



DALLAS COUNTY COMMUNITY COLLEGES



1982

Dallas County Community College District

1984

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1982 - 1984 Catalog

For the Seven
Member Colleges
of the Dallas County
Community College
District

Brookhaven College
3939 Valley View Lane
Farmers Branch, Texas 75234

Cedar Valley College
3030 North Dallas Avenue
Lancaster, Texas 75134

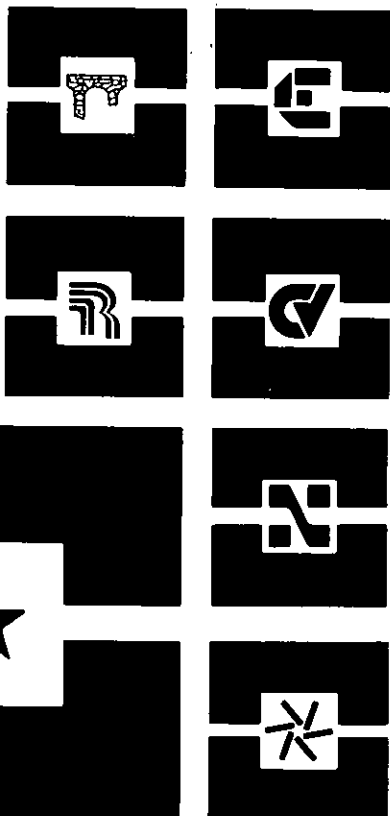
Eastfield College
3737 Motley Drive
Mesquite, Texas 75150

El Centro College
Main & Lamar Streets
Dallas, Texas 75202

Mountain View College
4849 West Illinois Avenue
Dallas, Texas 75211

North Lake College
5001 N. MacArthur Blvd.
Irving, Texas 75062

Richland College
12800 Abrams Road
Dallas, Texas 75243



This catalog contains policies, regulations, and procedures in existence at the time this publication went to press. The District Colleges reserve the right to make changes at any time to reflect current Board policies, administrative regulations and procedures, and applicable State and Federal regulations. This catalog is for information purposes and does not constitute a contract.

ACADEMIC CALENDAR

SUMMER SESSIONS, 1982

First Session

May 27 (R)	Registration
May 31 (M)	Memorial Day holiday
June 1 (T)	Classes begin
June 2 (W)	Last day for tuition refund
June 4 (F)	4th class day
June 29 (T)	Last day to withdraw "W"
July 5 (M)	Independence Day holiday
July 6 (T)	Final examinations
July 6 (T)	Session closes

Second Session

July 8 (R)	Registration
July 12 (M)	Classes begin
July 13 (T)	Last day for tuition refund
July 15 (R)	4th class day
Aug. 9 (M)	Last day to withdraw "W"
Aug. 13 (F)	Final examinations
Aug. 13 (F)	Session closes

FALL SEMESTER, 1982

Aug. 18 (W)	Faculty reports
Aug. 19, 20, 23 (RFM)	Registration
Aug. 24 (T)	Faculty development
Aug. 25 (W)	Classes begin
Aug. 28 (S)	Saturday classes begin
Sept. 1 (W)	Last day for tuition refund
Sept. 6 (M)	Labor Day holiday
Sept. 8 (W)	12th class day
Nov. 25 (R)	Thanksgiving holidays begin
Nov. 29 (M)	Classes resume
Nov. 30 (T)	Last day to withdraw "W"
Dec. 15 (W)	Last day of classes
Dec. 16-17, 20-21 (RFMT)	Final examinations
Dec. 18 (S)	Final exams, Sat. classes
Dec. 21 (T)	Semester closes

SPRING SEMESTER, 1983

Jan. 10 (M)	Faculty reports
Jan. 1-13 (TWR)	Registration
Jan. 14 (F)	Faculty development
Jan. 15 (S)	Saturday classes begin
Jan. 17 (M)	Classes begin
Jan. 24 (M)	Last day for tuition refund
Jan. 28 (F)	12th class day
Feb. 17 (R)	District Conference Day
Feb. 18 (F)	Faculty development
Mar. 14 (M)	Spring break begins
Mar. 18 (F)	Spring holiday for all employees
Mar. 21 (M)	Classes resume
Apr. 1 (F)	Easter Holidays begin
Apr. 4 (M)	Classes resume
May 6 (F)	Last day to withdraw "W"
May 13 (F)	Last day of classes
May 14 (S)	Final exams, Sat. classes
May 16-19 (MTWR)	Final examinations
May 19 (R)	Graduation
May 19 (R)	Semester closes

SUMMER SESSIONS, 1983

First Session

May 27 (F)	Registration
May 30 (M)	Memorial day holiday
May 31 (T)	Classes begin
June 1 (W)	Last day for tuition refund
June 3 (F)	4th class day
June 24 (F)	Last day to withdraw "W"
July 1 (F)	Final examinations
July 1 (F)	Semester closes

Second Session

July 5 (T)	Registration
July 7 (R)	Classes begin
July 11 (M)	Last day for tuition refund
July 12 (T)	4th class day
Aug. 4 (R)	Last day to withdraw "W"
Aug. 10 (W)	Final examinations
Aug. 10 (W)	Semester closes

FALL SEMESTER, 1983

Aug. 17 (W)	Faculty reports
Aug. 18, 19, 22 (RFM)	Registration
Aug. 23 (T)	Faculty development
Aug. 24 (W)	Classes begin
Aug. 27 (S)	Saturday classes begin
Aug. 31 (W)	Last day for tuition refund
Sept. 5 (M)	Labor Day holiday
Sept. 7 (W)	12th class day
Nov. 24 (R)	Thanksgiving holidays begin
Nov. 28 (M)	Classes resume
Dec. 2 (F)	Last day to withdraw "W"
Dec. 13 (T)	Last day of classes
Dec. 14-16, 19 (WRFM)	Final examinations
Dec. 17 (S)	Final exams, Sat. classes
Dec. 19 (M)	Semester closes

SPRING SEMESTER, 1984

Jan. 9 (M)	Faculty reports
Jan. 10-12 (TWR)	Registration
Jan. 13 (F)	Faculty development
Jan. 14 (S)	Saturday classes begin
Jan. 16 (M)	Classes begin
Jan. 23 (M)	Last day for tuition refund
Jan. 27 (F)	12th class day
Feb. 16 (R)	District Conference Day
Feb. 17 (F)	Faculty development
Mar. 19 (M)	Spring break begins
Mar. 23 (F)	Spring holiday for all employees
Mar. 26 (M)	Classes resume
Apr. 20 (F)	Easter holidays begin
Apr. 23 (M)	Classes resume
Apr. 27 (F)	Last day to withdraw "W"
May 9 (W)	Last day of classes
May 10-11, 14-15 (RFMT)	Final examinations
May 12 (S)	Final exams, Sat. classes
May 15 (T)	Graduation
May 15 (T)	Semester closes

SUMMER SESSIONS, 1984

First Session

May 25 (F)	Registration
May 28 (M)	Memorial Day holiday
May 29 (T)	Classes begin
May 30 (W)	Last day for tuition refund
June 1 (F)	4th class day
June 25 (M)	Last day to withdraw "W"
July 2 (M)	Final examinations
July 2 (M)	Semester closes

Second Session

July 5 (R)	Registration
July 9 (M)	Classes begin
July 10 (T)	Last day for tuition refund
July 12 (R)	4th class day
Aug. 3 (F)	Last day to withdraw "W"
Aug. 10 (F)	Final examinations
Aug. 10 (F)	Semester closes

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DALLAS COUNTY COMMUNITY COLLEGE DISTRICT BOARD OF TRUSTEES

Seated from left: Jerry Gilmore, chairman; Pattie T. Powell; Robert H. Power. Standing from left: Bob Beard; Bart Rominger, vice-chairman; J.D. Hall; and Don Buchholz.

DALLAS COUNTY COMMUNITY COLLEGE DISTRICT ADMINISTRATORS

Chancellor	R. Jan LeCroy
Vice Chancellor of Business Affairs	Walter Pike
Associate Vice Chancellor of Business Affairs	Ted B. Hughes
Vice Chancellor of Educational Affairs	Terry O'Banion
Associate Vice Chancellor of Educational Affairs	Ruth Shaw
Assistant Chancellor of Planning and Development Affairs	Bill Tucker
Assistant to the Chancellor	Jackie Caswell
Director of Development	Carole Shlipak
Legal Counsel	Robert Young
Special Assistant to the Chancellor	Lehman E. Marks
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Director, Center for Telecommunications	Rodger Pool
Director of Computer Services	Jim Hill
Director of Community & Student Programs	Richard McCrary
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Director of Occupational Education	Linda Coffey
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Director of Purchasing	Mavis Williams
Director of Resource Development	Bonny Franke
Director of Technical Services	Paul Dumont



General Information



For the Seven
Member Colleges
of the Dallas County
Community College District

I. GENERAL INFORMATION

HISTORY OF THE DALLAS COUNTY COMMUNITY COLLEGE DISTRICT

The Dallas County Community College District is comprised of seven colleges located strategically throughout Dallas County. Together the colleges enroll approximately 75,000 students and employ over 1,900 full-time faculty and staff members.

The growth of the District into an educational system with such impact was not by chance. In May, 1965, voters created the Dallas County Junior College District and approved a \$41.5 million bond issue to finance it. The next year the District's first college, El Centro, began operation in downtown Dallas. Eastfield College and Mountain View College enrolled their first students in 1970, and the plans for a multi-campus district became a reality. Richland College became the District's fourth college in 1972.

The voters of Dallas County approved the sale of an additional \$85 million in bonds in September, 1972. This step provided for expansion of the four existing colleges and the construction of three more colleges. A key part of the expansion program was the remodeling and enlarging of El Centro College, a project completed in 1979. Construction of new facilities resulted in the opening of Cedar Valley College and North Lake College in 1977. Brookhaven College, the final campus in the seven-college master plan, opened in 1978.

DISTRICT PHILOSOPHY AND GOALS

Since 1972, the District has been known as the Dallas County Community College District. The name shows that the District has outgrown the term "junior college." The name also reflects the District's philosophy. The colleges truly are



Dr. R. Jan LeCroy
Chancellor

community institutions, meeting the varied educational needs of the growing Dallas County region. The primary goal of the District and its colleges is to help students of all ages achieve effective living and responsible citizenship in a fast-changing region, state, nation, and world. Each college is therefore committed to providing a broad range of educational programs for the people it serves.

The needs, abilities, and goals of each student are considered important. The focus is on creating an educational program for the individual rather than squeezing or stretching the individual to fit an "educational mold."

The District therefore has a place for different kinds of students. There is a place for the young person setting forth toward a degree in

medicine, and a place for the adult delving into an interesting hobby to enrich leisure hours. There is a place for the person preparing to enter a trade or technical field with a year or two of studies, and a place for the employed individual wanting to improve occupational skills. There is a place for the very bright high school student ready to begin college work in advance of high school graduation, and a place for the high school dropout who now sees the need for education in today's complex society. In short, there is a place for everyone.

How do the colleges meet the educational needs of such a varied family? The answer is found in four categories of programs:

1. For the student working toward a bachelor's or higher degree, the colleges offer a wide range of first-year and second-year courses which transfer to senior colleges and universities.
2. For the student seeking a meaningful job, the colleges offer one-year and two-year programs in technical and occupational fields.
3. For the employed person wishing to improve job skills or to move into a new job, the colleges offer credit and non-credit adult educational courses.
4. For the person who simply wants to make life a little more interesting, the colleges offer community service programs on cultural, civic and other topics.

Additional programs are available for the high school student, dropout, and others with special needs. The colleges help each student design the educational program that best meets individual needs. Every student is offered intensive counseling to define goals and identify abilities. Continued guidance is available throughout the student's college career in case goals and plans change. This emphasis on counseling, rare for some institutions, is routine at all District colleges.

DISTRICT RESPONSIBILITIES

To carry out the District philosophy, the colleges obviously must offer a range of programs and courses, including guidance services. These programs and courses must help each individual attain a high level of technical competence and a high level of cultural, intellectual, and social development. In addition, high professional standards for the academic staff must be maintained within a framework prescribed by the Board of Trustees. At the same time, the program and organization of each college must make maximum use of faculty and facilities.

The colleges have a basic responsibility to provide educational and cultural leadership to the community. They must be sensitive to changing community needs and adapt readily to those needs. Individuals capable of continuing their educational development should be given the opportunity to improve their skills. Finally, to continue to meet its responsibilities in changing times, the college system must guard against stagnation. Creativity and flexibility are therefore fostered at the District level and on each campus.

LEAGUE FOR INNOVATION

The Dallas County Community College District is a member of the League for Innovation in the Community College. The League is composed of 17 outstanding community college districts throughout the nation. Its purpose is to encourage innovative experimentation and the continuing development of the community college movement in America. Membership commits the District to research, evaluation, and cooperation with other community college districts. The goal is to serve the community with the best educational program and the fullest use of resources.



EQUAL EDUCATIONAL AND EMPLOYMENT OPPORTUNITY POLICY

Dallas County Community College District is committed to providing equal educational and employment opportunity regardless of sex, marital or parental status, race, color, religion, age, national origin, or handicap. The District provides equal opportunity in accord with Federal and State laws. Equal educational opportunity includes admission, recruitment, extra-curricular programs and activities, access to course offerings, counseling and testing, financial aid, employment, health and insurance services, and athletics. Existing administrative procedures of the College are used to handle student grievances. When a student believes a condition of the College is unfair or discriminatory, the student can appeal to the administrator in charge of that area. Appeals to higher administrative authority are considered on the merits of the case.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974

In compliance with the Family Educational Rights and Privacy Act of 1974, the College may release information classified as "directory information" to the general public without the written consent of the student. Directory information includes: (1) student name, (2) student address, (3) telephone number, (4) dates of attendance, (5) educational institution most recently attended, and (6) other information, including major field of study and degrees and awards received.

A student may request that all or any part of the directory information be withheld from the public by giving written notice to the Registrar's Office during the first twelve class days of a fall or spring semester or the first four class days of a summer session. If no request is filed, information is released upon inquiry. No telephone inquiries are acknowledged; all requests must be made in person. No transcript or academic record is released without written consent from the student stating the information to be given, except as specified by law.

STUDENT CONSUMER INFORMATION SERVICES

Pursuant to Public Law 178, the College provides all students with information about its academic programs and financial aid available to students.

STANDARDS OF CONDUCT

The college student is considered a responsible adult. The student's enrollment indicates acceptance of the standards of conduct published in this catalog.

II. ADMISSIONS AND REGISTRATION

GENERAL ADMISSIONS POLICY

The College has an "open door" admissions policy. It insures that all persons who can profit from post-secondary education have an opportunity to enroll. The College requires certain assessment procedures for use in course placement prior to admission to a certificate or degree program, but the assessment is not used to determine admissions.

ADMISSION REQUIREMENTS

Beginning Freshmen

Students enrolling in college for the first time who fit one of the following categories may apply for admission:

- a. Graduates from an accredited high school or those who have earned a General Education Diploma (G.E.D.), who are 18 years of age or older, and whose high school class has graduated.
- b. Graduates of an unaccredited high school who are 18 years of age or older.
- c. Persons who do not hold a high school diploma or G.E.D. (but who are 18 years of age or older and whose high school class has graduated) may be admitted by giving evidence of an ability to profit from college instruction. Such admission will be on a probationary basis.
- d. High school seniors recommended by their high school principal. The College admits a limited number of students in this category. The students are concurrently enrolled for a maximum of 6 hours of special study each semester. Students must continue to make normal progress toward high school graduation.

Transfer Students

Transfer applicants are considered for admission on the basis of their previous college record. Academic standing for transfer applicants is

determined by the Registrar's Office according to standards established by the College. Students on scholastic or disciplinary suspension from another institution must petition the Committee on Admissions and Academic Relations for special approval. Contact the Admissions Office for further information.

Former Students

Students formerly enrolled in the Dallas County Community College District must submit an application for readmission to any District college. Students with unsettled financial debts at any District college will not be readmitted.

Non-Credit Students

Students enrolling for non-credit courses apply through Community Services.

International Students

The College is authorized under federal law to enroll non-immigrant alien students. International students are not admitted, however, until all admissions requirements are complete. International students must:

- a. complete a personal interview with the international student counselor and receive approval from the College administration,
- b. present TOEFL (Test of English as a Foreign Language) test scores of 525 or higher,
- c. be proficient in English and provide a letter in their own handwriting indicating educational and vocational plans,
- d. show evidence of sufficient financial support for the academic year,
- e. complete a health information form,
- f. fulfill all admission requirements for international students at least 30 days prior to registration,
- g. enroll as a full-time student (minimum of 12 credit hours),
- h. supply official transcripts for all previous academic work with a minimum "C" average.

Contact the Admissions Office for information.



APPLICATION AND ADMISSION PROCEDURES

Applications may be submitted any time prior to registration, but applicants should submit materials at least three weeks before registration to insure effective counseling and schedule planning. Earlier application is desirable because the student's place in registration is determined by the date an applicant's admission file is complete. A late place in registration may mean that the student cannot register for some courses because they are already filled.

Applicants must submit the following material to the Admissions Office to have a complete admissions file:

- a. An official application, available from the Admissions Office.
- b. An official transcript from the last school (high school or college) attended. Students seeking certificates or associate degrees must submit official transcripts of all previous college work. The College's accrediting agency requires transcripts, and the College uses them in program advisement.
- c. Written proof from a medical office of (1) a negative tuberculin skin test or chest X-ray, (2) a polio immunization if the applicant is

under 19 years of age, and (3) a diphtheria/tetanus injection within the last 10 years.

This medical proof is required by state law (Tex. ED. Code 2.09). Once the above materials are submitted, the applicant is assigned a place in registration. All applicants may select only those classes available when they register. Students may enroll in certain courses at times other than regular semester registration. See Flexible Entry Courses in this catalog and contact the Registrar's Office for additional information.

TUITION

Tuition is charged on a sliding scale according to the number of credit hours for which a student is enrolled and the student's place of legal residence. Tuition is subject to change without notice by the Board of Trustees or the Texas Legislature.

ADDITIONAL FEES

Additional fees may be assessed as new programs are developed with special laboratory costs. These fees will always be kept to a practical minimum. A graduation fee is not assessed, but each student must pay for cap and gown rental.

SPECIAL FEES AND CHARGES

Laboratory Fee: \$2 to \$8 a semester (per lab).

Physical Education Activity Fee: \$5 a semester.

Bowling Class Fee: Student pays cost of lane rental.

Private Music Lesson Fee: *\$45 for one hour per week (maximum) for one course, \$25 for one half hour per week.

Audit Fee: The charge for auditing a course is the same as if the course were taken for credit, except that a student service fee is not charged.

Credit by Examination: A fee will be charged for each examination.**

* Available only to music majors enrolled for 12 hours or more.

**This fee can change without prior notice.

**DALLAS COUNTY COMMUNITY COLLEGE DISTRICT
TUITION AND STUDENT SERVICES FEE***

Semester	Dallas County			Out-of District			Out-of State or Out-of-Country		
Cr. Hours	Tuition	Fee	Total	Tuition	Fee	Total	Tuition	Fee	Total
1	\$ 25	\$ 1	\$ 26	\$ 25	\$ 1	\$ 26	\$ 41	\$ 1	\$ 42
2	25	2	27	42	2	44	82	2	84
3	25	3	28	63	3	66	123	3	126
4	32	4	36	84	4	88	164	4	168
5	40	5	45	105	5	110	205	5	210
6	48	6	54	126	6	132	246	6	252
7	56	7	63	147	7	154	287	7	294
8	64	8	72	168	8	176	328	8	336
9	72	9	81	189	9	198	369	9	378
10	80	10	90	210	10	220	410	10	420
11	86	10	96	216	10	226	451	10	461
12	92	10	102	222	10	232	492	10	502
13	98	10	108	228	10	238	533	10	543
14	104	10	114	234	10	244	574	10	584
15	110	10	120	240	10	250	615	10	625
16	116	10	126	246	10	256	656	10	666
17	122	10	132	252	10	262	697	10	707
18	128	10	138	258	10	268	738	10	748
19	134	10	144	264	10	274	779	10	789
20	140	10	150	270	10	280	820	10	830

The following definitions are brief guidelines only; please discuss any questions regarding proper tuition classification with Admissions Office personnel.

● A Dallas County resident is one who (1) resides in Dallas County and (2) qualifies as an in-state resident. Texas law defines an in-state resident as an individual "who is employed full-time in Texas for the 12-month period preceding registration." The Dallas County Community College District Board of Trustees has waived the difference in tuition between the out-of-state or out-of-district rates and Dallas County rates for a person and his/her dependents who owns real estate, business or personal, within Dallas County. For information on documents necessary to prove such ownership or dependency, consult the Admissions Office. Classification as a state resident or qualification for a waiver of out-of-state fees applies only to U.S. citizens or permanent resident aliens.

● The DCCCD Board of Trustees defines an Out-of-District student as (1) a student eighteen (18) years of age or older who resides in a Texas county other than Dallas County or (2) a student who is less than eighteen (18) years of age whose parents live in a Texas county other than Dallas County. In either case, state residency requirements must be fulfilled (see above).

● An out-of-state student is one who has come to Texas from out-of-state within the 12-month period prior to registration. Anyone who enrolls as an out-of-state student is presumed to remain out-of-state as long as the residence of the individual in Texas is for the purpose of attending school. An individual who would have been classified as a resident for the first five of the six years immediately preceding registration but who resided in another state for all or part of the year immediately preceding registration shall be classified as a resident student.

● A foreign national on any other than a permanent resident visa must pay out-of-country tuition and fees.

*The tuition schedule above is subject to change without notice by action of the District Board of Trustees or the State of Texas.

REFUND POLICY

Student tuition and fees provide only a fraction of the cost of education. When students enroll in a class, they reserve places which cannot be made available to other students unless they officially drop the class during the first week of the semester. Also, the original enrollment of students represents a sizable cost to the District whether or not they continue in the class. Therefore, a refund is made only under the following conditions:

- a. No 100% refund is granted unless College error is involved.
- b. An 80% refund of tuition and fees may be obtained through the date noted in the college calendar. An 80% refund may be given through the first two class days of a six-week summer session or fast track semester. Refunds for Flexible Entry Courses are considered through completion of the second day of class from the date of enrollment.
- c. No refund is given for advanced placement or College Level Examination Program (CLEP) tests.
- d. A physician's statement must be submitted along with petitions when medical reasons account for withdrawal. Requests for refunds must be submitted before the end of the semester for which the refund is requested.
- e. No refund of less than \$4 for tuition and fees is made.

Refund Petition Forms are available in the Counseling Center and the Office of the Vice President of Student Services. Students who believe their refund requests are due to extenuating circumstances beyond the limits of the refund policy should state explicitly their circumstances on the Refund Petition Form. All requests for refunds are referred to the Refund Petition Committee. The Committee's recommendations are made to the Vice President of Student Services who notifies the student of the action taken. Refund checks normally require a minimum of one month from date of approval for processing.

RETURNED CHECKS

Checks returned to the Business Office must be paid with cash or a cashier's check within the time limits prescribed by the notification letter. An additional fee is added for returned checks.

If a check for tuition is returned by a bank for any reason, including stop payment, the college business office may submit the check to the Justice of the Peace for appropriate legal action and collection. The Vice President of Student Services may also implement disciplinary procedures.

ADVISEMENT PROCEDURES

Individual assessment of skill levels is an important part of student success in college. Therefore, the District has provided an assessment process available through the counseling centers at each of the District colleges. Information gained from assessment is used to advise students in the selection of courses which can provide the best possible opportunity for academic success. All students are required to go through an assessment process and should schedule it prior to initial registration. Developmental studies are available for students who need skill development in reading, writing, or math. Test data, transcripts, previous work, and counseling may be used to determine placement in this program.

COURSE PREREQUISITES

Prerequisites are established for certain advanced courses to help assure that students have sufficient background in the subject area to maximize their probability of success in the course. The College recognizes that certain related life experiences may also provide necessary background for success in these courses. Therefore, the division chairperson is authorized to waive a course prerequisite.

CHANGE OF SCHEDULE

Students should be careful in registering to schedule courses only for the days and hours they can attend. Students requesting class changes should contact the Registrar's Office during the time specified in the class schedule. No change is complete until it has been processed by the Registrar's Office.

NON-CREDIT STUDENT (AUDIT)

A person who meets the admission requirements of the District may, with the consent of the division chairperson and instructor, enroll in a credit course as a non-credit student. A non-credit student may attend class, but may not receive a final grade or credit for a course. An instructor may give an examination if he determines the examination is an essential component of the learning process. The fee in a credit course is the same for a non-credit student as for a credit student.



TRANSFER OF CREDITS

Transfer of credit is generally given for all passing work completed at accredited colleges and universities. The Registrar's Office evaluates all transfer credit. Transfer students admitted with a grade point deficiency cannot graduate until the deficiency is cleared by earning additional grade points. Credits earned in military service schools or through the U.S. Armed Forces Institute are reviewed by the Registrar and credit granted if applicable.

DROPPING A COURSE OR WITHDRAWING FROM COLLEGE

To drop a class or withdraw from the College, students must obtain a drop or withdrawal form and follow the prescribed procedure. Should circumstances prevent a student from appearing in person to withdraw from the College, the student may withdraw by mail by writing to the Registrar. No drop or withdrawal requests are accepted by

telephone. Students who drop a class or withdraw from the College before the semester deadline receive a "W" (Withdraw) in each class dropped. The deadline for receiving a "W" is indicated on the academic calendar. After that time students receive a performance grade in each course.

ADDRESS CHANGES AND SOCIAL SECURITY NUMBER

Each student has the responsibility to inform the Registrar's Office of changes in name or address. Each applicant for admission is asked to furnish a Social Security number. This number doubles as a student identification number and insures accuracy of student records. If a student does not have a Social Security number, another number is assigned for record keeping.

III. ACADEMIC INFORMATION

DEGREE REQUIREMENTS

The College confers the Associate in Arts and Sciences Degree upon students who have completed all general and specific requirements for graduation. Each degree candidate must earn the last 15 hours as a resident student in the District colleges or accrue 45 hours in residence.

The degree must be awarded by the college which offers the program in which the student majored. If two or more schools offer the program, the student is granted the degree where the majority of the hours were taken. Correspondence work must be approved by the Registrar for graduation credit. No more than one-fourth of the work required for any degree or certificate may be taken by correspondence.

ASSOCIATE IN ARTS AND SCIENCES DEGREE

Students must have a minimum of 60 credit hours and a grade point average of at least "C" (2.0) to receive the Associate in Arts and Sciences Degree. These 60 hours may be earned at any District college. They must include:

- English 101-102 plus an additional 6 hours of English for a total of 12 credit hours in English.
- 8 credit hours in Laboratory Science (Music majors will substitute Music 101-102 for this requirement.)
- 12 credit hours of History 101-102 and Government 201-202. No substitutions are allowed. Only 3 credit hours of history and 3 credit hours of government may be earned through credit by examination. CLEP credit may not be used to meet this requirement.
- 3 credit hours in Humanities, selected from Theater 101, Art 104, Music 104, Humanities 101 or Philosophy 102.
- A maximum of 4 physical education activity hours may be counted as credit toward requirements for graduation. Courses numbered 99

and below cannot be included to meet degree or certificate requirements. Music 199, Art 199, and Theater 199 may not be counted toward the 60 hour minimum.

All students planning to transfer to a four-year institution may complete their four semester requirements in physical education during their freshman and sophomore year. Students are urged to consult the catalogs of the institutions to which they may transfer for their special requirements. These catalogs should be used by students and advisors in planning programs.

ASSOCIATE IN APPLIED ARTS AND SCIENCES DEGREE AND CERTIFICATE CAREER PROGRAMS

Students must have a minimum of 60 credit hours and a grade point average of at least "C" (2.0) to receive the Associate in Applied Arts and Sciences Degree. For some programs, more than 60 credit hours are required. All prescribed requirements for the specific Technical/Occupational Program in which the student is enrolled must be completed. These programs may also have other criteria in addition to degree requirements.

See the Technical/Occupational Programs section of this catalog for a more detailed explanation. The requirements for certificates are detailed under specific programs listed in the Technical/Occupational Programs section of this catalog. A "C" (2.0) grade point average is required. A maximum of 4 physical education activity hours may be counted as credit toward graduation. Courses numbered 99 and below may not be included to meet degree or certificate requirements. Music 199, Art 199, and Theatre 199 may not be counted toward the 60-hour minimum.

PROCEDURE FOR FILING DEGREE AND CERTIFICATE PLANS AND FOR GRADUATION

Students should request a degree plan from the Registrar's Office at the end of their freshman year. Official transcripts of all previous college work must be on file at the time of request for degree plans. Students following a one-year certificate program should request an official plan during the first semester of their enrollment. Application for the granting of the degree or certificate should be filed in the Registrar's Office prior to the deadline announced by the Registrar.

An annual graduation ceremony is held at the conclusion of the spring semester. Participation is ceremonial only and confers on a student no rights to a degree. January and August graduates may participate in the next commencement if they desire, but they are not required to do so. The Registrar's Office should be notified if the student wishes to participate. Instructions for graduation are mailed to all candidates thirty days prior to commencement.

Within five years of initial enrollment a student may graduate according to the catalog requirements in effect at the time of first enrollment or any subsequent catalog provided the requisite courses are still being offered. If a student fails to complete within five years all requirements of the catalog in effect at the time of initial enrollment, then the student may be required to graduate under a later catalog at the discretion of the institution.

RECOMMENDED ACADEMIC LOAD

The maximum academic load is 18 credit hours of course work per semester or five classes plus physical education. Students must receive permission of the Registrar or the appropriate college official to carry a heavier load. Employed students carrying a full load (12 credit

hours or more) should not work more than twenty hours per week. Students working more hours should reduce their academic load proportionately. The recommended load limit for day or evening students who are employed full-time is 6 credit hours. The recommended load limit in a six-week summer session is 6 credit hours. A total of 14 credit hours is the maximum that may be earned in any twelve-week summer period.

CLASS ATTENDANCE

Students are expected to attend regularly all classes in which they are enrolled. Students have the responsibility to attend class and to consult with the instructor when an absence occurs.

Instructors are responsible for describing attendance policy and procedures to all students enrolled in their classes. Students who do not attend class during the first twelve days of a long semester or the first four days of a summer session are dropped by the instructor. After this time, it is the responsibility of the student to withdraw from the course. A student, however, may be dropped from the class roll prior to the published withdrawal deadline notice for lack of attendance at the discretion of the instructor.

If an instructor drops a student, the student is notified by a letter from the Registrar's Office sent to the student's address of record. The effective drop date is stated in the letter. A student who desires to remain in class must contact the instructor within the time specified in the instructor's letter. With the instructor's approval, a student may be reinstated. Students dropped for excessive absences prior to the published withdrawal deadline receive a grade of "W."

SCHOLASTIC STANDARDS: GRADES AND GRADE POINT AVERAGE

Final grades are reported for each student for every course according to the following grading system.

Grade	Interpretation	Grade Point Value
A	Excellent	4 points
B	Good	3 points
C	Average	2 points
D	Poor	1 point
F	Failing	0 points
I	Incomplete	Not Computed
WX	Progress; re-enrollment required	Not Computed
W	Withdrawn	Not Computed
CR	Credit	Not Computed

Grade points earned for each course are determined by multiplying the number of points for each grade by the number of credit hours the course carries. For example, a student who takes a three hour course and earns an "A" accumulates 12 grade points for that course. A student's *grade point average* is computed by adding the total grade point values for all courses and dividing by the number of credit hours attempted during the same period. For example, a student who takes the following courses and earns the following grades has a grade point average 2.93:

Credit Hours	Grade	Grade Points
2-hour course	A	8
3-hour course	B	9
4-hour course	B	12
3-hour course	C	6
Total Credit Hours:		Total Grade Points: 35

$$35 \div 12 = 2.93$$

For repeated courses, only the latest grade earned is included in cumulative grade point averages. Transcripts do, however, indicate all work completed in the District, even if the latest grade is lower than a preceding grade. When a student withdraws from a course being repeated, the cumulative grade point average is calculated by using the immediately preceding grade in the same course.

If a student believes an error has been made in determining a course grade, the instructor or appropriate division office should be contacted as soon as possible. Requests for grade changes will not be considered later than two years following the last day of the semester for which the grade was assigned.

An incomplete grade "I" may be given when an unforeseen emergency prevents a student from completing the work in a course. The "I" must be converted to a performance grade (one with a grade point value) within ninety days after the first day of classes in the subsequent regular semester. If the work is not completed after ninety days, the "I" is converted to a performance grade.

An *Incomplete Contract* is used to convert an incomplete grade to a performance grade and states the requirements for the satisfactory completion of the course. The Incomplete Contract must be agreed upon and signed by the instructor, the student and the division chairperson and submitted with the final grade report. When an Incomplete Contract must be submitted without the student's signature, the instructor must include a statement indicating that the student is aware of and in agreement with the contract.

Students who do not complete course requirements may receive a "WX" grade when the instructor determines that reasonable progress has been made and when the student can re-enroll for course completion prior to the certification date in the next regular semester. If the student re-enrolls and completes the course requirements, the "WX" remains for the first enrollment; a performance grade is given for the second enrollment. If the student does not re-enroll, the "WX" is converted to a performance grade.

ACCEPTABLE SCHOLASTIC PERFORMANCE

College work is measured in terms of credit hours. The number of credit hours offered for each course is given with the course description.

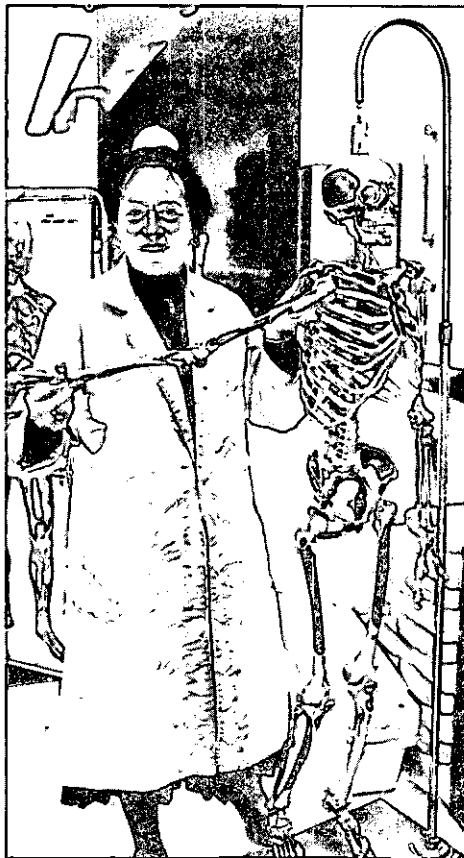
Acceptable scholastic performance is the maintenance of a grade point average of 2.0 (on a 4.0 scale) or better. Students may not be graduated from any degree or certificate program unless they have a cumulative grade point average of 2.0 or better. Grade points and hours earned in courses numbered 99 and below are included in computing a student's scholastic standing, but they cannot be used to meet graduation requirements.

HONORS

Full-time students who complete at least 12 hours of credit and earn a grade point average of 3.00-3.49 are listed on the College's Honor Roll. Full-time students who complete at least 12 hours of credit and average 3.50-4.00 are placed on the Vice President's Honor List. Part-time students who take 6-11 credit hours and maintain a 3.5 or higher grade point average are placed on the Academic Recognition List.

SCHOLASTIC PROBATION AND SCHOLASTIC SUSPENSION

Full-time and part-time students who have completed a total of 12 credit hours are placed on probation if they fail to maintain a 2.0 cumulative grade point average. Students may be removed from probation when they earn a 2.0 cumulative grade point average. Students on scholastic probation who achieve either a cumulative grade point average of 1.5 or above or a previous semester grade point average of 2.0 or above are continued on scholastic probation. Students on probation who do not meet the requirements for continued probation are placed on scholastic suspension. Students on suspension for the first time may not register for the immediately following semester or summer session without special permission. Suspended students must file a petition for readmission. The conditions for readmission are established and administered by the Vice President of Student Services.



GRADE REPORTS

A grade report is issued to each student at the end of each semester and gives the grade earned in each course that semester. A transcript is the official record of college work and gives all grades earned throughout the college career. Transcripts are withheld from students who have not met financial or other obligations to the College. (See Student Codes and Expectations: "Financial Transactions with the College.")

WAIVING OF SCHOLASTIC DEFICIENCY

Any student in an academic transfer program may transfer to a career program. In such a case, the student may choose to have any grades below "C" disregarded. However, the procedure for disregarding low grades may only be exercised while



the student is in a career program. If the student changes to an academic transfer program, the original conditions of the academic transfer program must be followed, including the calculation of a cumulative grade point average of all college credits earned. The procedure for waiving scholastic deficiency applies both to students of this college and to students transferring from other institutions. The student who wishes to use the procedure for waiving scholastic deficiency should so state in writing to the Registrar prior to registration and should inform a counselor of such intentions during the pre-registration advisement session.

TRANSCRIPTS OF CREDIT

Upon the written request of a student, the Registrar's Office will send an official transcript to the individual student or to any college or agency named. The transcript may be withheld, however, until the student has settled all obligations with the College.

CLASSIFICATION OF STUDENTS

Freshman:

A student who has completed fewer than 30 credit hours.

Sophomore:

A student who has completed 30 or more credit hours.

Part-time:

A student carrying fewer than 12 credit hours in a given semester.

Full-time:

A student carrying 12 or more credit hours in a given semester.

LEARNING RESOURCES CENTER AND LIBRARY OBLIGATIONS

The Learning Resources Center (LRC) supports classroom instruction. It is a place where students can find books and non-print materials to supplement classroom learning or where — if they choose — they can actually take a course. The LRC helps students to learn in their own ways and at their own speeds. It provides books, slides, tapes, and films. The College has a growing collection of books on a wide variety of general information areas to support Academic Transfer Programs and Technical/Occupational Programs. In addition, there are special collections of career materials and pamphlets. The library also subscribes to current popular and technical periodicals as well as to area and national newspapers.

Classroom Resource Services is a part of the LRC and supports the instructional program. It is responsible for all campus audio-visual equipment and non-print materials used in the classroom or by individual students and for the production of instructional materials.

Willful damage to library materials (or property) or actions disturbing users of the library may lead to the loss of library privileges. Damage cases are referred to the appropriate authorities for further action. All books and other library materials must be returned before the end of each semester. No transcript is issued until the student's library record is cleared.

IV. EDUCATIONAL AND SPECIAL OPPORTUNITIES

ACADEMIC TRANSFER STUDIES

Students who desire to earn a bachelor's degree may complete the first two years at this college before transferring to a four-year institution. The academic transfer curriculum is coordinated with senior colleges and universities to facilitate the transfer of credits to these schools.

TECHNICAL/OCCUPATIONAL PROGRAMS

Students who desire to enter a chosen field as a skilled employee after one or two years of college work may enroll in one of the many Technical/Occupational Programs offered by the College.

Technical/occupational courses carry college credit leading to a Certificate of Completion or an Associate in Applied Arts and Sciences Degree. These programs are established only after studies verify that employment opportunities will exist at the time the student completes training.

The College attempts to match the community's labor requirements with the ambitions and goals of its students. This realistic approach to occupational education is made possible by the excellent cooperation of local industry, business, and public agencies. They increasingly depend on District colleges to supply skilled personnel. A continuous liaison is maintained with prospective employers to help place graduates and to keep the training programs current with job requirements. Recommendations for adding new programs to the College offerings are made periodically and are based on community studies which identify additional training needs.

CREDIT BY EXAMINATION

Students who believe they already meet the requirements of a course by experience or previous training may request credit by examination. The Counseling Center has a list of courses available through this method. The examination may be a

section of the College Level Examination Program (CLEP), Advanced Placement Exams (CEEB), or a teacher-made test, depending on the course.

The student pays an examination fee for each course examination. This fee must be paid prior to taking the examination and is not refundable. The colleges credit by examination program is coordinated with similar programs of four-year institutions. Final acceptance of credit by examination for specific degree purposes is determined by the degree-granting institution. Students planning to use credit by examination to meet degree requirements at other institutions should check the requirements of the *receiving* institution.

Students must be currently enrolled at this college to receive credit by examination. Students may not request credit by examination in courses for which they are currently enrolled. Students may earn as many credits through examination as their ability permits and needs require, but the last 15 credit hours required for graduation in any degree or certificate program may not be earned through credit by examination except as approved by the Vice President of Instruction.

Credit by examination may be attempted only one time in any given course, and a grade of "C" or better must be earned in order for credit to be recorded. A student may use credit by examination for only three (3) credit hours to apply toward the degree requirements in history and only three (3) credit hours to apply toward the degree requirements in government.

(CLEP exam does not meet this requirement.)

NON-TRADITIONAL LEARNING

The College is committed to serve students and the community in the most effective manner possible while maintaining high standards of education. Students learn in a variety of ways and through a multitude of experiences; therefore, the College shall assess these learning activities and grant equivalent college credit according to the following guidelines:

1. A student must be currently enrolled in the College to receive equivalent credit for non-traditional learning.
2. Credit may be granted for non-traditional learning as it relates to specific courses offered by the college assessing the learning experiences. Credit will be awarded on a course by course basis only.
3. A student is required to complete at least 12 semester hours of course work with the District prior to awarding of equivalent credits for non-traditional activities. The "CR" grade is awarded for non-traditional course work accepted for credit.
4. Credit may be granted for occupational courses approved by the Texas Education Agency.
5. The number of equivalent credits awarded may not exceed the total number of credits required for the student's specific associate degree objective. No graduation, residency, degree or program requirements will be waived as a result of credits earned as provided by this policy.

Students desiring to take advantage of this opportunity should consult with the College Advocate For Non-traditional Learning for additional information. Students making application for assessment of prior learning through life experiences are required to enroll in a Human Development Course to facilitate the process.

FLEXIBLE ENTRY COURSES

In keeping with its commitment to meet individual educational needs, the College makes available Flexible Entry Courses. These courses are often self paced, allowing students to work at their own speed. Students are cautioned to be aware of the time specified by the College as to when the course requirements need to be completed. Students may register for Flexible Entry Courses during the pre-semester registration periods or at regular times during the semester. Students should check with the Registrar to determine times for registration in these courses. Approval must be obtained for enrollment.

TELECOURSES

Students may take a variety of college credit courses via television. The schedule of telecourses varies each semester and may include courses in anthropology, astronomy, business, earth science, ecology, biology, English, economics, government, history, humanities, psychology, religion, and sociology. Content and credit for these courses are the same as for similar courses taken on campus.

Telecourses include the viewing of television programs on KERA/Channel 13 and on cable, plus reading, study guide and writing assignments. Students come to the campus for an orientation session at the beginning of the semester, for one to four discussion meetings, for three or four tests, and for laboratory sessions in science courses having laboratories. These campus visits are normally scheduled for a time convenient to the students. Field trips are required in some courses. Telecourses may be taken in conjunction with on-campus courses or by persons who are not enrolled in any on-campus courses. Students may register for telecourses by mail or through the regular on-campus registration process.

COOPERATIVE WORK EXPERIENCE EDUCATION

Students may enrich their education in certain career programs by enrolling in Cooperative Work Experience Courses. These courses allow students to combine classroom study with on-the-job experience at training stations approved by the College. Students must have completed at least two courses in their occupational major to be eligible for Cooperative Work Experience.

A full-time student (carrying 12 credit hours or more) must take two courses which relate to the student's work experience, and a maximum of 4 credit hours may be in Cooperative Work Experience. Part-time students (carrying under 12 credit hours) may take a maximum of 4 credit hours of work experience. They must be concurrently enrolled in a course related to their work experience (or a support course to be applied toward their occupational degree or certificate).

To enroll in a Cooperative Work Experience Course, students must have the approval of their instructor/coordinator. Course credit is awarded at the rate of 1 credit hour for each 80 hours of approved work experience during the semester. The 80 hours is approximately 5 hours per week during a fall or spring semester.

Additional information regarding Cooperative Work Experience may be secured from the Cooperative Education Office. The Technical/Occupational Programs having work experiences are indicated in the Course Descriptions Section of this catalog.

INTERNATIONAL STUDIES

Selected programs combine learning experiences with foreign travel. This travel-study is under the direct supervision of the faculty. These courses support specific learning objectives, and college credit may be earned by students who successfully meet the objectives.

HUMAN DEVELOPMENT

In Human Development Courses students can explore the relationship between meaningful education and some of the dilemmas or questions commonly brought to college. "Why learn" and "how to learn" are put in a perspective of "who is to learn." These courses are taught by counselors and other qualified instructors. They offer academic credit which transfers to most surrounding four-year institutions. The courses in human development enhance the total curriculum and blend in with the total concept of the community college.

EVENING AND WEEKEND COLLEGE

In dynamic, growing communities such as those encompassing this college, people have continuing educational needs, yet many of them have work schedules and personal involvements which make it impossible for them to attend college during normal daytime hours. For this reason, evening and weekend college courses offer the same broad spectrum of programs available for full-time day students. Courses are offered both on campus and at selected community locations.

Evening and weekend courses offer high quality instruction, excellent facilities, and a variety of student services, including counseling, health, library, bookstore, food services, financial aid, and recreation. Instructors are selected from the College's own full-time staff, from outstanding Dallas area educators, and from other professional specialists interested in teaching. To enroll in the evening and weekend courses, contact the Director of Admissions. Information may also be obtained by contacting the Extended Day Administration Office.

SERVICEMEN'S OPPORTUNITY COLLEGE

In cooperation with other community colleges in the United States, colleges of the Dallas County Community College District participate in the Servicemen's Opportunity College. Through this program, students can plan an educational experience regardless of location requirements of the military. For further information, contact the Admissions Office.

COMMUNITY SERVICE PROGRAMS

Community Service Programs are an important element in the concept of the community college. They greatly expand the available opportunities for persons of all ages to participate in college programs and activities. And courses are offered throughout the year to meet a variety of community needs.

Community Service Programs are offered in the following categories:

- Continuing education opportunities for individuals who want to broaden their knowledge or learn new skills for different occupational fields.
- Cultural and community enrichment studies for groups and individuals seeking to enhance their quality of life.
- Personal entertainment and recreation for individuals wishing to explore new activities for personal growth and enjoyment.
- Resources for industry, government and professional groups needing to supplement their own training and development programs.

Community Service Programs offer short courses, seminars, workshops, and institutes. The type of course offering is determined by the nature of the material, instructional approach, and needs of the requesting individuals or organizations. Generally there are no entrance requirements or examinations. Some courses may have age restrictions or may require a certain amount of experience for

enrollment. Admission is on a first-come, first-served basis. All one need do to register is fill out the form and pay the fee. Classes and activities are held on campus and in a variety of locations throughout the community. Most classes and activities are conducted on weekday evenings, but many are also held on weekdays and weekends.

Community Service Program instructors are professional men and women from the community who have proven experience in their fields. Their objective is to share their knowledge, insight, and experience, and to insure that students acquire a greater perspective of the subject and have a meaningful experience. Although most Community Service Courses do not require textbooks, the nature of some special offerings do require the purchase of books or supplies. Students are notified of the need for texts and other materials at the first meeting.

Library privileges are available for Community Service students during the term they are registered. Contact the Community Service Office for further information.

CONTINUING EDUCATION UNITS (CEU'S)

Although no college credit is awarded for Community Service class participation, Continuing Education Units are transcribed for successful completion of most courses. The CEU, by nationwide definition, is "ten contact hours of participation in an organized continuing adult education or extension experience under responsible sponsorship, capable direction, and qualified instruction." The CEU is a means of recording and accounting for the various continuing education activities one accumulates over a period of years.

V. STUDENT SERVICES

The College is committed to providing opportunities for each individual student's total educational development. Specific student services are integrated with the instructional program of the College to address individual needs for educational, personal, social, cultural, and career development.

STUDENT DEVELOPMENT AND ACTIVITIES

The Student Development Office plans and presents programs and activities for the general campus population. Programs often are coordinated with the various instructional division to provide students with valuable educational experiences. Many programs and activities are offered to help the student develop life enriching skills. Other programs provide students with interesting and entertaining ways to spend leisure time on campus. The goal of all programs is to facilitate the development of cultured and well-rounded human beings. Student participation in the operation of programs is highly encouraged.

GUIDANCE AND COUNSELING SERVICES

Individuals may find the counseling services helpful as they make plans and decisions in various phases of their development. For example, counselors can assist students in selecting courses of study, determining transferability of courses, choosing or changing careers; gaining independence, and confronting problems of daily living. Confidential assistance is provided by the counseling staff in the following areas:

1. Career counseling to explore possible vocational directions, occupational information, and self-appraisals of interest, personality and abilities.



2. Academic advisement to examine appropriate choices of courses, educational plans, study skills, and transferability of courses.
3. Confidential personal counseling to make adjustment and life decisions about personal concerns.
4. Small group discussions led by counselors and focusing on such areas as interpersonal relationships, test anxiety, and assertiveness. Counselors will consider forming any type of group for which there is a demand.
5. Standardized testing to provide additional information about interests, personality and abilities needed in planning and making decisions.
6. Referral sources to provide indepth assistance for such matters as legal concerns, financial aid, tutoring, job placement, medical problems, or psychological problems.

TUTORING SERVICES

For students needing special temporary assistance in course work, tutoring services are available. Students are encouraged to seek services through self referral as well as through instructor referral.



TESTING AND EVALUATION CENTER

The Testing Center administers various tests. Types of tests include:

1. Psychological tests of personality, vocational interests, and aptitudes.
2. Academic tests for college instructional programs. Many courses are individualized and self-paced, permitting students to be tested at appropriate times.
3. Assessment tests for appropriate class placement. These tests are very strongly recommended to insure student success.
4. Tests for selected national programs.

HEALTH CENTER

Health is the most fundamental human need, and a high standard of physical and mental health is a basic right of every human being. The Health Center helps maintain and promote the health of students, faculty, and staff. Services provided by the Health Center include education and counseling about physical and emotional health, emergency first aid treatment, referral services to community

agencies and physicians, free tuberculin skin tests and other screening programs, and programs of interest to students and faculty. Students are encouraged to make an appointment with the nurse to discuss specific health problems. No information on a student's health is released without written permission from the student, except as required by law.

SERVICES FOR HANDICAPPED STUDENTS

The Services for Handicapped Students Office offers a variety of support services to enable handicapped students to participate in the full range of college experiences. Services are arranged to fit the individual needs of the student and include interpreters, notetakers, tutors, mobility assistants, loan of wheelchairs, readers for the blind, and tape recorders.

Handicapped students should contact the office at least one month before registration. The office will provide students with an orientation session and registration information. For additional information, contact the Services for Handicapped Students Office or the Counseling Center.

STUDENT ORGANIZATIONS

Information about participation in any organization may be obtained through the Student Development Office. The development of student organizations is determined by student interest. Categories of organizations include:

- Co-curricular organizations pertinent to the educational goals and purposes of the College.
- Social organizations to provide an opportunity for friendships and promote a sense of community among students.
- Service organizations to promote student involvement in the community.
- Pre-professional and academic organizations to contribute to the development of students in their career fields.

INTERCOLLEGIATE ATHLETICS

Participation on athletic teams is voluntary on a non-scholarship basis for students who meet requirements established by the Metro Athletic Conference. For more information regarding eligibility, rules, standards, and sports offered, contact the Physical Education Office.

INTRAMURAL SPORTS

The College provides a campus intramural program for students and staff and encourages participation. For additional information contact the intramural director in the Physical Education Office or the Student Development Office.

HOUSING

The College does not operate dormitories of any kind or maintain listings of available housing for students. Students who do not reside in the area must make their own arrangements for housing.

CAMPUS SECURITY

Campus security is required by State law to "protect and police buildings and grounds of state institutions of higher learning." Because all laws of the state are in full force within the campus community, specially trained and educated personnel are commissioned to protect College property, personal property, and individuals on campus. Security officers are certified peace officers. They have the power to enforce all Texas laws and rules, regulations, and policies of the College, including the Code of Student Conduct.



VI. FINANCIAL AID

Students who need financial aid to attend college can apply for grants, scholarships, loans, or job opportunities. These aid opportunities are provided in the belief that education should not be controlled by the financial resources of students.

Students needing financial assistance are encouraged to complete an application well in advance of registration for the semester they wish to attend. The Financial Aid Needs Analysis Forms take 4-6 weeks to process. Early application allows the Financial Aid Office to prepare a realistic financial aid package.

Some of the grant, scholarship, loan and job programs available to students are outlined in the following paragraphs. Contact the Financial Aid Office for detailed information about any program and deadlines for applying. Some of the colleges have established priority deadlines for state grants and scholarships.

PELL GRANT

The PELL Grant is a federally funded program designed to help undergraduate pre-baccalaureate students continue their education. The purpose of this program is to provide eligible students with a "foundation" of financial aid to assist with the costs of attending college.

All students applying for financial assistance through the College must apply for a PELL Grant. Other types of financial aid may be awarded if the student applies and qualifies.

Eligibility for PELL Grant is based on financial need and satisfactory academic progress. Applications and additional information concerning the PELL Grant Program are available in the Financial Aid Office and in the counseling offices of most high schools. The application process takes approximately 4-6 weeks. In response to the PELL Grant application, a Student Aid Report (SAR) will be mailed directly to the student. The student should immediately review the SAR to make

sure it is correct and bring it to the Financial Aid Office. The exact amount of the PELL Grant award will depend upon the aid index on the SAR and the number of hours for which the student enrolls. In order to be eligible, a student must enroll for at least 6 credit hours each semester. Students must apply each year.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (SEOG)

The SEOG is a Federal program to help pre-baccalaureate students with eligibility based solely on need. The amount of a SEOG award depends on the individual student's needs, the total number of applicants, and funds available. To be eligible, students must enroll for at least 6 credit hours, make satisfactory progress toward their educational goal and have financial need. Students must apply each year for the SEOG.

TEXAS PUBLIC EDUCATIONAL GRANT (TPEG)

The TPEG is a State program to assist students attending state-supported colleges. To be eligible, students must make satisfactory progress toward the educational goal and have financial need according to an approved needs analysis system. Grants are awarded by eligibility on a first-come, first-served basis for credit and some non-credit courses. Students must apply each year for the TPEG.

TEXAS PUBLIC EDUCATIONAL — STATE STUDENT INCENTIVE GRANT (TPE-SSIG)

The TPE-SSIG is a state program. To qualify, students must enroll for at least 6 credit hours per semester, make satisfactory progress toward their educational goal, be a Texas resident, and have financial need. Grants are awarded by eligibility on a first-come, first-served basis. Student must apply each year for the TPE-SSIG.

HINSON-HAZLEWOOD COLLEGE STUDENT LOAN PROGRAM

The Hinson-Hazlewood College Student Loan Program is a State operated, federally insured student loan program. To qualify, students must enroll on at least a half-time basis (6 credit hours in the fall or spring semester), be a Texas resident, and demonstrate financial need. Students must apply for all other types of aid before applying for this loan, and they must apply each year to renew the loan. New students must have applied for and been denied a Texas Guaranteed Student Loan before applying for this loan.

Repayment begins nine to twelve months after the student ceases to be enrolled for at least one-half the normal course load.

Repayment may extend up to 10 years, but a minimum payment of \$30 a month is required. The interest rate is 9% a year (adjusted).

STUDENT EMPLOYMENT

The College Work/Study Program is a Federal program to assist students through jobs both on and off campus. To be eligible, students must demonstrate financial need, be enrolled in 6 or more credit hours, and make satisfactory progress toward their educational goal. Students will generally work 20 hours per week. The Student Employment Program provides some jobs on campus for students who do not meet the financial need requirement of the College Work/Study Program. Students must be enrolled in 6 or more credit hours and make satisfactory progress toward their educational goal. Students will generally work 20 hours per week.

SOCIAL SECURITY ADMINISTRATION

The Social Security Administration has offered benefits to students who met its criteria. However, most students who are not currently receiving Social Security Educational Benefits will not be eligible in Fall, 1982, because of a phase out of this program as part of the Omnibus



Budget Reconciliation Act. Students need to contact the regional Social Security Administration Office regarding eligibility. The Admissions Office on campus acts as liaison between students and the Social Security Administration after eligibility has been established.

BUREAU OF INDIAN AFFAIRS

The Bureau of Indian Affairs offers educational benefits to American Indian students. Students need to contact the regional Bureau of Indian Affairs Office regarding eligibility.

Bureau of Indian Affairs
1100 Commerce - Room 2C44
Dallas, Texas 75202

VOCATIONAL REHABILITATION

The Texas Rehabilitation Commission offers assistance for tuition and fees to students who are vocationally handicapped as a result of a physically or mentally disabling condition. This assistance is generally limited to students not receiving other types of aid. For information, contact Texas Rehabilitation Commission, 13612 Midway, Suite 530, Dallas, Texas 75234.



VETERANS' BENEFITS PROGRAM

The Veterans' Benefits Program is coordinated by the Veterans' Affairs Office of the College. Services of this office include counseling the veteran concerning benefits, Veterans Administration loans, Veterans Administration work study programs, financial problems, career counseling, and other areas related to the veteran's general welfare.

When testing indicates that a veteran should enroll in developmental courses such as reading, writing, or math, the student may pursue these courses with no charge to his or her benefits. Tutoring services are also available to the veteran who is having learning difficulties in one or more subjects. The veteran student should be aware of some of the Veterans Administration guidelines. Violation of these guidelines causes complications in receiving monthly benefits or loss of those benefits.

1. Class attendance is mandatory.
Failure to attend class results in

suspension from class.

2. A veteran student who plans to enroll in developmental courses must be tested and show a need in basic skills before enrolling in these courses.
3. A veteran student enrolled in television courses must be pursuing more on-campus credit hours than hours taken by television.
4. A veteran student who has successfully completed credit hours at another college or university must submit a transcript from that college or university before applying for V.A. benefits. The transcript is evaluated and credit granted when applicable.
5. A veteran student must enroll in courses required for a degree program. Information on degree requirements may be obtained from the Registrar's Office.
6. A veteran student who withdraws or who is dropped from all courses attempted during a semester is considered as making unsatisfactory progress by the V.A. and may lose future benefits. A veteran student must also maintain a satisfactory grade point average as outlined in the catalog.

The above V.A. regulations are subject to change without notice. Students should contact the Veterans' Affairs Office in order to be aware of current regulations and procedures.

HAZLEWOOD ACT

Under the Hazlewood Act certain veterans who have exhausted remaining educational benefits from the Veterans Administration can attend Texas state-supported institutions and have some fees waived. To be eligible, students must have been residents of Texas at the time they entered the service, have an honorable discharge and must now be residents of Texas. To apply, students must submit a Hazlewood Act application and a copy of their discharge papers to the Financial Aid Office.

ACADEMIC PROGRESS REQUIREMENT

Students who receive financial aid are required by government regulations to make measureable progress toward the completion of their course of study. For a detailed description of the requirements, contact the Financial Aid Office.

The 2.0 Grade Point average (GPA) Requirement

- a. Students funded for full-time course loads must complete a full-time course load with a minimum GPA of 2.0 each semester an award is made.
- b. Students funded for part-time course loads are expected to achieve a minimum GPA of 2.0 on all courses funded each semester. No drops or withdrawals are allowed.

Academic Compliance

- a. If the 2.0 GPA requirement is not met once, a warning notice is mailed to the student. Transfer students entering the District on probation are considered to be in this category.
- b. If the 2.0 GPA requirement is not met twice, no award is made for six months.
- c. A third chance may be approved at the discretion of the Financial Aid Director after the six-month suspension period. The student must sign acknowledgement of conditional approval before the award is made. If the 2.0 GPA requirement is not met three times, no award is made for two years.
- d. A fourth chance may be approved at the discretion of the Financial Aid Director after the two-year suspension period. If approved, the student must sign a warning notice before the award is made.

Students may appeal the Financial Aid Director's decisions to the Vice President of Student Service. The appeal must be in writing. The Financial Aid Office reserves the right to review and cancel awards at any time because of (1) failure to maintain an acceptable academic



record. (2) failure to meet the minimum course load requirements. (3) changes in the financial status of the student or the student's family, or (4) failure by the student to meet any regulations governing the program from which the student is receiving aid. It is understood that the student is aware of the conditions under which aid is offered and agrees to meet all requirements.

SHORT-TERM LOANS

The College offers students short-term loans. Normally, a loan would not exceed tuition, fees, and books, but check with the Financial Aid Office for further details. The loan must be repaid within sixty to ninety days or before the end of the semester in which the money is borrowed.

JOB PLACEMENT SERVICES

The Placement Office is available to assist any student in job placement, either on or off-campus. Job openings are listed in the Placement Office. The Placement Office also works directly with students and community employers to locate jobs and students qualified to fill them. Career placement assistance is available for students nearing the end of their course of study. In addition to listing full-time career opportunities, the Placement Office also assists students in developing resumes, preparing for interviews, and developing successful job search strategies.

VII. DALLAS COUNTY COMMUNITY COLLEGE DISTRICT STUDENT RIGHTS AND RESPONSIBILITIES

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- (2) The college has jurisdiction for disciplinary purposes over a person who was a student at the time he allegedly violated a Board policy, college regulation, or administrative rule.

c. Definitions: In this code, unless the context requires a different meaning:

- (1) "Class day" means a day on which classes before semester or summer session final examinations are regularly scheduled or on which semester or summer session final examinations are given;
- (2) "Vice President of Student Services" means the Vice President of Student Services, his delegate(s) or his representative(s);
- (3) "Director of Student Development" means the Director of Student Development, his delegate(s) or his representative(s);
- (4) "Director of Campus Security" means the Director of Campus Security, his delegate(s) or his representative(s);
- (5) "President" means the president of a college of the Dallas County Community College District;
- (6) "Student" means a person enrolled in a college of the Dallas County Community College District, or a person accepted for admission to the college;
- (7) All vice presidents, deans, associate deans, assistant deans, directors, and division chairmen of the college for the purposes of this code shall be called "administrators";
- (8) "Complaint" is a written summary of the essential facts constituting a violation of a Board policy, college regulation or administrative rule;
- (9) "Board" means the Board of Trustees, Dallas County Community College District;
- (10) "Chancellor" means the Chancellor of the Dallas County Community College District;
- (11) "Major violation" means one which can result in suspension or expulsion from the college or denial of degree;
- (12) "Minor violation" means one which can result in disciplinary action other than suspension or expulsion from the college or denial of degree.

2. Acquaintance with Policies, Rules, Regulations

The Student Rights and Responsibilities statement is subject to change by action of the Board of Trustees. Each student is expected to be fully acquainted with all published policies, rules, and regulations of the College, copies of which shall be available to each student for review at the offices of the Vice President of Student Services and Student Development. The college will hold each student responsible for compliance with these policies, rules and regulations. The student is responsible for obtaining published materials to update the items in this statement. Students are also expected to comply with all federal, state and local laws. This principle extends to conduct off campus which is likely to have an adverse effect on the College or on the educational process.

3. Campus Regulations

- a. **Basic Standard:** The basic standard of behavior requires a student
 - (1) Not to violate any municipal, state, or federal laws, and
 - (2) Not to interfere with or disrupt the orderly educational processes of any college of the Dallas County Community College District.

A student is not entitled to greater immunities or privileges before the law than those enjoyed by other citizens generally.

- b. **Enumerated Standards:** The succeeding regulations describe offenses for which disciplinary proceedings may be initiated, but the college expects from its students a higher standard of conduct than the minimum required to avoid discipline. The college expects all students to obey the law, to show respect for properly constituted authority, to perform contractual obligations, to maintain absolute integrity and a high standard of individual honor in scholastic work, and to observe standards of conduct

1. General Provisions

a. Preamble

The primary goal of the District and its Colleges is to help students of all ages achieve effective living and responsible citizenship in a fast changing region, state, nation and world. The District's primary concern is the student. Each college attempts to provide an environment which views students in a wholistic manner encouraging and inviting them to learn and grow independently, stressing the process and the acquisition of skills. Such an environment presupposes both rights and responsibilities. Free inquiry and expression are essential parts of this freedom to learn and of room for growth and development. However, this environment also demands appropriate opportunities and conditions in the classroom, on the campus and, indeed, in the larger community. Students must exercise these freedoms with responsibility.

The responsibility to secure and to respect general conditions conducive to the freedom to learn and to grow is shared by all members of the college community. Dallas County Community College District has a duty to develop policies and procedures which provide and safeguard this liberty and this environment. The purpose of this statement is to enumerate the essential provisions for student freedom to learn and grow and the responsibilities which go with these liberties as established by the Dallas County Community College District Board of Trustees.

b. Scope

- (1) This code applies to individual students and states the function of student, faculty, and administrative staff members of the college in disciplinary proceedings.

appropriate for a community of scholars. In short, a student enrolled in the college assumes an obligation to conduct himself in a manner compatible with the college function as an educational institution.

(1) **Student Identification:**

a. **Issuance and Use:** I.D. cards will be distributed during the first week of school and will be required for the following events and services: library usage, concerts, lectures, campus movies, use of student center facilities, voting in campus elections, and tickets for campus and community events. All I.D. cards are the property of the college and must be shown on request of a representative of the college. Students are required to be in possession of their I.D. cards at all times and are prohibited from loaning their I.D. cards to any other person for any reason. Likewise, it is prohibited to use any other card except the one issued by the college.

b. **Replacement Cards:** If lost, duplicate I.D. cards may be obtained in the business office by payment of a \$4.00 charge.

(2) **Use of District Facilities:** Each college of the Dallas County Community College District is a public facility entrusted to the Board of Trustees and college officials for the purpose of conducting the process of education. Activities which appear to be compatible with this purpose are approved through a procedure maintained in the Student Development Office.

Activities which appear to be incompatible or in opposition to the purposes of education are normally disapproved. It is imperative that decision be made prior to an event in order to fulfill the trust of the public. No public facility could be turned over to the indiscriminate use of anyone for a platform or forum to promote random causes. These reasonable controls are exercised by college officials for the use of facilities to ensure the maximum use of the college for the purpose for which it was intended.

Therefore, anyone planning an activity at one of the colleges of the Dallas County Community College District which requires space to handle two or more persons to conduct an activity must have prior approval. Application forms to reserve space must be acquired through the Student Development Office. This office also maintains a statement on procedures for reserving space.

(3) **Speech and Advocacy:** Students have the right of free expression and advocacy; however, the time, place, and manner of exercising speech and advocacy shall be regulated in such a manner to ensure orderly conduct, non-interference with college functions or activities, and identification of sponsoring groups or individuals. Meetings must be registered with the Student Development Office. An activity may be called a meeting when the following conditions prevail at that activity:

- (a) When two or more persons are sitting, standing, or lounging so as to hear or see a presentation or discussion of a person or a group of persons.
- (b) When any special effort to recruit an audience has preceded the beginning of discussions or presentations.
- (c) When a person or group of persons appears to be conducting a systematic discussion or presentation on a definable topic.

(4) **Disruptive Activities:** Any activity which interrupts the scheduled activities or processes of education may be classified as disruptive; thus, anyone who initiates in any way any gathering leading to disruptive activity will be violating college regulations and/or state law.

The following conditions shall normally be sufficient to classify behavior as disruptive:

- (a) Blocking or in any other way interfering with access to any facility of the college.
- (b) Inciting others to violence and/or participating in violent behavior, e.g., assault; loud or vulgar language spoken publicly; or any form of behavior acted out for the purpose of inciting and influencing others.

- (c) Holding rallies, demonstrations, or any other form of public gathering without prior approval of the college.

- (d) Conducting any activity which causes college officials to be drawn off their scheduled duties to intervene, supervise or observe the activity in the interest of maintaining order at the college.

Furthermore, the Vice President of Student Services shall enforce the provisions of the Texas Education Code, Section 4.30(following)

Education Code Section 4.30 provides:

- (a) No person or group of persons acting in concert may willfully engage in disruptive activity or disrupt a lawful assembly on the campus or property of any private or public school or institution of higher education or public vocational and technical school or institute.
- (b) For the purposes of this section, disruptive activity means
 - (1) Obstructing or restraining the passage of persons in an exit, entrance, or hallway of any building without the authorization of the administration of the school;
 - (2) Seizing control of any building or portion of a building for the purpose of interfering with any administrative, educational, research, or other authorized activity;
 - (3) Preventing or attempting to prevent by force or violence or the threat of force or violence any lawful assembly authorized by the school administration.
 - (4) Disrupting by force or violence or the threat of force or violence a lawful assembly in progress; or
 - (5) Obstructing or restraining the passage of any person at an exit or entrance to said campus or property or preventing or attempting to prevent by force or violence or by threats thereof the ingress or egress of any person to or from said property or campus without the authorization of the administration of the school.
- (c) For the purposes of this section, a lawful assembly is disrupted when any person in attendance is rendered incapable of participating in the assembly due to the use of force or violence or due to a reasonable fear that force or violence is likely to occur.
- (d) A person who violates any provisions of this section is guilty of a misdemeanor and upon conviction is punishable by a fine not to exceed \$200 or by confinement in jail for not less than 10 days nor more than 6 months, or both.
- (e) Any person who is convicted the third time of violating this section shall not thereafter be eligible to attend any school, college, or university receiving funds from the State of Texas for a period of two years from such third conviction.
- (f) Nothing herein shall be construed to infringe upon any right of free speech or expression guaranteed by the Constitutions of the United States or the State of Texas.

(5) **Drinking of Alcoholic Beverages:** Each college of the Dallas County Community College District specifically forbids the drinking of or possession of alcoholic beverages on its campus.

(6) **Drugs:** Each college of the Dallas County Community College District specifically forbids the illegal possession, use, sale or purchase of drugs, narcotics, or hallucinogens on or off campus.

(7) **Gambling:** State law expressly forbids gambling of any kind on state property.

(8) **Hazing:** Each college of the Dallas County College District, as a matter of principle and because it is a violation of state law, is opposed to and will endeavor to prevent hazing activities which involve any of the following factors singly or in conjunction:

- (a) Any actions which seriously imperil the physical well-being of any student (all walks and all calisthenics are held to be actions which seriously imperil the physical well-being of students and are, therefore, accordingly specifically prohibited).
- (b) Activities which are by nature indecent, degrading, or morally offensive.
- (c) Activities which by their nature may reasonably be assumed to have a degrading effect upon the mental or moral attitude of the persons participating therein.

The institutional policy is one discouraging all activities incompatible with the dignity of the college

student and exercising disciplinary correction over such of activities as escape from reasonable control, regulation, and decency. From the institution's point of view, the reasonability for the control of hazing activities, if engaged in by an organization, rests in the elected and responsible officials of the group, as individuals, and in the group as a whole, since it sets and approves the policy to be followed in these matters. It is accordingly recommended that all groups be informed that both their officers and the group as a whole, will be held singularly and collectively responsible for any actions considered to be unreasonable, immoral, and irresponsible with the policy limits detailed above. Individual activity falling in this category shall be handled on an individual basis and will result in disciplinary action.

(9) Academic Dishonesty

- (a) The Vice President of Student Services may initiate disciplinary proceedings against a student accused of academic dishonesty.
- (b) "Academic dishonesty" includes, but is not limited to, cheating on a test, plagiarism and collusion.
- (c) "Cheating on a test" includes:
 - (i) Copying from another student's test paper;
 - (ii) Using, during a test, materials not authorized by the person giving the test;
 - (iii) Collaborating with another student during a test without authority;
 - (iv) Knowingly using, buying, selling, stealing, transporting or soliciting in whole or part the contents of an unadministered test.
 - (v) Substituting for another student, or permitting another student to substitute for one's self, to take a test; and
 - (vi) Bribing another person to obtain an unadministered test or information about an unadministered test.
- (d) "Plagiarism" means the appropriation of another's work and the unacknowledged incorporation of that work on one's written work offered for credit.
- (e) "Collusion" means the unauthorized collaboration with another person in preparing written work offered for credit.

(10) Financial Transactions with the College

- (a) No student may refuse to pay or fail to pay debt he owes to the college.
- (b) No student may give the college a check, draft or order with intent to defraud the college.
- (c) A student's failure to pay the college the amount due on a check, draft, or order, on or before the fifth class after the day the business office sends written notice that the drawee has rightfully refused payment on the check, draft or order, is prima facie evidence that the student intended to defraud the college.
- (d) The Vice President of Student Services may initiate disciplinary proceedings against a student who has allegedly violated the provisions of this section.

(11) Other Offenses

- (a) The Vice President of Student Services may initiate disciplinary proceedings against a student who:
 - (i) Conducts himself in a manner that significantly interferes with college teaching, research, administration, disciplinary proceedings or other college activities, including its public service functions, or with other authorized activities on college premises;
 - (ii) Damages, delays or destroys college property or property of a member of the college community or campus visitor;
 - (iii) Knowingly gives false information in response to requests from the college;
 - (iv) Engages in hazing, as defined by state law and college regulations;
 - (v) Forges, alters or misuses college documents, records or I.D. cards;

- (vi) Violates college policies or regulations concerning parking, registration of student organizations, use of college facilities, or the time, place and manner of public expression;
- (vii) Fails to comply with directions of college officials acting in the performance of their duties;
- (viii) Conducts himself in a manner which adversely affects his suitability as a member of the academic community or endangers his own safety or the safety of others;
- (ix) Illegally possesses, uses, sells, or purchases drugs, narcotics, hallucinogens, or alcoholic beverages on or off campus;
- (x) Commits any act which is classified as an indictable offense under either state or federal law.

4. Disciplinary Proceedings

a. Administrative Disposition

(i) Investigation, Conference and Complaint

- (a) When the Vice President of Student Services' Office receives information that a student has allegedly violated a Board policy, college regulation, or administrative rule, the Vice President or a subordinate delegated by him shall investigate the alleged violation. After completing the preliminary investigation, the Vice President may:
 - (i) Dismiss the allegations as unfounded, either before or after conferring with the student; or
 - (ii) Proceed administratively and impose disciplinary action; or
 - (iii) Prepare a complaint based on the allegation for use in disciplinary hearings along with a list of witnesses and documentary evidence supporting the allegation.
- (b) The President may take immediate interim disciplinary action, suspend the right of a student to be present on the campus and to attend classes, or otherwise alter the status of a student for violation of a Board policy, college regulation, or administrative rule, when in the opinion of such official the interest of the college would best be served by such action.
- (c) No person shall search a student's personal possessions for the purpose of enforcing this code unless the individual's prior permission has been obtained. Searches by law enforcement officers of such possessions shall be only as authorized by law.

(2) Summons

- (a) A student may be summoned to appear in connection with an alleged violation by sending him a letter by certified mail, return receipt requested, addressed to the student at his address appearing in the registrar's office records. It is the student's responsibility to immediately notify the registrar's office of any change of address.
- (b) The letter shall direct the student to appear at a specified time and place not less than three class days after the date of the letter. The letter shall also describe briefly the alleged violation and shall state the Vice President of Student Services' intention to handle the allegation as a minor or major violation.
- (c) The Vice President of Student Services may place on disciplinary probation a student who fails without good cause to comply with a letter of summons, or the Vice President may proceed against the student as stated below in the sections of **Disposition and Penalties**.

(3) Disposition

- (a) At a conference with a student in connection with an alleged minor or major violation, the Vice President shall advise the student of his rights.
- (b) A student may refuse administrative disposition of the alleged violation and, on refusal, is entitled to a hearing. If a student accepts administrative disposition, he shall sign a statement that he understands the nature of the charges, his right

to a hearing or to waive the same, the penalty imposed, and his waiver of the right of appeal.

- (c) The Vice President of Student Services shall prepare an accurate, written summary of each administrative disposition and forward a copy to the student (and, if the student is a minor, to the parent or guardian of the student), to the Director of Student Development and to the Director of Campus Security.
- (d) The Vice President of Student Services may impose disciplinary action as follows:
 - (i) For minor violations, any action authorized by this code in the section on **Penalties** (from 1-8, i.e. Admonition through Suspension of eligibility).
 - (ii) For major violations, any action authorized by this code in the section on **Penalties** (from 1-11, i.e. Admonition through Expulsion).

b. Student Discipline Committee

(1) Composition; Organization

- (a) When a student refuses administrative disposition of either a major or a minor violation, he is entitled to a hearing before the Student Discipline Committee. This request must be made in writing on or before the sixth working day following administrative disposition. The Committee shall be composed of **equal numbers of students, administrators and faculty** of the college. The committee shall be appointed by the President for each hearing on a rotating basis or on a basis of availability.
- (b) The Student Discipline Committee shall elect a Chairman from the appointed members. The Chairman of the committee shall rule on the admissibility of evidence, motions, and objections to procedure, but a majority of the committee members may override the Chairman's ruling. All members of the Committee are eligible to vote in the hearing.
- (c) **Chairman:** The Chairman shall set the date, time, and place for the hearing and may summon witnesses, and require the production of documentary and other evidence.
- (d) The Vice President of Student Services shall represent the college before the Student Discipline Committee and present evidence to support any allegations of violations of Board policy, college regulation, or administrative rules. The Vice President of Student Services may be assisted by legal counsel when in the opinion of the Vice President of Student Services the best interests of the student or the college would be served by such assistance.

(2) Notice

- (a) The Committee Chairman shall by letter notify the student concerned of the date, time and place for the hearing. The letter shall specify a hearing date not less than three (3) nor more than ten (10) class days after the date of the letter. If the student is under 18 years of age, a copy of the letter shall be sent to the parents or guardian.
- (b) The Chairman may for good cause postpone the hearing so long as all interested parties are notified of the new hearing date, time and place.
- (c) The Student Discipline Committee may hold a hearing at any time if the student has actual notice of the date, time, and place of the hearing, and consents in writing thereto, and the President, or his designated representative in his absence, states in writing to the committee that, because of extraordinary circumstances the requirements are inappropriate.
- (d) The notice shall specify whether the charge or charges are considered minor violations or major violations; shall direct the student to appear before the committee on the date and at the time and place specified, and shall advise the student of the following rights:

- (i) To a private hearing;
- (ii) To appear alone or with legal counsel (if charges have been evaluated as a major violation or if the college is represented by legal counsel);
- (iii) To have his parents or legal guardian present at the hearing;
- (iv) To know the identity of each witness who will testify against him;
- (v) To cause the committee to summon witnesses, require the production of documentary and other evidence possessed by the college, and to offer evidence and argue in his own behalf;
- (vi) To cross-examine each witness who testifies against him;
- (vii) To have a stenographer present at the hearing to make a stenographic transcript of the hearing, at the student's expense, but the student is not permitted to record the hearing by electronic means;
- (viii) To appeal to the Faculty-Student Board of Review, subject to the limitations established by the **Faculty-Student Board of Review** section.
- (e) The Vice President of Student Services may suspend a student who fails without good cause to comply with a letter sent under this section, or, at his discretion, the Vice President of Student Services may proceed with the hearing in the student's absence.

(3) Preliminary Matters

- (a) Charges arising out of a single transaction or occurrence, against one or more students, may be heard together or, either at the option of the Committee or upon request by one of the students-in-interest, separate hearings may be held.
- (b) At least three (3) class days before the hearing date, the student concerned shall furnish the Committee Chairman with:
 - (i) The name of each witness he wants summoned and a description of all documentary and other evidence possessed by the college which he wants produced;
 - (ii) An objection that, if sustained by the Chairman of the Student Discipline Committee, would prevent the hearing;
 - (iii) The name of legal counsel, if any, who appear with him;
 - (iv) A request for a separate hearing, if any, and the grounds for such a request.
- (c) When the hearing is set under waiver of notice or for other good cause determined by the Committee Chairman, the student concerned is entitled to furnish the information described in paragraph (b) hereof at any time before the hearing begins.

(4) Procedure

- (a) The hearing shall be informal and the Chairman shall provide reasonable opportunities for witnesses to be heard. The college may be represented by staff members of the Vice President of Student Services' office, legal counsel and other persons designated by the President. The hearing shall be open to the public so long as space is available, but may include the following persons on the invitation of the student:
 - (i) Representatives of the College Council;
 - (ii) A staff member of the College newspaper;
 - (iii) Representatives of the Faculty Association;
 - (iv) Student's legal counsel, and
 - (v) Members of the student's immediate family.
- (b) The Committee shall proceed generally as follows during the hearing:
 - (i) The Vice President of Student Services shall read the complaint;
 - (ii) The Vice President of Student Services shall inform the student of his rights, as stated in the notice of hearing;

- (iii) The Vice President of Student Services shall present the College's case;
- (iv) The student may present his defense;
- (v) The Vice President of Student Services and the student may present rebuttal evidence and argument;
- (vi) The Committee will vote the issue of whether or not there has been a violation of Board policy, college regulation or administrative rule; if the Committee finds the student has violated a Board policy, college regulation or administrative rule, the Committee will determine an appropriate penalty.
- (vii) The Committee shall inform the student of the decision and penalty, if any;
- (viii) The Committee shall state in writing each finding of a violation of Board policy, college regulation or administrative rule, and the penalty determined. Each committee member concurring in the finding and penalty shall sign the statement. The Committee may include in the statement its reasons for the finding and penalty.

(5) Evidence

- (a) Legal rules of evidence shall not apply to hearings before the Student Discipline Committee, and the Committee may admit and give probative effect to evidence that possesses probative value and is commonly accepted by reasonable men in the conduct of their affairs. The Committee shall exclude irrelevant, immaterial and unduly repetitious evidence. The Committee shall recognize as privileged communications between a student and a member of the professional staff of the Health Center, Counseling and Guidance Center, or the Office of the Vice President of Student Services where such communications were made in the course of performance of official duties and when the matters discussed were understood by the staff member and the student to be confidential. Committee members may freely question witnesses.
- (b) The Committee shall presume a student innocent of the alleged violation until it is convinced by clear and convincing evidence that the student violated a Board policy, college regulation or administrative rule.
- (c) All evidence shall be offered to the Committee during the hearing and made a part of the hearing record. Documentary evidence may be admitted in the form of copies of extracts, or by incorporation by reference. Real evidence may be photographed or described.
- (d) A student defendant may not be compelled to testify against himself.

(6) Record

- (a) The hearing record shall include; a copy of the notice of hearing; all documentary and other evidence offered or admitted in evidence; written motions, pleas, and any other materials considered by the Committee; and the Committee's decisions.
- (b) If notice of appeal is timely given as hereinafter provided, the Vice President of Student Services, at the direction of the Committee Chairman, shall send the record to the Board of Review, with a copy to the student appellant on or before the tenth class day after the notice of appeal is given.

b. Faculty-Student Board of Review

(1) Right to Appeal

- (a) In those cases in which the disciplinary penalty imposed was as prescribed in the section on **Penalties**, (6) Restitution through (11) Expulsion, the student may appeal the decision of the Student Discipline Committee, or the decision of the President in an interim action to the Faculty-Student Board of Review. Disciplinary actions taken under the section on Penalties, (1) Admonition through (5) Bar against readmission,

cannot be appealed beyond the Student Discipline Committee. A student appeals by giving written notice to the Vice President of Student Services on or before the third class day after the day the decision or action is announced. This notice may be informal, but shall contain the student's name, the date of the decision or action, the name of his legal counsel, if any, and a simple request for appeal.

- (b) Notice of appeal timely given suspends the imposition of penalty until the appeal is finally decided, but interim action may be taken as authorized under the section on **Disciplinary Disposition** which authorizes the President to take immediate interim disciplinary action.

(2) Board Composition

- (a) The President shall appoint Boards of Review to hear appeals under this code. Each such Board shall have three faculty representatives and two students appointed by the President in alphabetical rotation from available members of the Review Panel.
- (b) The Review Panel shall have twenty-five (25) members, selected as follows:
 - (i) Fifteen (15) representatives from the faculty, recommended by the President of the Faculty Association and appointed by the President of the college for three-year staggered terms.
 - (ii) Ten (10) students shall be appointed by the President of the college for one-year terms. Student members must have an overall 2.0 average on all college work attempted at the time of the nomination and must not have a discipline case pending.
- (c) The President shall instruct the Board of Review members on student disciplinary policies, rules, and hearing procedures as soon as practicable after the members are appointed.

(3) Consideration of Appeal

- (a) The Board of Review shall consider each appeal on the record of the Student Discipline Committee and for good cause shown, original evidence and newly discovered evidence may be presented.
- (b) Upon timely appeal, the President shall select a Board of Review as aforesaid and shall notify the student appellant and the Vice President of Student Services in writing of the time, date, and place of the hearing as determined by the President.
- (c) The President will designate one of the members of the Board of Review to serve as chairman.
- (d) Appellate hearings will follow the procedure prescribed in this code.
- (e) The Board of Review will hear oral argument and receive written briefs from the student appellant and Vice President of Student Services or their representatives.
- (f) The Board of Review, after considering the appeal, may affirm the Student Discipline Committee's decision, reduce the penalty determined or otherwise modify the decision of the Student Discipline Committee, or dismiss the complaint.
- (g) The Board of Review shall modify or set aside the finding of violation, penalty or both, if the substantive rights of the student were prejudiced because the Student Discipline Committee's finding of facts, conclusions or decisions were:
 - (i) In violation of a federal or state law, Board policy, college regulation, administrative rule, or authorized procedure;
 - (ii) Clearly erroneous in view of the reliable probative and substantial evidence on the complete hearing; or
 - (iii) Capricious, or characterized by abuse of discretion or clearly unwarranted exercise of discretion.
- (h) The Board of Review may not increase a penalty assessed by the Student Discipline Committee.

(4) Petition for Administrative Review

- (a) A student is entitled to appeal in writing to the Board of Trustees through the President, the Chancellor, and the Chairman of the Board. The President shall automatically review every penalty of expulsion.
- (b) A petition for review is informal but shall contain, in addition to the information required, notice of appeal, the date of the Board of Review's action on the student's appeal and his reasons for disagreeing with the Board's action. A student shall file his petition with the President on or before the third class day after the day the Board of Review announces its action on the appeal. If the President rejects the petition, and the student appellant wishes to petition the Chancellor, he shall file the petition with the Chancellor on or before the third class day after the President rejects the petition in writing.
- (c) The President, the Chancellor, and the Board of Trustees in their review may take any action that the Student Discipline Committee is authorized to take. They may receive written briefs and hear oral argument during their review.

4. Penalties

- a. **Authorized Disciplinary Penalties:** The Vice President of Student Services, the Student Discipline Committee, or the Faculty-Student Board of Review may impose one or more of the following penalties for violation of a Board policy, college regulation, or administrative rule:

- (1) Admonition
- (2) Warning probation
- (3) Disciplinary probation
- (4) Withholding of transcript or degree
- (5) Bar against readmission
- (6) Restitution
- (7) Suspension of rights or privileges
- (8) Suspension of eligibility for official athletic and non-athletic extracurricular activities
- (9) Denial of degree
- (10) Suspension from the college
- (11) Expulsion from the college

- b. **Definitions:** The following definitions apply to the penalties provided above:

- (1) An "Admonition" is a written reprimand from the Vice President of Student Services to the student on whom it is imposed.
- (2) "Warning probation" indicates that further violations may result in suspension. Disciplinary probation may be imposed for any length of time up to one calendar year and the student shall be automatically removed from probation when the imposed period expires.
- (3) "Disciplinary probation" indicates that further violations may result in suspension. Disciplinary probation may be imposed for any length of time up to one calendar year and the student shall be automatically removed from probation when the imposed period expires. Students will be placed on disciplinary probation for engaging in activities such as the following: being intoxicated, misuse of I.D. card, creating a disturbance in on or campus facilities, and gambling.
- (4) "Withholding of transcript or degree" is imposed upon a student who fails to pay a debt owed the college or who has a disciplinary case pending final disposition. The penalty terminates on payment of the debt or final disposition of the case.
- (5) "Bar against readmission" is imposed on a student who has left the college on enforced withdrawal for disciplinary reasons.
- (6) "Restitution" is reimbursement for damage to or misappropriation of property. Reimbursement may take the form of appropriate service to repair or otherwise compensate for damages.
- (7) "Disciplinary suspension" may be either or both of the following:
 - (a) "Suspension of rights and privileges" is an elastic penalty which may impose limitations or restrictions to fit the particular case.
 - (b) "Suspension of eligibility for official athletic and

non-athletic extracurricular activities" prohibits, during the period of suspension, the student on whom it is imposed from joining a registered student organization; taking part in a registered student organization's activities, or attending its meetings or functions; and from participating in an official athletic or non-athletic extracurricular activity. Such suspension may be imposed for any length of time up to one calendar year. Students will be placed on disciplinary suspension for engaging in activities such as the following: having intoxicating beverages in any college facility; destroying state property or student's personal property; giving false information in response to requests from the college; instigating a disturbance or riot; stealing; possession, use, sale or purchase of illegal drugs on or off campus; any attempt at bodily harm, which includes taking an overdose of pills or any other act where emergency medical attention is required; and conviction of any act which is classified as a misdemeanor or felony under state or federal law.

- (8) "Denial of Degree" may be imposed on a student found guilty of scholastic dishonesty and may be imposed for any length of time up to and including permanent denial.
- (9) "Suspension from the College" prohibits, during the period of suspension, the student on whom it is imposed from being initiated into an honorary or service organization; from entering the college campus except in response to an official summons; and from registering, either for credit or for non-credit, for scholastic work at or through the college.
- (10) "Expulsion" is permanent severance from the college. This policy shall apply uniformly to all of the colleges of the Dallas County Community College District.

In the event any portion of this policy conflicts with the state law of Texas, the state law shall be followed.

6. Parking and Traffic

(a) Reserved Parking Areas

These reserved areas are designated by signs; all other parking areas are open and are non-reserved.

- (1) Handicapped persons, College visitors
- (2) Motorcycles

(b) Tow Away Areas

- (1) Handicapped persons area
- (2) Fire Lanes
- (3) Parking or driving on campus in areas other than those designated for vehicular traffic
- (4) Parking in "No Parking" zone
- (5) Parking on courtyards

(c) General Information

- (1) College parking areas are regulated by state, municipal and campus statutes. College campus officers are commissioned to cite violators.
- (2) All vehicles which park on the campus of the College must bear a parking decal emblem. The parking decal may be secured from the College Security Division or during fall and spring registration periods. No fee is charged for the decal.
- (3) Placement of decal emblem:
 - (a) Cars: Lower left corner of rear bumper.
 - (b) Motorcycles, Motor Bikes, etc., Gas tank
- (4) **Campus Speed Limits***
 - (a) 10 M.P.H. in parking areas
 - (b) 20 M.P.H. elsewhere on campus.

* Unless otherwise posted.
- (5) All handicapped parking must be authorized and handicapped decal displayed on vehicle prior to parking in handicapped reserved areas.

(d) Campus Parking and Driving Regulations

- (1) The Colleges, acting by and through their Board of Trustees are authorized by state law to promulgate, adopt and enforce campus parking and driving regulations. Campus officers are commissioned police officers, and as such, all traffic and criminal violations are within their jurisdiction.
- (2) The College has authority for the issuance and use of suitable vehicle identification insignia as permits to

park and drive on campus. Permits may be suspended for the violation of campus parking and driving regulations.

- (3) The College campus officers have the authority to issue the traffic tickets and summons of type now used by the Texas Highway Patrol. It is the general policy to issue these tickets for violations by visitors and persons holding no College permit. These tickets are returnable to the Justice of Peace Court in which the college is located. Furthermore the campus officers are authorized to issue campus citations which are returnable to the Department of Safety and Security at the Business Office.
- (4) Under the direction of the College President, the Department of Safety and Security shall post proper traffic and parking signs.
- (5) Each student shall file an application for a parking permit with the Security Office upon forms prescribed by the College.
- (6) These traffic regulations apply not only to automobiles but to motor bikes, motorcycles and ordinary bicycles.

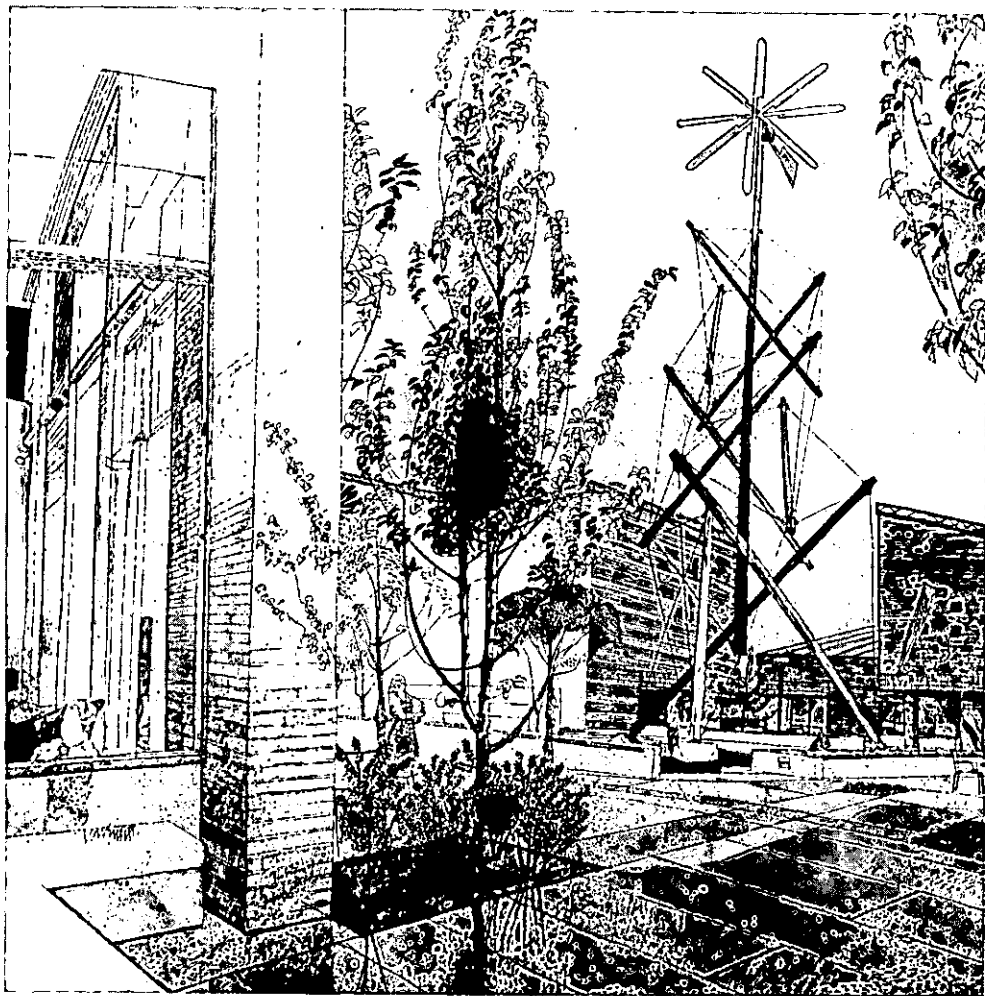
(e) Procedures

- (1) All motor vehicles must be parked in the parking lots between the parking lines. Parking in all other areas, such as campus drives, curb areas, courtyards, and loading zones, will be cited.
- (2) Citations may be issued for:
 - (a) Speeding (the campus speed limit is 20 M.P.H. except where posted)
 - (b) Reckless driving
 - (c) Double parking
 - (d) Driving wrong way in one-way lane
 - (e) Parking in "No Parking" lane
 - (f) Improper parking (parts of car outside the limits of a parking space).
 - (g) Parking in wrong area (for example, handicapped or "No Parking" areas)
 - (h) Parking trailers or boats on campus
 - (i) Parking or driving on campus in areas other than those designated for vehicular traffic
 - (j) Violations of all state statutes regulating vehicular traffic.
 - (k) Failure to display parking permit
 - (l) Collision with another vehicle or any sign or immovable object
- (3) A citation is notice that a student's parking permit has been suspended. The service charge to reinstate the parking and driving permit must be paid at the Business Office. Failure to pay the service charge will result in the impoundment of a vehicle that is parked on campus and whose decal has been suspended.
- (4) A person who receives a campus citation shall have the right within ten days to appeal in writing to the Vice President of Business, accompanied by whatever reason the person feels that the citation should not have been issued.
- (5) If it becomes necessary to remove an improperly parked vehicle, an independent wrecker operator may be called. The owner of the vehicle will be charged the wrecker fee in addition to the service charge for reinstatement of driving and parking privileges.
- (6) Visitors to campus are also required to follow College regulations.
- (7) The service charge for reinstatement of the parking and driving permit will be \$5.00 per citation.
- (8) Four citations per car during an academic year will result in permanent suspension of parking and driving permit for the balance of that academic year. A new total commences on August 1 of each year.
- (9) The College is not responsible for the theft of vehicles on campus or their contents.



Brookhaven College

Information, Administration, Faculty



BROOKHAVEN COLLEGE

Brookhaven College is the youngest of the seven colleges of the Dallas County Community College District. Opening in 1978, it marked the culmination of a thirteen year college development program begun in 1965.

Brookhaven's strategic location in fast growing North Dallas has already catapulted the school into a position of prominence both as an educational institution and as an art and cultural center.

Brookhaven's "open-door" policy gives the community a broad range of opportunities for lifelong learning. The College is dedicated to helping students of all ages and all backgrounds develop academic, social, cultural and work skills which will enable them to achieve their full potential and improve their quality of life. A college of alternatives and flexibility, the instructional emphasis is designed to allow individual learning rates and styles to emerge. Curriculum offerings keep the active community in mind and provide a balance between Academic Transfer Programs, Technical/Occupational Programs and Community Service Courses.

Brookhaven's outstanding faculty, excellent facilities and innovative programs combine to make an impressive educational package to serve a changing and growing community.

The Campus

Brookhaven College is located on a

200 acre campus bounded by Alpha Road, Valley View Lane, Marsh Lane, and Farmers Branch Creek. The campus design emphasizes outdoor spaces and activities, including a 1.8 mile path for hiking, biking and jogging which includes an 18-station Parcourse trail. Landscaping utilizes native Texas plants from various parts of the state and a developing arboretum/botanical resource area is planned for the future.

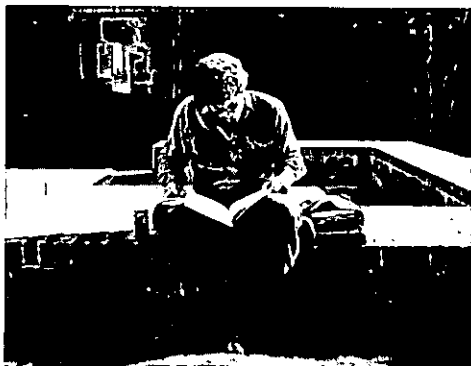
In addition to outstanding classroom and laboratory facilities, the campus also has an excellent 750-seat performance hall, an arena theatre and gymnasium which attract many visitors to the campus for athletic and fine arts events.

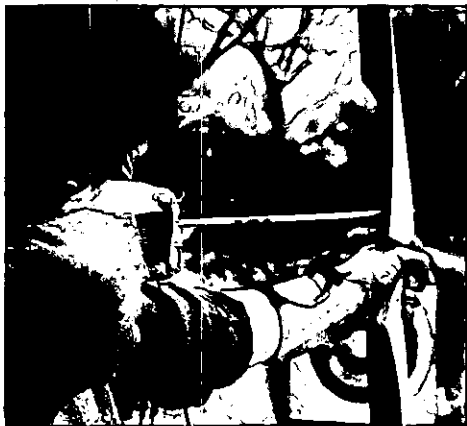
Accreditation

Brookhaven College is a member of

- The Southern Association of Colleges and Schools
- The American Association of Community and Junior Colleges
- The Texas Public Community/Junior College Association
- The Texas Association of Colleges and Universities
- The League for Innovation in the Community College

Brookhaven is recognized and sanctioned by the Coordinating Board of the Texas College and University System and the Texas Education Agency, and is an Affirmative Action Equal Opportunity Institution.





BROOKHAVEN COLLEGE ADMINISTRATION

President	H. Deon Holt	620-4803
Vice President of Instruction	John E. Pickelman	620-4802
Vice President of Student Services	Joseph R. Sullivan	620-4801
Vice President of Business Services	Brenda L. Floyd	620-4801
Dean of Occupational and Continuing Education	Jo-Ann O. Killinger	620-4802
Asso. Dean, Student Support Services	Gary L. Matney	620-4700
Asso. Dean, Learning Resource Center	Larry M. Wilson	620-4850
Asst. Dean Community Service	Lindle Grigsby	620-4715
Asst. Dean of Institution	Paul Forte	620-4803
Director of Counseling	John D. Williams	620-4830
Director of Health Services	Naomi R. Garrett	620-4195
Director of Public Information	Hollis Walker	620-5200
Director of Student Development	Lou A. King	620-4116
Asst. Director Community Service	Sue Lichten	620-4723

DIVISION CHAIRPERSONS

Business and Automotive	Marilyn A. Kolesar	620-4160
Communications	Joy A. Babb	620-4770
Fine and Applied Arts	Charles D. McAdams	620-4730
Science and Mathematics	Larry J. Darlage	620-4750
Social Science and Child Development	Eugene H. Gibbons	620-4130
Physical Education and Human Development	John D. Williams	620-4830

BROOKHAVEN FACULTY AND STAFF

Alders, Johnyce	Counselor/Instructor Human Development
Oklahoma State Univ., B.S., M.A.	
Attner, Raymond E., Jr.	Business
California State Univ. at Long Beach, B.S.; Northeast Louisiana Univ., M.B.A.	
Austin, Robert R.	Music
North Texas State Univ., B.Mus., M.Mus.	
Babb, Joy Ellen	Chairperson, Communications
North Texas State Univ., B.S., M.Ed., Ed D.	
Bagot, Diane S.	Resource Consultant
Southern Methodist Univ., B.A., Univ. of Texas at Dallas, M.S.	
Benner, Marcia Rea	Mathematics
Michigan State Univ., B.S., M.A., Georgia State Univ., Ed.S., Ph.D.	
Brumbach, Mary A.	Art/Humanities
Mary Hardin-Baylor College, B.A.; North Texas State Univ., M.A., Ph.D.	
Burton, Sharon LaVerne	Office Occupations
Lamar Univ., B.B.A.; North Texas State Univ. M.B.E.	
Butler, Rodney, H.	Music
California State Univ., B.A.; Univ. of California at Santa Barbara, M.A., Ph.D.	
Cinclair, Carol L.	Reading/Learning Disabilities
Mount Mary College, B.S.; Northern State College, M.S.	
Clements, Kathleen	Psychology
The Univ. of Texas at Austin, B.A., M.Ed., Ph.D.	
Cox, Beverly Anne	Director of Library Services
Oklahoma State Univ., B.S.; Univ. of Oklahoma, M.L.S.	
Crawford, Carrie	Assistant Director of Student Development
Univ. of Texas at Austin, B.A.	
Darlage, Larry James	Chairperson, Science/Math
Indiana Central Univ., A.B., Iowa State Univ., Ph.D.	
Dennehy, Michael A.	Counselor/Instructor Human Development
North Texas State Univ., B.S.; Southern Methodist Univ., M.A.	
Fleming, Delryn	English
Southwestern Univ. B.A.; East Texas State Univ., M.A.	
Flowers, Annette L.	Business
Southern Univ., B.S.; North Texas State Univ., M.B.E.	
Floyd, Brenda	Vice President, Business Services
Dallas Baptist College, B.S., North Texas State Univ., M.S.	
Forte, Paul Jr.	Assistant Dean, Instruction
Langston Univ., B.S.; Clarion State College, M.S.	
Gabryl, Belinda	Art
Univ. of Texas at Austin, B.F.A.; Yale Univ., M.F.A.	
Garrett, Naomi	Director, Health Services
East Texas State Univ., B.S., M.Ed.	
Gibbons, H. Eugene	Chairperson, Social Science/Child Development
Quachita College, B.A.; Oklahoma City Univ., M.A.; The Univ of Oklahoma, Ph.D.	
Grigsby, Lindle	Assistant Dean, Community Service
Abilene Christian University, B.S., M.S.	
Hamm, Michael	Mathematics
Univ. of Texas at Arlington, B.A., M.A.	
Herring, Gus W.	Economics/Computer Science
St. Edward's Univ., R.S.; Univ. of Dallas, M.B.A., M.S.	
Herron, Carolyn	German/English
Southern Methodist Univ., B.A.; Univ. of Colorado, M.A.	
Hilton, Maynard	Mid-Management
Univ. of New Hampshire, B.S.; Univ. of Arkansas, M.S.; Boston Univ., M.Ed.	
Holt, H. Deon	President
Univ. of Utah, B.A., M.A.; Univ. of Texas at Austin, Ph.D.	

Horton, Diane	Counselor/Instructor Human Development
Southeastern Louisiana Univ., B.A.; North Texas State Univ., M.Ed.	
Houston, Robert Stewart	Physical Education
Univ. of Texas at Austin, B.S.; North Texas State Univ., M.Ed.	
Jackman, Phillip H.	Theatre
Nebraska Wesleyan Univ., B.A.; Univ. of Texas at Austin, M.F.A.	
Jacobs, Greg	Counselor/Instructor Human Development
North Texas State Univ., B.A., M.Ed.	
Jamieson, Avis T.	Physical Education
Univ. of Texas at Austin, B.S., M.Ed.	
Kalady, Mary Lou	Mid Management
Illinois Institute of Technology, B.S.; Governor's State Univ., M.B.A.	
Kasparian, Glenn D.	Biology
Tufts Univ., B.S.; Univ. of Texas at Dallas, M.S.	
Kauffman, Judith	Advertising Art
Cornell Univ., B.F.A.; Antioch Univ., M.F.A.	
Killinger, Jo-Ann	Dean of Occupational and Continuing Education
Ohio State Univ., B.S.; Michigan State Univ., M.A.	
King, Lou A.	Director, Student Development
East Texas State Univ., B.S.	
Kolesar, Marilyn Ann	Chairperson, Business/Automotive
North Texas State Univ., B.B.A., M.B.E.	
Lee, Linda Hope	Resource Consultant
Fisk Univ., B.A.; American Univ., M.A.	
Lichten, Sue	Assistant Director, Community Services
Bryn Mawr College, B.A.	
Link, Stephen William	Counselor/Instructor Human Development
State Univ. of New York at Oneonta, B.A.; State Univ. of New York at Albany, M.S., E.D.S.	
Linn, Hilda L.	Child Development
Texas Christian Univ., B.A.; North Texas State Univ., M.S.	
Little, Robert Douglas	Government
North Texas State Univ., B.S.; State Univ. of New York at Buffalo, Ed.M.	
Lynch, Eileen	Government
North Texas State Univ., B.A.; M.A.; Ph.D.	
Matney, Gary L.	Associate Dean of Student Support Services
Washburn Univ., B.A.; Southern Illinois Univ., M.S.	
McAdams, Charles D.	Chairperson, Fine/Applied Arts
Memphis State Univ., M.A.; Louisiana State Univ., B.M.Ed.; East Texas State Univ., Ph.D.	
McCool, Kenneth B.	Mathematics
Univ. of Texas at Arlington, B.S., North Texas State Univ., M.S., Ph.D.	
Mills, Marian	Communications
Texas Woman's Univ., B.A., M.A.	
Moore, Michael Lee	Director of Media Services
Kilgore Jr. College, A.A.; East Texas State Univ., B.S., M.S.	
Neal, John F.	Journalism
Univ. of Houston, B.A.; Univ. of Texas at Austin, M.A.	
Nelson, Eileen	French/Spanish
Univ. of Dallas, B.A.; Tulane Univ., M.A.	
Pendleton, Julianne K.	Mathematics
Univ. of Texas at Austin, B.A., M.Ed., Ph.D.	
Perez, Julie Marie	Counselor/Instructor Human Development
North Texas State Univ., B.S., M.Ed.	
Pickelman, John E.	Vice President, Instruction
Albion College, A.B.; Univ. of Missouri at Kansas City, M.A.; Univ. of Texas at Austin, Ph.D.	
Proctor, Robert D.	Automotive
Odessa College, A.A.S.; Tarleton State College, B.S.	
Quetin, Jane	Dance
San Jose State Univ., B.A.; Univ. of Utah, M.F.A.	

Rager, Brenda Marie	Music
North Texas State Univ., B.A., M.M.	
Reese, Steve	Automotive
Stephen F. Austin State Univ., B.B.A., M.Ed.	
Schuchat, Marjorie	English
Allegheny College, B.A.; Wayne State Univ., M.A.	
Schuster, Steve	History
Texas Christian Univ., B.A., M.A., Ph.D.; Univ. of Utah, M.S.	
Shelp, Phillip R.	Biology
Concordia Teachers College, B.S.; Arizona State Univ., M.S.	
Shirey, Jack Raymond	Accounting
North Texas State Univ., B.B.A.; Univ. of Dallas, M.B.A.	
Smith, James Patrick	Chemistry
North Texas State Univ., B.S.; Southern Methodist Univ., M.B.A.; North Texas State Univ., Ph.D.	
Stewart, W. Gene	Mid-Management
Univ. of Arkansas, B.S.E.; Southern Methodist Univ., M.Ed.; North Texas State Univ. Ed.D.	
Stock, Bob	Physical Education
San Jose State College, B.A.; East Texas State Univ., M.S.	
Storey, Phillip G., Jr.	Counselor/Instructor Human Development
Bethany Nazarene College, B.A.; North Texas State Univ., M.Ed.	
Strickland, Eva Lorene	English
Stephen F. Austin Univ., B.A., M.A.	
Sullivan, Joseph R.	Vice President, Student Services
Holy Cross Seminary, B.A.; Univ. of Wisconsin, M.A.	
Sullivan, Marilyn	Retail Distribution and Marketing
Kansas State Univ., B.S., M.S.	
Taylor, Donald Lee	Art
Louisville School of Art, B.F.A.; Washington Univ., M.F.A.	
Thompson, Dora Jean	Philosophy
North Texas State Univ., B.A.; Texas Christian Univ., M.A.	
Thompson, Tommy	Mathematics
Southern Louisiana Univ., B.S.; Univ. of Texas at Austin, M.A., Ph.D.	
Thrash, Mary	Reading
Texas Wesleyan College, B.S.; Southern Methodist Univ., M.A.	
Todd, Susan	Geology
Univ. of Texas at Austin, B.S., Univ. of Texas at Dallas, M.A.T.	
Tully, Bettie L.	Counselor/Instructor Human Development
Our Lady of the Lake College, B.A., M.Ed.; East Texas State Univ., Ed.D.	
Venza, Stephanie	English
Lamar Univ., B.A.; Univ. of Texas at Austin, M.A.; Univ. of Texas at Arlington, M.A.	
Walker, Hollis	Director of Public Information
North Texas State Univ., B.A.	
Ward, Marilyn	History
Univ. of Texas at Austin, B.A.; Southern Methodist Univ., M.A.	
Weaver, David L.	Accounting
Oklahoma State Univ., B.S., North Texas State Univ., M.B.A.	
Weston, Joan Laveson	Sociology
Univ. of Michigan, B.A.; Southern Methodist Univ., M.A.; North Texas State Univ., Ph.D.	
Wieland, Janice Carole	Communications/Speech
Univ. of Illinois, B.A.; Southern Methodist Univ., M.A.	
Williams, Gerald	Automotive
East Texas State Univ., B.S.	
Williams, John D.	Chairperson, Physical Education/Human Development
Louisiana Technical Univ., B.A., M.A.	
Wilson, Larry M.	Associate Dean, Learning Resource Center
East Texas State Univ., B.S., M.Ed.; North Texas State Univ., Ph.D.	
Wood, Jane Roberts	English
Texas Tech Univ., B.A.; Texas Christian Univ., M.A.	



Brookhaven College

Curriculum Patterns
For Technical/Occupational Programs



ACCOUNTING ASSOCIATE

(Associate Degree)

The Accounting Associate two-year program is designed to prepare a student for a career as a junior accountant in business, industry and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles.

The Associate in Applied Arts and Sciences Degree is awarded for successful completion of at least 63 credit hours as outlined below. Students desiring a less comprehensive program that emphasizes bookkeeping procedures and practices should consider the General Office Certificate with elective emphasis on accounting careers. The General Office Certificate is available in the Office Careers Program.

		CREDIT HOURS
SEMESTER I		
ACC 201	Principles of Accounting I	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or*	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
OFC 160	Office Machines	3
		<u>15</u>
SEMESTER II		
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or*	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
† OFC 172	Beginning Typing	3
		<u>15</u>
SEMESTER III		
ACC 203	Intermediate Accounting I	3
ACC 204	Managerial Accounting	3
ECO 201	Principles of Economics I	3
GVT 201	American Government	3
† Electives		3-6
		<u>15-18</u>
SEMESTER IV		
ACC 238	Cost Accounting or	3
ACC 239	Income Tax Accounting	
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
† Electives		3-6
		<u>15-18</u>
Minimum Hours Required:		63

† Electives — A minimum of 9 credit hours must be selected from the following:

ACC 205	Business Finance	3
ACC 207	Intermediate Accounting II	3
ACC 238	Cost Accounting	3
ACC 239	Income Tax Accounting	3
ACC 703-713	Cooperative Work Experience	3
803-813		
ACC 704-714	Cooperative Work Experience	4
804-814		
BUS 143	Personal Finance	3
BUS 237	Organizational Behavior	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science and Data Processing	4
MGT 206	Principles of Marketing	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
SPE 105	Fundamentals of Public Speaking	3
Any CS or DP Programming course		

* ENG 101 and ENG 102 may be substituted for COM 131 and COM 132 provided that SPE 105 is also taken.

† Students who can demonstrate proficiency by previous training, experience, or placement tests may substitute a course from the electives listed for this program.

ADVERTISING ART

(Associate Degree)

This program will provide entry-level skills for careers in graphic design and illustration. Courses in the program provide for the development of adequate technical, interpersonal, business and communication skills to function effectively as a free-lance illustrator or designer or as a staff person within an advertising agency or department.

		CREDIT HOURS
SEMESTER I		
ADV 110	Introduction to Advertising Art	3
ART 110	Design I	3
ART 114	Drawing I	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15
SEMESTER II		
ADV 111	History and Psychology of Visual Communications	3
ADV 120	Lettering and Layout	4
ADV 121	Beginning Illustration	4
ART 111	Design II	3
COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
ADV 201	Illustration for Reproduction	4
ADV 203	Advanced Graphics Design	4
ADV 703	Cooperative Work Experience or	3
ADV 704		(4)
PSY 131	Human Relations	3
		14-15
SEMESTER IV		
ADV 202	Advanced Illustration	4
ADV 204	Advanced Presentations	4
ADV 205	Professional Practices	3
ADV 713	Cooperative Work Experience or	3
ADV 714	Cooperative Work Experience or	(4)
† Electives		
HUM 101	Introduction to Humanities	3
		17-18
Minimum Hours Required:		63

Suggested Electives:

ACC 131	Bookkeeping I	3
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
MGT 153	Small Business Management	3
DES 135	Textiles	3
RDM 292	Fashion Design	3
GA 134	Basic Camera Operations	3
GA 136	Copy Preparation	3
DFT 183	Basic Drafting	4
PHO 110	Introduction to Photography and Photo-Journalism	3

AUTO BODY TECHNOLOGY

(Associate Degree)

This program introduces the student to all facets of auto body repair and painting. Emphasis is placed upon the development of the necessary skills and knowledge required to function successfully in this industry. The program of study includes technical aspects of metal behavior combined with correct repair and refinishing procedures.

		CREDIT HOURS
SEMESTER I		
AB 111	Basic Metal Principles*	3
AB 112	Applied Basic Metal Principles*	2
AB 121	Basic Paint Principles*	3
AB 122	Applied Basic Paint Principles*	2
AB 245	Welding for Auto Body or	3
WE 101	Basic Welding Principles	
MTH 195	Technical Mathematics	3
		16
SEMESTER II		
AB 113	Minor Metal Repair*	3
AB 114	Applied Minor Metal Repair*	2
AB 123	Paint Blending and Spot Repair Techniques*	3
AB 124	Applied Paint Blending and Spot Repair Techniques*	2
COM 131	Applied Composition and Speech	3
PHY 131	Applied Physics	4
		17
SEMESTER III		
AB 211	Major Panel Replacement*	3
AB 212	Applied Major Panel Replacement*	2
AB 213	Major Collision and Frame Repair	3
PSY 131	Human Relations	3
† Elective		4
		15
SEMESTER IV		
AB 139	Body Shop Operations	3
AB 221	Advanced Paint Techniques*	3
AB 222	Applied Advanced Paint Techniques*	2
AB 235	Estimating	3
AB 803	Cooperative Work Experience or	3
AB 804	Cooperative Work Experience	(4)
		14-15
Minimum Hours Required:		62

† Electives — Must be selected from the following:

AT 118	Electrical Systems	4
AT 221	Heating and Air Conditioning	4
AT 225	Front End	4

*Must be enrolled in concurrently (at the same time): AB 111/112, AB 113/114, AB 121/122, AB 123/124, AB 211/212, AB 221/222

AUTO BODY TECHNOLOGY

(Certificate)

This program is designed to train a student in all facets of auto body and repair and painting. Emphasis is placed upon those skills needed to train the student to become a successful auto body repair person. This program offers the student a certificate in Auto Body Technology upon successful completion of the program.

		CREDIT HOURS
SEMESTER I		
AB 111	Basic Metal Principles*	3
AB 112	Applied Basic Metal Principles*	2
AB 121	Basic Paint Principles*	3
AB 122	Applied Basic Paint Principles*	2
AB 123	Paint Blending and Spot Repair Techniques*	3
AB 124	Applied Paint Blending and Spot Repair Techniques*	2
AB 245	Welding for Auto Body or	3
WE 101	Basic Welding Principles	
		18
SEMESTER II		
AB 113	Minor Metal Repair*	3
AB 114	Applied Minor Metal Repair*	2
AB 211	Major Panel Replacement*	3
AB 212	Applied Major Panel Replacement*	2
AB 221	Advanced Paint Techniques*	3
AB 222	Applied Advanced Paint Techniques*	2
		15
SEMESTER III		
AB 139	Body Shop Operations	3
AB 213	Major Collision and Frame Repair	3
AB 235	Estimating	3
AB 803 or	Cooperative Work Experience	3
AB 804	Cooperative Work Experience	(4)
		12-13
Minimum Hours Required:		45

*Must be enrolled in concurrently (at the same time): AB 111/112, AB 113/114, AB 121/122, AB 123/124, AB 211/212, AB 221/222

AUTOMOTIVE PARTS SALES AND SERVICE

(Associate Degree)

This program has been developed to provide students with the basic skills needed for entry-level employment in the automotive parts sales and service industry. Students will develop skills through actual experience in the automotive parts laboratories and through cooperative on-the-job training. All the courses will be presented in an individualized, self-paced format. Successful completion of the program leads to the Associate in Applied Arts and Sciences Degree.

		CREDIT HOURS
SEMESTER I		
AP 100	Orientation to the Auto Parts Industry	2
AP 110	Auto Parts Safety	1
AP 130	Automotive Equipment, Tools and Accessories	2
AT 121	Engine Repair I	4
MGT 136	Principles of Management	3
MTH 130	Business Mathematics	3
		15
SEMESTER II		
AP 150	Auto Parts Sales Techniques	2
AP 160	Auto Parts Inventory Operations	2
AP 713	Cooperative Work Experience or	3
AP 714	Cooperative Work Experience	(4)
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
MGT 230	Salesmanship	3
COM 131	Applied Composition and Speech	3
		16-17
SEMESTER III		
AP 170	Auto Vehicle Components	3
AP 190	Role of the Counterperson	1
AP 803	Cooperative Work Experience or	3
AP 804	Cooperative Work Experience	(4)
AT 118	Electrical Systems	4
MGT 153	Small Business Management	3
CS 175	Introduction to Computer Science	3
		17-18
SEMESTER IV		
AP 180	Order Processing and Analysis	2
AP 813	Cooperative Work Experience or	3
AP 814	Cooperative Work Experience	(4)
MGT 206	Principles of Marketing	3
GVT 201	American Government	3
HUM 101	Introduction to Humanities	3
Elective		3
		17-18
Minimum Hours Required:		66

AUTOMOTIVE PARTS COUNTER ASSISTANT

(Certificate)

This one-year program has been developed to provide students with the basic skills needed for entry-level employment in the automotive parts industry. Students will develop skills through actual experiences in the automotive parts laboratories and through cooperative on-the-job training. All the courses will be presented in an individualized, self-paced format. Students may elect to earn a certificate after completing the technical courses or they may wish to apply the certificate courses toward the Associate Arts and Sciences degree.

		CREDIT HOURS
SEMESTER I		
AP 100	Orientation to the Auto Parts Industry	2
AP 110	Auto Parts Safety	1
AP 130	Automotive Equipment, Tools and Accessories	2
AP 150	Auto Parts Sales Techniques	2
AP 160	Auto Parts Inventory Operations	3
MTH 130	Business Mathematics	3
COM 131	Applied Composition and Speech	3
		16
SEMESTER II		
AP 170	Auto Vehicle Components	3
AP 180	Order Processing and Analysis	2
AP 190	The Role of the Counterperson	1
AP 713	Cooperative Work Experience or	3
AP 714	Cooperative Work Experience	(4)
AT 121	Engine Repair I	4
MGT 153	Small Business Management	3
Elective		3
		19-20
Minimum Hours Required:		35

Suggested Electives:

MGT 230	Salesmanship	3
MGT 206	Principles of Marketing	3
MGT 136	Principles of Management	3
ACC 131	Bookkeeping I	3
ACC 201	Principles of Accounting I	3
BUS 237	Organizational Behavior	3
CS 175	Introduction to Computer Science	3

AUTOMOTIVE TECHNOLOGY

(Associate Degree)

The purpose of this program is to prepare students for entry level employment as an automotive technician. This program of study will include theory, diagnosis, repair, overhaul and maintenance of automobiles. Emphasis is placed on operational theory, practical skills and accepted shop procedures.

		CREDIT HOURS
SEMESTER I		
AT 108	Minor Vehicle Services	4
AT 110	Engine Repair I	4
AT 112	Engine Repair II	4
COM 131	Applied Composition and Speech I	3
MTH 195	Technical Mathematics	3
		18
SEMESTER II		
AT 114	Engine Analysis and Tune-Up	4
AT 116	Fuel and Emission Systems	4
AT 118	Electrical Systems	4
PHY 131	Applied Physics	4
		16
SEMESTER III		
AT 221	Heating and Air Conditioning	4
AT 223	Brake Systems	4
AT 225	Front End Systems	4
† Elective		3-4
		15-16
SEMESTER IV		
AT 227	Standard Transmissions and Drive Trains	4
AT 229	Automatic Transmissions I	4
AT 231	Automatic Transmissions II	4
AT 703	Cooperative Work Experience or	3
AT 714	Cooperative Work Experience	(4)
‡ Elective		3
		18-19
Minimum Hours Required:		67

† Elective — Must be selected from the following:

AB 245	Welding for Auto Body	3
BUS 105	Introduction to Business	3
WE 101	Basic Welding and Cutting Practices	3
AT 803	Cooperative Work Experience or	3
AT 814	Cooperative Work Experience	(4)

‡ Elective — Must be selected from the following:

GVT 201	American Government	3
HD 105	Basic Processes of Interpersonal Relationship	3
HUM 101	Introduction to the Humanities	3
PSY 131	Human Relations	3

AUTOMOTIVE TECHNOLOGY

(Certificate)

The purpose of this program is to train persons for entry level positions in the field of Automotive Technology. A certificate is issued upon successful completion of the following listed courses.

		CREDIT HOURS
SEMESTER I		
AT 108	Minor Vehicle Services	4
AT 110	Engine Repair I	4
AT 112	Engine Repair II	4
		12
SEMESTER II		
AT 114	Engine Analysis and Tune-Up	4
AT 116	Fuel and Emission Systems	4
AT 118	Electrical Systems	4
		12
SEMESTER III		
AT 221	Heating and Air Conditioning	4
AT 223	Brake Systems	4
AT 225	Front End Systems	4
		12
SEMESTER IV		
AT 227	Standard Transmissions and Drive Trains	4
AT 229	Automatic Transmissions I	4
AT 231	Automatic Transmissions II	4
AT 703	Cooperative Work Experience or	3
AT 714	Cooperative Work Experience	(4)
		15-16
Minimum Hours Required:		51

CHILD DEVELOPMENT ASSOCIATE

(Associate Degree)

The Child Development program offers students an in-depth study of young children from birth to twelve years of age in conjunction with the Parent/Child Study Center that provides students day-to-day involvement with young children. The program is designed to enable students to provide an optimal learning and caring environment for children.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services**	4
CD 140	Early Childhood Development, 0-3 Years**	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
SOC 101	Introduction to Sociology	3
† Elective		3-4
		<u>16-17</u>
SEMESTER II		
CD 137	Early Childhood Learning Environments, Activities and Materials**	4
CD 141	Early Childhood Development, 3-5 Years**	3
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	(3)
CD 814	Cooperative Work Experience	(4)
HD 106	Personal and Social Growth or	3
PSY 105	Introduction to Psychology	
HST 102	History of the United States	3
† Elective		3
		<u>18-20</u>
SEMESTER III		
CD 100	Directed Participation in Early Childhood Programs* or	4
CD 233	Directed Participation in Early Childhood Programs	
CD 239	Studies in Child Guidance**	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
GVT 201	American Government	3
† Elective		2-4
		<u>15-17</u>

continued

SEMESTER IV

CD 150	Nutrition, Health and Safety of the Young Child**	3
CD 200	Application of Child Development Learning Theories* or	4
CD 244	Application of Child Development Learning Theories	
HUM 101	Introduction to the Humanities	3
SOC 203	Marriage and the Family	3
† Electives		2-4
		<u>15-17</u>

Minimum Hours Required:

64

† Electives — Must be selected from the following:

CD 125	Infant and Toddler Learning Environments, Activities, and Materials	4
CD 127	Early Childhood Development, 5-12 Years	3
CD 203	Parents and the Child Caregiver/Teacher	3
CD 209	Early Childhood Development Special Projects	3
CD 236	The Special Child: Growth and Development	3
CD 238	Introduction to Administration of Child-Care Programs	3
CD 246	Advanced Administrative Practices for Child-Care Facilities	3
CD 250	Supportive Services for Exceptional Children	3
CD 251	Learning Programs for Children with Special Needs	3
CD 253	Abuse Within the Family	3
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	3
CD 814	Cooperative Work Experience	4
TPD 141	Beginning Sign Language	4

* CD 100 and CD 200 are taken as one-hour courses concurrently with the six (6) required CD courses(**) and two (2) of the following CD electives: CD 125, CD 127, CD 203, CD 238, or CD 246.

CD 100 and CD 200 are repeated for credit for a total of eight (8) hours and are *equivalent to CD 233 and CD 244*.

CHILD DEVELOPMENT — SPECIAL CHILD CERTIFICATE

(Certificate)

This certificate program is planned to emphasize the needs of special children and their families.

		CREDIT HOURS
SEMESTER I		
CD 140	Early Childhood Development, 0-3 Years	3
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 236	The Special Child: Growth and Development	3
CD 239	Studies in Child Guidance	3
HD 106	Personal and Social Growth	3
		<u>15</u>
SEMESTER II		
CD 141	Early Childhood Development, 3-5 Years	3
CD 250	Supportive Services for Exceptional Children	3
CD 251	Learning Programs for Children with Special Needs	4
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	(3)
CD 814	Cooperative Work Experience	(4)
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
† Elective		<u>3-4</u>
		<u>18-21</u>
Minimum Hours Required:		33

† Elective — Must be selected from the following:

CD 125	Infant and Toddler Learning Environments, Activities, and Materials	4
CD 127	Early Childhood Development, 5-12 Years	3
CD 253	Abuse Within the Family	3
TPD 141	Beginning Sign Language	4

CDA TRAINING CERTIFICATE

(Certificate)

This certificate program provides course work to assist the student to prepare for the CDA (Child Development Associate) assessment process. Students interested in applying for this national credential should consult a Child Development instructor.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services	4
CD 140	Early Childhood Development, 0-3 Years	3
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 239	Studies in Child Guidance	3
HD 106	Personal and Social Growth	3
† Elective		3-4
		<u>19-20</u>
SEMESTER II		
CD 137	Early Childhood Learning Environments, Activities, and Materials	4
CD 141	Early Childhood Development, 3-5 Years	3
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	(3)
CD 814	Cooperative Work Experience	(4)
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
† Elective		3-4
† Elective		3-4
		<u>18-22</u>
Minimum Hours Required:		37

† Electives — Must be selected from the following:

CD 125	Infant and Toddler Learning Environments, Activities, and Materials	4
CD 203	Parents and the Child Caregiver/Teacher	3
CD 209	Early Childhood Development Special Projects	3
CD 236	The Special Child: Growth and Development	3
CD 238	Introduction to Administration of Child-Care Programs	3
CD 246	Advanced Administrative Practices for Child-Care Facilities	3
CD 250	Supportive Services for Exceptional Children	3
CD 251	Learning Programs for Children with Special Needs	4
CD 253	Abuse Within the Family	3
TPD 141	Beginning Sign Language	4

CHILD DEVELOPMENT — ADMINISTRATIVE OPTION

(Certificate)

This one-year program will provide an opportunity for the student to study administrative procedures for child care facilities.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services	4
CD 140	Early Childhood Development, 0-3 Years* or	3
CD 141	Early Childhood Development, 3-5 Years	
CD 238	Introduction to Administration of Child Care Programs	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 131	Applied Composition and Speech	3
		16
SEMESTER II		
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 239	Studies in Child Guidance	3
CD 246	Advanced Administrative Practices for Child Care Facilities	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 132	Applied Composition and Speech	3
HD 106	Personal and Social Growth or	3
PSY 105	Introduction to Psychology	
		18
Minimum Hours Required:		34

*CD 100 and/or CD 200 — To be taken as one (1) credit-hour courses concurrently with each required child development course listed above. Check with the instructor before enrolling.

CHILD DEVELOPMENT — INFANT-TODDLER OPTION

(Certificate)

This one-year program provides for an in-depth study of infant-toddler growth and development, programs and services.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services	4
CD 140	Early Childhood Development, 0-3 Years	3
CD 239	Studies in Child Guidance	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 131	Applied Composition and Speech	3
		<u>16</u>
SEMESTER II		
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 125	Infant and Toddler Learning Environments, Activities and Materials	4
CD 203	Parents and the Child Caregiver/Teacher	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 132	Applied Composition and Speech	3
HUM 101	Introduction to the Humanities	3
		<u>19</u>
Minimum Hours Required:		35

*CD 100 and/or CD 200 — To be taken as one (1) credit-hour courses concurrently with each required child development course listed above. Check with the instructor before enrolling.

DATA PROCESSING PROGRAMMER

(Associate Degree)

This curriculum is intended for the preparation of entry-level or trainee computer programmers who will work in an applications setting to support the general, administrative, and organizational information processing function of industry, commerce, business and government service. It is designed as a two-year career program to prepare students for jobs. Graduates should be able to work in conjunction with a systems analyst in the programming environment usually found in a medium to large job shop. It is intended to provide a sufficient foundation so that graduates with experience and continued learning may advance in career paths appropriate to their own particular interests and abilities.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
BUS 105	Introduction to Business or	3
MGT 136	Principles of Management	
DP 137	Data Processing Mathematics or any business math*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 201	Principles of Accounting I**	3
		15
SEMESTER II		
DP 133	Beginning Programming (COBOL)	4
DP 138	Systems Analysis and Data Processing Logic	3
ECO 201	Principles of Economics I or	3
ECO 202	Principles of Economics II	
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		16
SEMESTER III		
DP 136	Intermediate Programming (COBOL)	4
DP 142	RPG Programming or	3
DP 244	Basic Programming	
DP 233	Operating Systems and Communications	4
ACC 203	Intermediate Accounting or	3
ACC 238	Cost Accounting	
† Elective		3-4
		17-18
SEMESTER IV		
DP 231	Advanced Programming (ALC)	4
DP 232	Applied Systems	4
DP 236	Advanced COBOL Techniques or other 200 level DP or CS course	3-4
Any approved DP or CS course		3-4
		14-16
Minimum Hours Required:		62

continued

† Electives — Must be selected from the following:

Any DP or CS course (including DP 700-800 Cooperative Work Experience)

DP 129	Data Entry Concepts	4
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
MTH 202	Introductory Statistics	3
ENG 210	Technical Writing	3
BUS 105	Introduction to Business	3
ECO 201	Principles of Economics I	3

* MTH 111, MTH 112, MTH 130 or an equivalent business math course

**ACC 131 — Bookkeeping I, and ACC 132 — Bookkeeping II may be substituted for

ACC 201 — Principles of Accounting

NOTE: Students may obtain credit toward a degree or certificate for only one of each of the pairs of courses listed below:

DP 133 or CS 184

DP 231 or CS 186

DP 244 or CS 182

CS 175 or CS 174



MANAGEMENT CAREERS — ADMINISTRATIVE MANAGEMENT OPTION

(Associate Degree)

The Administrative Management option offers a continuation of the traditional management and business studies. This option is designed for students seeking a detailed examination of management practices, techniques, and theories.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech *	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
ACC 201	Principles of Accounting I **	3
COM 132	Applied Composition and Speech *	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
† Elective		3
		15
SEMESTER IV		
MGT 242	Personnel Administration	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
	Social Science elective or Humanities elective	3
† Elective		3
		18
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — MID-MANAGEMENT OPTION

(Associate Degree)

The Mid-Management option is a cooperative plan with members of the business community whereby the student attends college classes in management and related courses and concurrently works at a regular, paid, part-time or full-time job in a sponsoring business firm. To enter the Mid-Management option, students must make formal application and be interviewed by a member of the Mid-Management faculty before final acceptance will be granted.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 150	Management Training	4
MGT 154	Management Seminar: Role of Supervision	2
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
		15
SEMESTER II		
MGT 151	Management Training	4
MGT 155	Management Seminar: Personnel Management	2
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
HUM 101	Introduction to the Humanities	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		18
SEMESTER III		
MGT 250	Management Training	4
MGT 254	Management Seminar: Organizational Development	2
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 251	Management Training	4
MGT 255	Management Seminar: Business Strategy, the Decision Process and Problem Solving	2
ECO 202	Principles of Economics II	3
Social Science elective or Humanities elective		3
† Elective		3
		15
Minimum Hours Required:		63

† Elective — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.



MANAGEMENT CAREERS — SALES, MARKETING, AND RETAIL MANAGEMENT OPTION

(Associate Degree)

The Sales, Marketing, and Retail Management option is designed to prepare students for career opportunities in retail management, sales, or marketing. Students specialize in courses in retail management, sales, and marketing. Students also have the opportunity to work in sales, marketing, or retail areas through a sponsoring business firm.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 137	Principles of Retailing	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
MGT 230	Salesmanship	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
† Elective		3
		18
SEMESTER III		
MGT 233	Advertising and Sales Promotion	3
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
RDM 703	Cooperative Work Experience	3
		15
SEMESTER IV		
ECO 202	Principles of Economics II	3
RDM 245	Sales Management	3
RDM 246	Management and Marketing Cases	3
RDM 803	Cooperative Work Experience	3
Social Science elective or Humanities elective		3
		15
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 212	Special Problems in Business	1
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

OFFICE CAREERS — ADMINISTRATIVE ASSISTANT OPTION

(Associate Degree)

The primary objective of the Administrative Assistant Option to the Office Careers Program is to prepare students for positions as assistants to administrators within public and private firms and agencies. Emphasis in this program is on the development of organizational and management skills in addition to basic office skills.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
BUS 105	Introduction to Business	3
† Elective		3
		17-18
SEMESTER II		
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
‡ OFC 273	Advanced Typing or	2
† Elective		
OFC 231	Business Communications	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting	
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
† Electives		6
		17
SEMESTER IV		
OFC 256	Office Management or	3
BUS 237	Organizational Behavior	
HUM 101	Introduction to Humanities	3
† Electives		9
		15
Minimum Hours Required:		66

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.



OFFICE CAREERS — LEGAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent legal secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 159	Beginning Shorthand or	
OFC 103	Speedwriting	4
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 167	Legal Terminology and Transcription	3
OFC 231	Business Correspondence	3
# OFC 266	Advanced Shorthand	4
OFC 273	Advanced Typing or	2
† Elective		(3)
CS 175	Introduction to Computer Science	3
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 274	Legal Office Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		15-16
Minimum Hours Required:		67

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — PROFESSIONAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 159	Beginning Shorthand or	4
OFC 103	Speedwriting	
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
CS 175	Introduction to Computer Science	3
# OFC 266	Advanced Shorthand	4
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
OFC 273	Advanced Typing or	2
† Elective		(3)
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
† Electives		6-7
		15-17
Minimum Required Hours:		67

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — RECORDS MANAGEMENT OPTION

(Associate Degree)

This program is designed to train students who wish to enter the ever-growing field of Records Management. Four technical courses will prepare the students to enter a comprehensive records management program in an organization which exerts control over the creation, distribution, retention, utilization, storage, retrieval, protection, preservation, and final disposition of all types of records. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 150	Filing Practices	3
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		14-15
SEMESTER II		
OFC 152	Introduction to Records Management	3
OFC 162	Office Procedures	3
† OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
OFC 250	Records Control	3
OFC 273	Advanced Typing or	2
† Elective		
CS 175	Introduction to Computer Science	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		17
SEMESTER IV		
OFC 252	Micrographics	3
OFC 265	Word Processing Practices and Procedures	3
HUM 101	Introduction to Humanities	3
† Electives		6-7
		15-16
Minimum Required Hours:		64

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

OFFICE CAREERS — GENERAL OFFICE

(Certificate)

The General Office Certificate Program is designed to provide the student with a basic working knowledge and skills in various office activities. A general knowledge of business concepts and procedures is provided.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Electives		7
		19
SEMESTER II		
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		7
		16
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

†Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Accounting Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing**	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
‡ ACC 132	Bookkeeping II or	3
† Elective		
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		8
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science.	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

‡ Required if ACC 131 was taken previously.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Office Clerical Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 162	Office Procedures	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
OFC 165	Introduction to Word Processing	3
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 166	Intermediate Shorthand***	4
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

†Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

RETAIL DISTRIBUTION AND MARKETING — FASHION MARKETING

(Associate Degree)

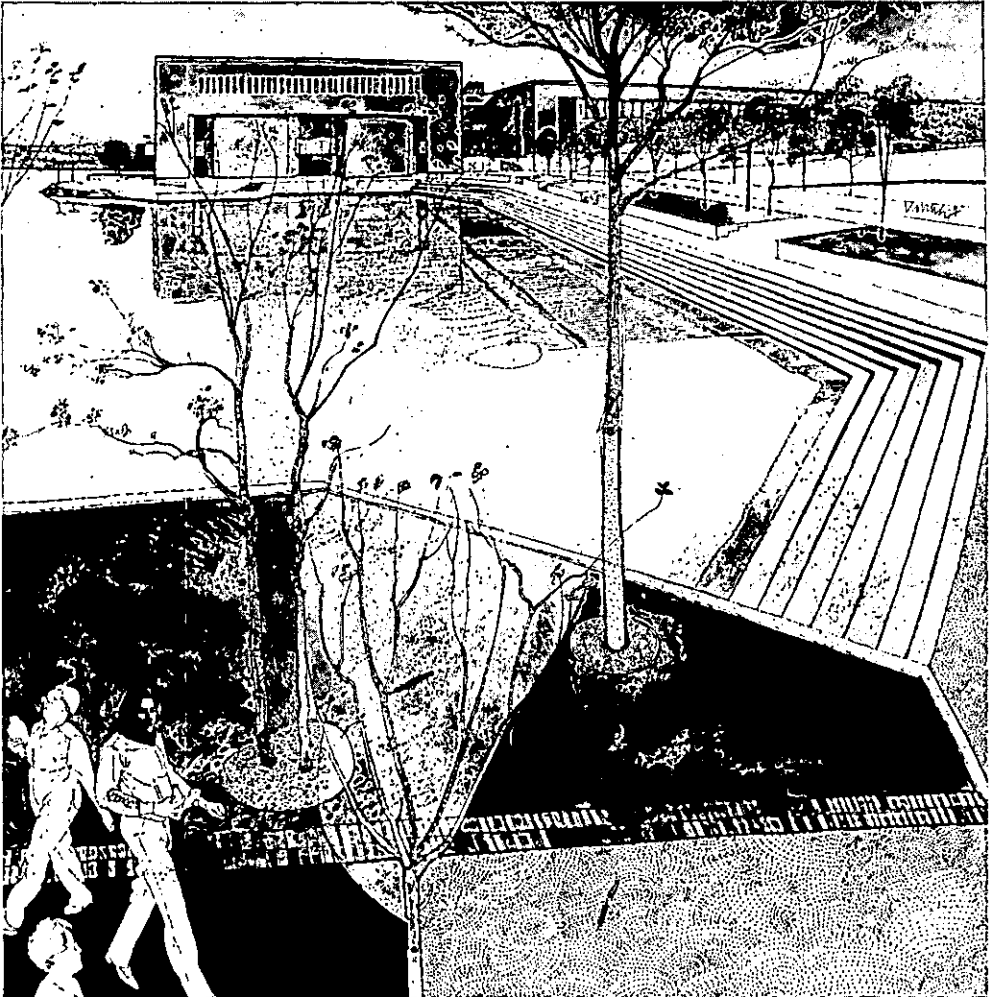
This two-year program is designed to prepare students for career opportunities in fashion marketing. Upon completion of the program, the student will receive an Associate in Applied Arts and Sciences Degree. Credit can be earned for on-the-job experience.

		CREDIT HOURS
SEMESTER I		
RDM 291	Fashion Merchandising	3
RDM 703	Cooperative Work Experience	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MGT 137	Principles of Retailing	3
MTH 130	Business Mathematics	3
		18
SEMESTER II		
RDM 292	Fashion Design	3
RDM 803	Cooperative Work Experience	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 230	Salesmanship	3
Elective		3
		18
SEMESTER III		
RDM 290	Fashion Buying	3
ACC 201	Accounting I or	3
ACC 131	Bookkeeping I	
MGT 206	Principles of Marketing	3
SPE 105	Fundamentals of Public Speaking	3
Elective		3
		15
SEMESTER IV		
DES 135	Textiles	3
ECO 201	Principles of Economics I	3
MGT 233	Advertising and Sales Promotion	3
PSY 131	Human Relations	3
Elective		3
		15
Minimum Hours Required:		66
Suggested Electives:		
CS 250	Contemporary Topics in Computer Science	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
RDM 245	Sales Management	3
RDM 246	Marketing and Management Cases	3



Cedar Valley College

Information, Administration, Faculty



CEDAR VALLEY COLLEGE

Cedar Valley College opened in 1977 on a 353-acre site at 3030 North Dallas Avenue in Lancaster. The school occupies a strategically important position in south Dallas County, east of Interstate 35 and south of Interstate 20. Continuing residential and industrial expansion in this area has thrust Cedar Valley into an increasingly vital role of service to the community.

Cedar Valley provides a broad range of Academic Transfer Programs for students desiring to continue their education at four year institutions. In addition to these, Cedar Valley's Technical/Occupational Programs provide many options for gaining needed training for area job markets in business, industry and the arts. Community Service courses provide people of all ages with exciting opportunities for personal growth, recreation, and to improve job skills. All these are coupled with an outstanding program of career planning and guidance from a competent counseling staff.

The Campus

Cedar Valley's award winning architecture and careful attention to landscaping have given the college a reputation for being one of the most scenic areas in the Metroplex. An internal courtyard punctuated with flower beds and shade trees provides a hub of activity between the main buildings. The entire campus stretches along the shore of a twelve-acre man-made lake. Functional building design is blended well with the natural impact of sky and water to give the campus a feeling of openness and light. Students can lounge or study on lakeside terraces and the free use of glass opens classrooms, lounges and eating areas to spacious scenic vistas.

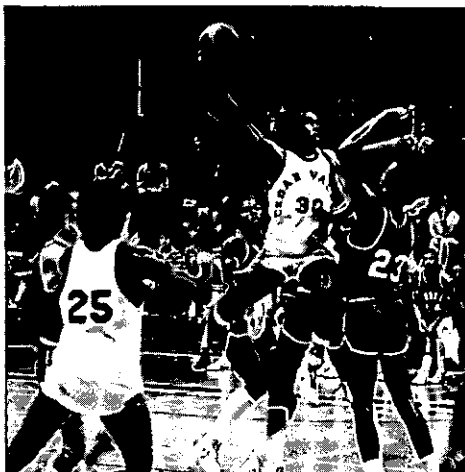
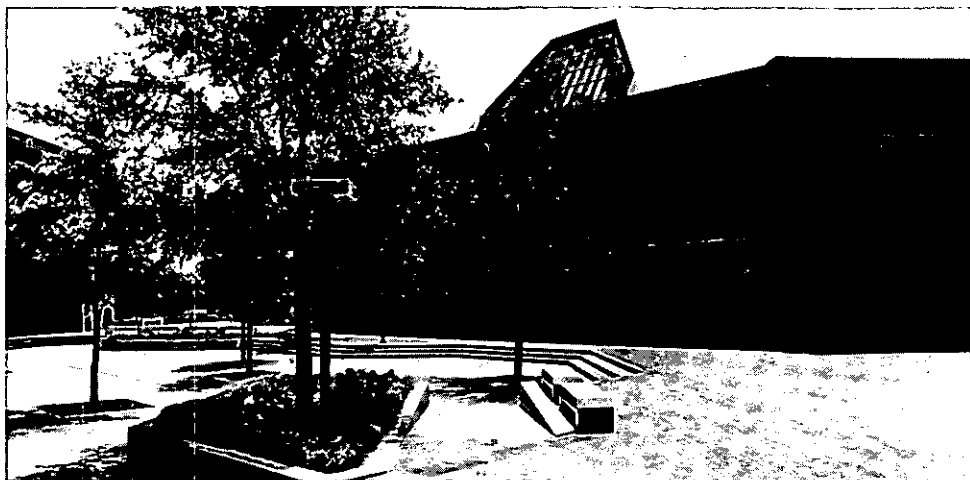
Accreditation

Cedar Valley College is a member of

- The Southern Association of Colleges and Schools
- The American Association of Community and Junior Colleges
- The League for Innovation in the Community College

Cedar Valley is recognized and sanctioned by the Coordinating Board of the Texas College and University System and the Texas Education Agency, and is an Affirmative Action Equal Opportunity Institution.





CEDAR VALLEY COLLEGE ADMINISTRATION

President	Floyd S. Elkins	372-8250
Vice President of Instruction	Patsy Fulton	372-8242
Vice President of Business Services	Walter N. Beene	372-8228
Associate Dean, Extended Day Programs	Kenneth W. Thomas	372-8230
Associate Dean, Learning Resources Center	Travis Y. Ueoka	372-8140
Associate Dean, Technical/Occupational Programs ..	Cecil H. Brewer, Jr.	372-8190
Assistant Dean, Community Service Programs	Teri Gathings	372-8210
Associate Dean/Student Services	Jim Harlow	372-8260
Director of Public Information	Kathleen Whitson	372-8258
Director of Financial Aid	Frank Ellis	372-8260
Registrar and Director of Admissions	John Williamson	372-8200

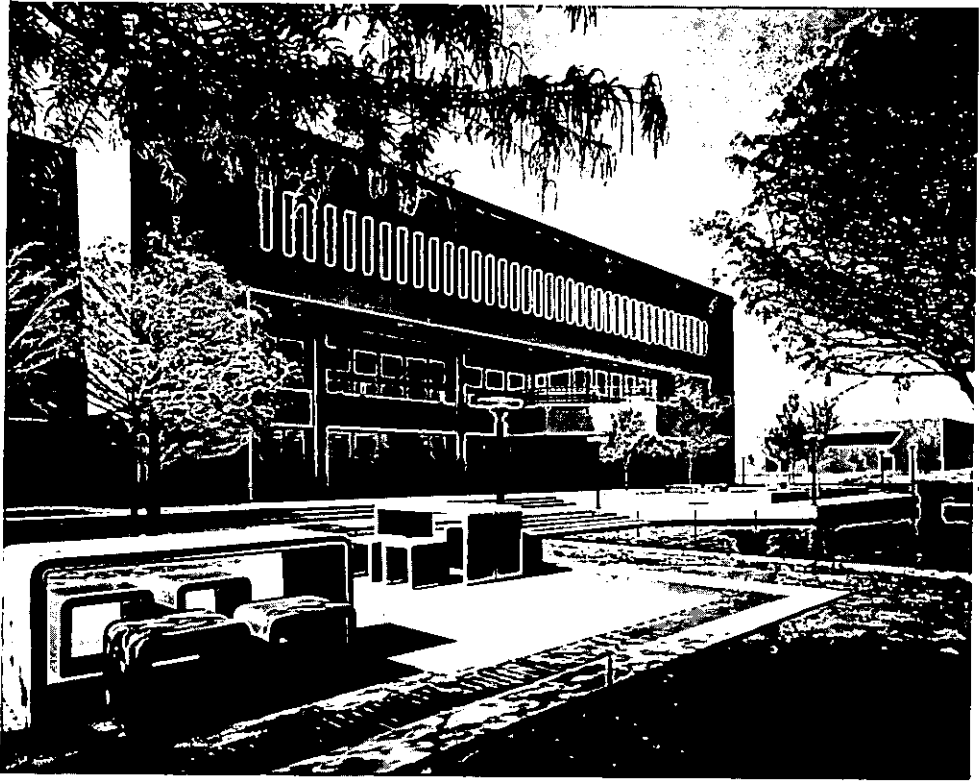
DIVISION CHAIRPERSONS

Business and Social Science	Gerald Stanglin	372-8110
Communication and Humanities	Mary Davidson	372-8120
Math, Science, Physical Education and Animal Medical Technology	Mike R. Huddleston	372-8160

CEDAR VALLEY COLLEGE FACULTY AND STAFF

Adkins, James A.	Physics & Astronomy
Univ. of Texas at Arlington, B.S., M.A.	
Beecham, Ron	Biology
East Texas State Univ., B.S., M.S.	
Beene, Walter N.	Vice President — Business Services
Univ. Of Houston, B.S.	
Benzamin, Russell E.	Music
Southwest Missouri State Univ., B.S.; North Colorado State Univ., M.A.	
Bilbrey, Keith	Air Conditioning/Refrigeration/Major Appliance Repair
Tarrant County Junior College, A.A.S.	
Brewer, Cecil H.	Associate Dean of Technical/Occupational Programs
Univ. of Texas at Arlington, B.A.; East Texas State Univ., M.S.; Certified Technician, N.I.A.S.E.	
Brodnax, Randall	Art
Norhtwestern State Univ., B.A., M.A.	
Brown, Jean Billingslea	English
Rutgers Univ., A.B.; Atlanta Univ., M.A.	
Carruthers, Ardrene	Director of Student Development
Texas Christian University, B.S.	
Cavett, Brucie	Physical Education/ Intramural Director
Texas Woman's Univ., B.S., M.S.	
Christman, Calvin L.	History
Dartmouth College, A.B.; Vanderbilt Univ., M.A., M.A.T.; Ohio State Univ., Ph.D.	
Cortina, Joseph	Reading
Citrus Community College, A.A.; San Diego State Univ., B.A.; North Texas State Univ., M.Ed.; Certified Reading Specialist/Texas	
Dawson, C. Edward	Music
Univ. of North Carolina, B.A., M.M.	
Davidson, Mary E.	Div. Chairperson, Communications/Humanities Div.
Texas Woman's Univ., B.S., M.A.; North Texas State Univ., Ed.D.	
Dismore, Roger E.	Music
North Texas State Univ., B.M.E., M.M.E.	
Earle, Brian D.	Science
North Texas State Univ., B.S.; Univ. of Texas at Dallas, M.A.	
Eishen, David Theodore	Air Conditioning/Refrigeration/Major Appliance Repair
Tarrant County Junior College, A.A.S.	
Elkins, Floyd S.	President
Univ. of Texas at Austin, B.S., M.Ed., Ph.D.	
Ellis, Frank	Director of Financial Aid
Texas Christian Univ., B.B.A.	
Fant, Milton	Automotive Technology Apprenticeship
Certified Tecnician, N.I.A.S.E.	
Faught, Diane	Office Occupations
North Texas State Univ., B.S., M.B.Ed.	
Fletcher, Norman R.	Mathematics
Texarkana College, A.S.; East Texas State Univ., B.S., M.S., Ed.D.	
Frazier, Gale	Director of Handicapped/Testing Services
Oklahoma State Univ., B.S., M.S.	
Fulton, Patsy J.	Vice President — Instruction
North Texas State Univ., B.B.A., M.B.E., Ph.D.	
Garcia, Edward H.	Journalism
Univ. of Texas at Austin, B.A.; Ohio State Univ., M.A.; Univ. of Texas at Austin, Ph.D.	
Gathings, Teri	Assistant Dean — Community Service
North Texas State Univ., B.S.; Texas Women's Univ., M.S.	
Gehrmann, Ines	Director of Library Services
Tarleton State Univ., B.A.; State University of New York: Geneseo, M.L.S.	

Hampton, LeRoy	Automotive Technology
East Texas State Univ., Certified Technician, N.I.A.S.E.	
Harlow, Jim	Associate Dean — Student Services
East Texas State Univ., B.B.A., M.S.	
Horton, Larry	Biology
Greenville College, B.S.; Southern Illinois., M.A.	
Huddleston, Mike	Division Chairperson, Math/Science/PE/AMT Division
East Texas State Univ., B.S., M.S.	
Lineberry, William L.	Animal Medical Technology
Texas A&M Univ., B.S.; Univ. of Texas at Dallas, M.A.T. Animal Technician Registered	
Maxwell, Rick	Art
Univ. of Dallas, B.A.; Southern Methodist Univ., M.F.A.	
McCoy, Clarice	Accounting
Southeastern Oklahoma State Univ., B.S.; East Texas State Univ., M.B.A.; C.P.A.	
Meachum, Bettie M.	Psychology
Northwestern State Univ., B.M.E., M.Ed.; Baylor Univ., Ed.D.	
Paul, Duncan A.	Motorcycle, Outboard Marine Engine and Small Engine Mechanics
North Texas State Univ., B.S.	
Pharr, John	Business and Retail Management
North Texas State Univ., B.A., M.S.	
Powell, Joyce	English
Mississippi College, B.A.; Univ. of Mississippi, M.A.Ed.	
Riley, Joel L.	Counselor
Bishop College, B.S.; North Texas State Univ., M.Ed.	
Robinson, Eddie	Mathematics
Northeast Oklahoma State Univ., B.S.; Oklahoma State Univ., M.S.	
Rolling, Lincoln Jr.	History
Sam Houston State Univ., B.A., M.A.	
Schwend, Gordon R.	Automotive Technology
Santa Rosa Junior College, A.A.; Certified Technician, N.I.A.S.E.	
Simmons, Phil	Automotive Technology Apprenticeship
East Texas State Univ., B.S., M.S.; Certified Technician, N.I.A.S.E.	
Slone, Ronald G.	Mid-Management Coordinator/Business
East Texas State Univ., B.B.A., M.B.A.	
Stewart, M. Kerby, Jr.	Music
Texas Christian Univ., B.F.A.	
Sullivan, Tim	Anthropology/Sociology/Religion
Univ. of Southern California, B.A.; Southern Methodist Univ., M.A.	
Thomas, Kenneth W.	Associate Dean — Extended Day Programs
Baylor Univ., B.A.; Univ. of Texas at Arlington, M.A.	
Thompson, John Paul	Director of Media Services
Southern Methodist Univ., B.F.A., M.Th.	
Ueoka, Travis Y.	Associate Dean — Learning Resources
New Mexico Highland Univ., B.S.; Indiana Univ., M.S.; East Texas State Univ., M.S.L.S., Ed.D.	
Whitson, Kathleen	Director of Public Information
Dallas Baptist College, A.A.S., B.A.; Southern Methodist Univ., M.L.A.	
Williamson, John W.	Director of Admissions & Registrar
Kilgore Junior College, A.A.; East Texas State Univ., B.S., M.S.	
Wilkie, Dave	Athletic Director/Physical Education
Ball State Univ., B.S., M.A.	
Wortham, Linda	Lead Counselor
Tennessee Technological Univ., B.S., M.A.; Univ. of Arkansas, Graduate Study	
Wright, David L.	Animal Medical Technology
Texas A&M Univ., B.S., D.V.M.	
Young, Rebecca	Fashion Merchandising
Iowa State Univ., B.S.; Texas Woman's Univ., M.S., Ph.D.	
Youngblood, Mary Ann	English
Univ. of Texas at Arlington, B.A.; North Texas State Univ., M.A.	





Cedar Valley College

Curriculum Patterns
For Technical/Occupational Programs



ACCOUNTING ASSOCIATE

(Associate Degree)

The Accounting Associate two-year program is designed to prepare a student for a career as a junior accountant in business, industry and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles.

The Associate in Applied Arts and Sciences Degree is awarded for successful completion of at least 63 credit hours as outlined below. Students desiring a less comprehensive program that emphasizes bookkeeping procedures and practices should consider the General Office Certificate with elective emphasis on accounting careers. The General Office Certificate is available in the Office Careers Program.

		CREDIT HOURS
SEMESTER I		
ACC 201	Principles of Accounting I	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or*	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
OFC 160	Office Machines	3
		<u>15</u>
SEMESTER II		
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or*	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
† OFC 172	Beginning Typing	3
		<u>15</u>
SEMESTER III		
ACC 203	Intermediate Accounting I	3
ACC 204	Managerial Accounting	3
ECO 201	Principles of Economics I	3
GVT 201	American Government	3
† Electives		3-6
		<u>15-18</u>
SEMESTER IV		
ACC 238	Cost Accounting or	3
ACC 239	Income Tax Accounting	
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
† Electives		3-6
		<u>15-18</u>
Minimum Hours Required:		63

† Electives — A minimum of 9 credit hours must be selected from the following:

ACC 205	Business Finance	3
ACC 207	Intermediate Accounting II	3
ACC 238	Cost Accounting	3
ACC 239	Income Tax Accounting	3
ACC 703-713 803-813	Cooperative Work Experience	3
ACC 704-714 804-814	Cooperative Work Experience	4
BUS 143	Personal Finance	3
BUS 237	Organizational Behavior	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science and Data Processing	4
MGT 206	Principles of Marketing	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
SPE 105	Fundamentals of Public Speaking	3
Any CS or DP Programming course		

* ENG 101 and ENG 102 may be substituted for COM 131 and COM 132 provided that SPE 105 is also taken.

‡ Students who can demonstrate proficiency by previous training, experience, or placement tests may substitute a course from the electives listed for this program.

AIR CONDITIONING — RESIDENTIAL

(Associate Degree)

This program is designed to train students to meet entry level requirements in the field of Residential Air Conditioning. This will include the installation, repair, and maintenance of residential air conditioning equipment. Included in this program is the study of residential air conditioners, gas and electric furnaces, humidifiers, and the design of residential systems. Throughout the entire program an emphasis is placed on current techniques as used by residential air conditioning technicians.

		CREDIT HOURS
SEMESTER I		
AC 150	Basic Principles of Electricity	3
AC 160	Basic Principles of Refrigeration	3
MTH 195	Technical Mathematics	3
PHY 131	Applied Physics	4
		13
SEMESTER II		
AC 155	Advanced Electrical Circuits	3
AC 165	Vapor Compression Systems	3
AC 170	Pipefitting Procedures	3
AC 175	Residential Load Calculations	3
SS 131	American Civilization	3
		15
SEMESTER III		
AC 180	Residential Cooling Systems	3
AC 185	Residential Heating Systems	3
AC 240	Air Distribution Systems	3
BPR 177	Blueprint Reading	2
COM 131	Applied Composition and Speech	3
MAR 240	Professional Service Skills or	3
PSY 131	Human Relations	
		17
SEMESTER IV		
AC 245	Residential Systems Service	3
AC 250	Air-Conditioning Equipment Selection	3
AC 255	Air Distribution System Design	3
AC 703	Cooperative Work Experience or	3
AC 704	Cooperative Work Experience	(4)
Elective		3-4
		15-17
Minimum Hours Required:		60

Suggested electives:

AC 280	Industrial Air Conditioning Systems	3
ACR 803	Cooperative Work Experience	3
ACR 804	Cooperative Work Experience	4
ACC 131	Bookkeeping	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech	3
MAR 240	Professional Service Skills	3
MGT 136	Principles of Management	3
PSY 131	Human Relations	3

AIR CONDITIONING — RESIDENTIAL

(Certificate)

This program is designed to train students to meet entry level requirements in the field of Residential Air Conditioning. This will include the installation, repair, and maintenance of residential air conditioning equipment. Included in this program is the study of residential air conditioners, gas and electric furnaces, humidifiers, and the design of residential systems. Throughout the entire program an emphasis is placed on current techniques as used by residential air conditioning technicians.

		CREDIT HOURS
SEMESTER I		
AC 150	Basic Principles of Electricity	3
AC 160	Basic Principles of Refrigeration	3
MTH 195	Technical Mathematics	3
PHY 131	Applied Physics	4
		13
SEMESTER II		
AC 155	Advanced Electrical Circuits	3
AC 165	Vapor Compression Systems	3
AC 170	Pipefitting Procedures	3
AC 175	Residential Load Calculations	3
		12
SEMESTER III		
AC 180	Residential Cooling Systems	3
AC 185	Residential Heating Systems	3
AC 240	Air Distribution Systems	3
AC 245	Residential Systems Service	3
ACR 703	Cooperative Work Experience or	3
AC 704	Cooperative Work Experience	(4)
Elective		
		15-16
Minimum Hours Required:		40

Suggested electives:

AC 280	Industrial Air Conditioning Systems	3
ACR 803	Cooperative Work Experience	3
ACR 804	Cooperative Work Experience	3
ACC 131	Bookkeeping	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech	3
MAR 240	Professional Service Skills	3
MGT 136	Principles of Management	3
PSY 131	Human Relations	3

ANIMAL MEDICAL TECHNOLOGY

(Associate Degree)

This program is designed to help meet the need for graduate animal technicians as indicated by the Texas Veterinary Medical Association. The American Veterinary Medical Association (AVMA) describes an "Animal Technician" as "a person knowledgeable in the care and handling of animals, in basic principles of normal and abnormal life processes and in routine laboratory and clinical procedures." The person is primarily an assistant to veterinarians, biological research workers and other scientists.

The AMT curriculum is designed to provide the graduate with information, experience and skills needed to perform all technical duties in a practice excluding diagnosis, prescription and surgery and whose performance of such duties is not in conflict with the state practice act.

Admission in the AMT program is limited and applicants will be screened for approval. Students are encouraged to develop a strong academic background in the sciences, including mathematics, biology and chemistry.

		CREDIT HOURS
SEMESTER I		
AMT 101	Medical Terminology for Animal Technicians	1
AMT 110	Animal Care and Sanitation: Canine	2
AMT 130	Introduction to Animal Medical Technology	4
AMT 137	Comparative Mammalian Anatomy and Physiology	4
AMT 138	Applied Biochemistry	5
MTH 139	Applied Mathematics	3
		19
SEMESTER II		
AMT 111	Animal Care and Sanitation: Feline, Porcine	2
AMT 231	Comparative Mammalian Anatomy and Physiology II	4
AMT 239	Pharmacology for Technicians	3
AMT 241	Clinical Pathology Techniques and Practices I	5
COM 131	Applied Composition and Speech	3
		17
SUMMER SESSION		
AMT 112	Animal Care and Sanitation: Equine	2
AMT 230	Anesthetic and Surgical Assisting Techniques	4
AMT 243	Clinical Pathology Techniques and Practices II	5
AMT 244	Large Animal Assisting Techniques	3
PSY 131	Human Relations	3
		17
SEMESTER III		
AMT 703	Cooperative Work Experience	3
Elective		2-4
		5-7

SEMESTER IV

AMT 210	Animal Care and Sanitation, Bovine	2
AMT 237	Principles and Practice of Radiography	3
AMT 242	Exotic and Research Animal Care and Management	3
AMT 249	Animal Hospital Nursing	4
MGT 153	Small Business Management	3
		15

Minimum Hours Required: 73

Suggested Electives:

AMT 245	Clinical Seminar	2
AMT 250	Special Projects in AMT	2
AMT 702	Cooperative Work Experience	2
AMT 703	Cooperative Work Experience	3
ACC 131	Bookkeeping I	3
HUM 101	Introduction to Humanities	3
OFC 172	Beginning Typing	3
SS 131	American Civilization	3
SS 132	American Civilization	3
	Physical Education	1

AUTOMOTIVE TECHNOLOGY

(Associate Degree)

The purpose of this program is to prepare students for entry level employment as an automotive technician. This program of study will include theory, diagnosis, repair, overhaul and maintenance of automobiles. Emphasis is placed on operational theory, practical skills and accepted shop procedures.

		CREDIT HOURS
SEMESTER I		
AT 108	Minor Vehicle Services	4
AT 110	Engine Repair I	4
AT 112	Engine Repair II	4
COM 131	Applied Composition and Speech I	3
MTH 195	Technical Mathematics	3
		18
SEMESTER II		
AT 114	Engine Analysis and Tune-Up	4
AT 116	Fuel and Emission Systems	4
AT 118	Electrical Systems	4
PHY 131	Applied Physics	4
		16
SEMESTER III		
AT 221	Heating and Air Conditioning	4
AT 223	Brake Systems	4
AT 225	Front End Systems	4
† Elective		3-4
		15-16
SEMESTER IV		
AT 227	Standard Transmissions and Drive Trains	4
AT 229	Automatic Transmissions I	4
AT 231	Automatic Transmissions II	4
AT 703	Cooperative Work Experience or	3
AT 714	Cooperative Work Experience	(4)
‡ Elective		3
		18-19
Minimum Hours Required:		67

† Elective — Must be selected from the following:

AB 245	Welding for Auto Body	3
BUS 105	Introduction to Business	3
WE 101	Basic Welding and Cutting Practices	3
AT 803	Cooperative Work Experience or	3
AT 814	Cooperative Work Experience	(4)

‡ Elective — Must be selected from the following:

GVT 201	American Government	3
HD 105	Basic Processes of Interpersonal Relationship	3
HUM 101	Introduction to the Humanities	3
PSY 131	Human Relations	3

AUTOMOTIVE TECHNOLOGY

(Certificate)

The purpose of this program is to train persons for entry level positions in the field of Automotive Technology. A certificate is issued upon successful completion of the following listed courses.

		CREDIT HOURS
SEMESTER I		
AT 108	Minor Vehicle Services	4
AT 110	Engine Repair I	4
AT 112	Engine Repair II	4
		<u>12</u>
SEMESTER II		
AT 114	Engine Analysis and Tune-Up	4
AT 116	Fuel and Emission Systems	4
AT 118	Electrical Systems	4
		<u>12</u>
SEMESTER III		
AT 221	Heating and Air Conditioning	4
AT 223	Brake Systems	4
AT 225	Front End Systems	4
		<u>12</u>
SEMESTER IV		
AT 227	Standard Transmissions and Drive Trains	4
AT 229	Automatic Transmissions I	4
AT 231	Automatic Transmissions II	4
AT 703	Cooperative Work Experience or	3
AT 714	Cooperative Work Experience	(4)
		<u>15-16</u>
Minimum Hours Required:		51

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP

(Associate Degree)

The Automotive Technology Apprenticeship program is offered in cooperation with the National Automobile Dealer Association, and the Bureau of Apprenticeship Training, U. S. Department of Labor. This is a three year program that provides full time "on-the-job" apprenticeship training along with college credit courses. Upon successful completion of the program, the apprentice will receive an Associate of Applied Arts and Science degree.

Admission to the program:

1. Admission is by individual application.
2. Personal interview with Automotive Technology Apprenticeship instructor.
3. Personal interview and acceptance as an apprentice by automotive dealership.
4. Applicants must demonstrate a sincere desire to become a professional automotive service technician.
5. Fulfill all requirements for admission to the college.

		CREDIT HOURS
SEMESTER I		
ATA 100	Automotive Fundamentals	3
ATA 101	Basic Electrical Systems	3
ATA 102	Automotive Service Department Management	3
ATA 191	Internship I	3
		12
SEMESTER II		
ATA 200	Advanced Electrical Systems	3
ATA 202	Basic Engine Repair	3
ATA 203	Engine Overhaul	3
ATA 192	Internship II	3
		12
SUMMER SESSION		
ATA 201	Automotive Air Conditioning and Heating Systems	3
ATA 193	Internship/II	3
SS 131	American Civilization	3
		9
SEMESTER III		
ATA 103	Suspension, Steering and Brake Systems	3
ATA 105	Engine Tune-Up Procedures	3
ATA 294	Internship IV	3
COM 131	Applied Composition and Speech	3
		12

SEMESTER IV

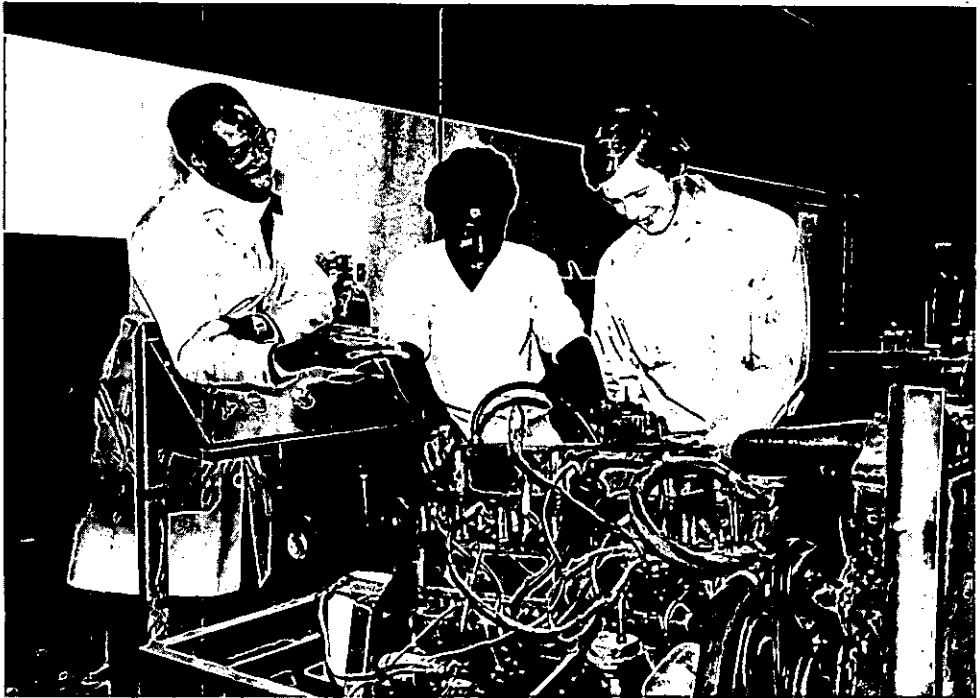
ATA 204	Clutches, Differentials and Drive Shafts	3
ATA 205	Transmissions	3
ATA 295	Internship V	3
MTH 195	Technical Mathematics or	3
MTH 139	Applied Mathematics	
		12

SUMMER SESSION

ATA 104	Automotive Parts Department Manager	3
ATA 296	Internship VI	3
PHY 131	Applied Physics	4
		10

Minimum Hours Required:

67



COMMERCIAL MUSIC — ARRANGER/COMPOSER/COPYIST

(Associate Degree)

This program is designed to prepare the student majoring in Arranging/Composing/Copying to demonstrate writing skills required for arranging and composition for small and large instrumental and vocal groups in all areas of commercial music, i.e., jazz, rock, "pop", country/western etc. Knowledge of standard engraving techniques will make possible professional copying of the student's work and of other arrangers and composers. Experience is stressed through actual writing for campus organizations and composing of jingles and background music for all campus productions.

		CREDIT HOURS
SEMESTER I		
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 192	Music in America	3
MUS 193	Improvisation	3
MUS 199	Recital	1
† Ensemble		1
‡ Applied Music		1-2
		14-16
SEMESTER II		
MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 194	Jazz Workshop	3
MUS 196	Business of Music	3
MUS 199	Recital	1
BUS 105	Introduction to Business	3
† Ensemble		1
‡ Applied Music		1-2
		17-18
SUMMER SESSION		
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		6
SEMESTER III		
MUS 190	Survey of Recording	2
MUS 195	Introduction to Synthesizer	2
MUS 199	Recital	1
MUS 292	Arranging/Orchestration	3
MUS 293	Independent Study or	3-4
MUS 803	Cooperative Work Experience or	(3)
MUS 804	Cooperative Work Experience	(4)
† Ensemble		1
‡ Applied Music		1-2
Elective		2-4
		15-19

SEMESTER IV

MUS 199	Recital	1
MUS 203	Composition	3
MUS 293	Independent Study or	3-4
MUS 813	Cooperative Work Experience or	(3)
MUS 814	Cooperative Work Experience	(4)
† Ensemble		1
‡ Applied Music		1-2
Elective		2-4
		<u>11-15</u>

Minimum Hours Required:

63

† Ensembles — Must be selected from the following:

MUS 103	Guitar Ensemble	1
MUS 150	Choir	1
MUS 155	Vocal Ensemble	1
MUS 160	Band	1
MUS 171	Woodwind Ensemble	1
MUS 172	Brass Ensemble	1
MUS 173	Percussion Ensemble	1
MUS 174	Keyboard Ensemble	1
MUS 176	Symphonic Wind Ensemble	1
MUS 181	Lab Band	1
MUS 185	Stage Band	1

‡ Applied Music — Courses to be selected from any Music course numbered from MUS 121 through MUS 143 or MUS 221 through MUS 243.

Suggested Electives:

MUS 197	Studio Technology	2
MUS 295	Advanced Synthesizer Techniques	2
BUS 234	Business Law	3
ECO 105	Introduction to Business	3
ECO 201	Principles of Economics I	3
MUS 110	Music Literature	3
MUS 111	Music Literature	3

COMMERCIAL MUSIC — MUSIC RETAILING

(Associate Degree)

This program is designed to prepare the music major in retailing for the music industry job market. To include music skills necessary as well as knowledge of the business world, i.e., business law, salesmanship, small business management, culminating in work experience coordinated through local merchants who have expressed interest in this area.

		CREDIT HOURS
SEMESTER I		
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 192	Music in America	3
MUS 199	Recital	1
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
† Ensemble		1
‡ Applied Music		1
		17
SEMESTER II		
MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 199	Recital	1
BUS 137	Principles of Retailing	3
BUS 230	Salesmanship	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
MGT 153	Small Business Management	3
† Ensemble		1
‡ Applied Music		1
		20
SEMESTER III		
MUS 199	Recital	1
MUS 803	Cooperative Work Experience or	3
MUS 804	Cooperative Work Experience	(4)
BUS 234	Business Law	3
PSY 131	Human Relations	3
‡ Applied Music		1
Elective		3
		14-15
SEMESTER IV		
MUS 199	Recital	1
MUS 813	Cooperative Work Experience	3
MUS 814	Cooperative Work Experience	(4)
ACC 201	Principles of Accounting I	3
‡ Applied Music		1-2
Elective		3
		11-13
Minimum Hours Required:		62

† Ensembles — Must be selected from the following:

MUS 103	Guitar Ensemble	1
MUS 150	Choir	1
MUS 155	Vocal Ensemble	1
MUS 160	Band	1
MUS 171	Woodwind Ensemble	1
MUS 172	Brass Ensemble	1
MUS 173	Percussion Ensemble	1
MUS 174	Keyboard Ensemble	1
MUS 176	Symphonic Wind Ensemble	1
MUS 181	Lab Band	1
MUS 185	Stage Band	1

‡ Applied Music — Courses to be selected from any Music course numbered from MUS 121 through MUS 143 or MUS 221 through MUS 243.

Suggested Electives:

ECO 201	Principles of Economics I	3
SOC 204	American Minorities	3
SPE 105	Fundamentals of Public Speaking	3
	Foreign Language	7

COMMERCIAL MUSIC — MUSIC RETAILING

(Certificate)

This program is designed to prepare the music major in retailing for the music industry job market. To include music skills necessary as well as knowledge of the business world, i.e., business law, salesmanship, small business management, culminating in work experience coordinated through local merchants who have expressed interest in this area.

		CREDIT HOURS
SEMESTER I		
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 192	Music in America	3
MUS 199	Recital	1
COM 132	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
BUS 105	Introduction to Business	3
† Ensemble		1
‡ Applied Music		1
		17
SEMESTER II		
MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 199	Recital	1
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 230	Salesmanship	3
† Ensemble		1
‡ Applied Music		1
		20
Minimum Hours Required:		37

† Ensembles — Must be selected from the following:

MUS 103	Guitar Ensemble	1
MUS 150	Choir	1
MUS 155	Vocal Ensemble	1
MUS 160	Band	1
MUS 171	Woodwind Ensemble	1
MUS 172	Brass Ensemble	1
MUS 173	Percussion Ensemble	1
MUS 174	Keyboard Ensemble	1
MUS 176	Symphonic Wind Ensemble	1
MUS 181	Lab Band	1
MUS 185	Stage Band	1

‡ Applied Music courses to be selected from any Music course numbered from MUS 121 through MUS 143.

COMMERCIAL MUSIC — PERFORMING MUSICIAN

(Associate Degree)

This program is designed to prepare the instrumental and vocal student for performances in commercial music, to include jazz, rock, "pop", country/western, etc. This will cover performance practices, styles, solo and ensemble work, repertoire for small and large groups, culminating in actual performance situations in cooperation with local performing groups.

		CREDIT HOURS
SEMESTER I		
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 192	Music in America	3
MUS 193	Improvisation	3
MUS 199	Recital	1
† Ensemble		1
‡ Applied Music		1-2
		14-15
SEMESTER II		
MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 194	Jazz Workshop	3
MUS 196	Business of Music	3
MUS 199	Recital	1
BUS 105	Introduction to Business	3
† Ensemble		1
‡ Applied Music		1-3
		17-19
SUMMER SESSION		
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		6
SEMESTER III		
MUS 190	Survey of Recording	2
MUS 199	Recital	1
MUS 292	Arranging/Orchestration	3
MUS 293	Independent Study or	3
MUS 803	Cooperative Work Experience or	
MUS 804	Cooperative Work Experience	(4)
† Ensemble		1
‡ Applied Music		1-2
Elective		2-4
		13-17

continued

SEMESTER IV

MUS 197	Studio Technology	2
MUS 199	Recital	1
MUS 813	Cooperative Work Experience or	3
MUS 814	Cooperative Work Experience	(4)
† Ensemble		1
‡ Applied Music		1-2
Elective		2-4
		10-14

Minimum Hours Required:

60

† Ensembles — Must be selected from the following:

MUS 103	Guitar Ensemble	1
MUS 150	Choir	1
MUS 155	Vocal Ensemble	1
MUS 160	Band	1
MUS 171	Woodwind Ensemble	1
MUS 172	Brass Ensemble	1
MUS 173	Percussion Ensemble	1
MUS 174	Keyboard Ensemble	1
MUS 176	Symphonic Wind Ensemble	1
MUS 181	Lab Band	1
MUS 185	Stage Band	1

‡ Applied Music — courses to be selected from any Music course numbered from MUS 121 through MUS 143 or MUS 221 through MUS 243.

Suggested Electives:

MUS 110	Music Literature	3
MUS 111	Music Literature	3
MUS 201	Sophomore Theory	4
MUS 202	Sophomore Theory	4
MUS 203	Composition	3
MUS 295	Advanced Synthesizer Techniques	2
	Social Science and/or Foreign Language	6

COMMERCIAL MUSIC — RECORDING TECHNOLOGY

(Associate Degree)

This program is designed to prepare commercial musicians with additional skills in the field of Recording Technology. In addition to preparing the student in vocal or instrumental commercial music techniques, training is provided in the basic console recording skills such as microphone selection and placement; mixdown techniques; master tape production; studio techniques; troubleshooting; and session procedures. Emphasis is placed on the specific needs of the commercial musician in the field of recording.

		CREDIT HOURS
SEMESTER I		
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 190	Survey of Recording	2
MUS 191	Survey of Recording Laboratory	1
MUS 192	Music in America	1
MUS 199	Recital	1
† Ensemble		1
‡ Applied Music		1-2
		<u>14-15</u>
SEMESTER II		
MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 151	Voice Class I	1
MUS 197	Studio Technology	2
MUS 198	Studio Technology Laboratory	1
MUS 199	Recital	1
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
† Ensemble		1
‡ Applied Music		1-2
		<u>15-16</u>
SEMESTER III		
MUS 195	Introduction to Synthesizer	2
MUS 199	Recital	1
MUS 293	Independent Study or	3
MUS 703	Cooperative Work Experience or	
MUS 296	Recording Studio Practices	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
† Ensemble		1
‡ Applied Music		1-2
Elective		2
		<u>16-17</u>

SEMESTER IV

MUS 196	Business of Music	3
MUS 199	Recital	1
MUS 293	Independent Study or	3
MUS 803	Cooperative Work Experience	
MUS 297	Studio Production	3
BUS 105	Introduction to Business	3
† Ensemble		1
‡ Applied Music		1-2
		15-16

Minimum Hours Required:

60

† Ensembles — Must be selected from the following:

MUS 103	Guitar Ensemble	1
MUS 150	Choir	1
MUS 155	Vocal Ensemble	1
MUS 160	Band	1
MUS 171	Woodwind Ensemble	1
MUS 172	Brass Ensemble	1
MUS 173	Percussion Ensemble	1
MUS 174	Keyboard Ensemble	1
MUS 176	Symphonic Wind Ensemble	1
MUS 181	Lab Band	1
MUS 185	Stage Band	1

‡ Applied Music — Courses to be selected from any Music course numbered from MUS 121 through MUS 143 or MUS 221 through MUS 243.

Suggested Electives:

MUS 201	Sophomore Theory	4
MUS 202	Sophomore Theory	4
MUS 203	Composition	3
MUS 292	Arranging/Orchestration	3
PHY 131	Applied Physics	4
SPE 105	Fundamentals of Public Speaking	3

COMMERCIAL MUSIC — RECORDING TECHNOLOGY

(Certificate)

This program is designed to prepare commercial musicians with additional skills in the field of Recording Technology. In addition to preparing the student in vocal or instrumental commercial music techniques, training is provided in the basic console recording skills such as microphone selection and placement; mixdown techniques; master tape production; studio techniques; troubleshooting; and session procedures. Emphasis is placed on the specific needs of the commercial musician in the field of recording.

		CREDIT HOURS
SEMESTER I		
MUS 113	Fundamentals of Music	3
MUS 190	Survey of Recording	2
MUS 191	Survey of Recording Laboratory	1
MUS 192	Music in America	3
MUS 199	Recital	1
COM 131	Applied Composition and Speech	3
		13
SEMESTER II		
MUS 114	Fundamentals of Music	3
MUS 151	Voice Class I	1
MUS 196	Business of Music	3
MUS 197	Studio Technology	2
MUS 198	Studio Technology Laboratory	1
MUS 199	Recital	1
† Elective		3
		14
SUMMER SESSION		
MUS 296	Recording Studio Practices	3
MUS 297	Studio Production	3
		6
Minimum Hours Required:		33

† Elective — Must be selected from any Music Course

DATA PROCESSING PROGRAMMER

(Associate Degree)

This curriculum is intended for the preparation of entry-level or trainee computer programmers who will work in an applications setting to support the general, administrative, and organizational information processing function of industry, commerce, business and government service. It is designed as a two-year career program to prepare students for jobs. Graduates should be able to work in conjunction with a systems analyst in the programming environment usually found in a medium to large job shop. It is intended to provide a sufficient foundation so that graduates with experience and continued learning may advance in career paths appropriate to their own particular interests and abilities.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
BUS 105	Introduction to Business or	3
MGT 136	Principles of Management	
DP 137	Data Processing Mathematics or any business math*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 201	Principles of Accounting I**	3
		<u>15</u>
SEMESTER II		
DP 133	Beginning Programming (COBOL)	4
DP 138	Systems Analysis and Data Processing Logic	3
ECO 201	Principles of Economics I or	3
ECO 202	Principles of Economics II	
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		<u>16</u>
SEMESTER III		
DP 136	Intermediate Programming (COBOL)	4
DP 142	RPG Programming or	3
DP 244	Basic Programming	
DP 233	Operating Systems and Communications	4
ACC 203	Intermediate Accounting or	3
ACC 238	Cost Accounting	
† Elective		3-4
		<u>17-18</u>
SEMESTER IV		
DP 231	Advanced Programming (ALC)	4
DP 232	Applied Systems	4
DP 236	Advanced COBOL Techniques or other 200 level DP or CS course	3-4
Any approved DP or CS course		3-4
		<u>14-16</u>
Minimum Hours Required:		62

† Electives — Must be selected from the following:

Any DP or CS course (including DP 700-800 Cooperative Work Experience)

DP 129	Data Entry Concepts	4
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
MTH 202	Introductory Statistics	3
ENG 210	Technical Writing	3
BUS 105	Introduction to Business	3
ECO 201	Principles of Economics I	3

* MTH 111, MTH 112, MTH 130 or an equivalent business math course

**ACC 131 — Bookkeeping I, and ACC 132 — Bookkeeping II may be substituted for
ACC 201 — Principles of Accounting

NOTE: Students may obtain credit toward a degree or certificate for only one of each of the pairs of courses listed below:

DP 133 or CS 184
DP 231 or CS 186
DP 244 or CS 182
CS 175 or CS 174

MAJOR APPLIANCE REPAIR

(Associate Degree)

This program is designed to prepare persons for entry into the field of Major Appliance Repair including the most common areas of specialization. The major emphasis is on domestic equipment used in the home and current repair techniques used by major appliance technicians.

		CREDIT HOURS
SEMESTER I		
AC 150	Basic Electricity	3
AC 160	Basic Refrigeration	3
COM 131	Applied Composition and Speech	3
MTH 195	Technical Mathematics or	3
MTH 139	Applied Mathematics	
† Elective		3
		15
SEMESTER II		
MAR 206	Domestic Refrigerators Electrical Systems	3
MAR 207	Domestic Refrigerators Sealed-Systems	3
MAR 208	Domestic Dishwashers	3
PHY 131	Applied Physics	4
† Elective		3
		16
SEMESTER III		
MAR 209	Domestic Disposers and Trash Compactors	3
MAR 215	Domestic Laundry Equipment-Washers	3
MAR 216	Domestic Laundry Equipment-Dryers	3
GVT 201	American Government	3
† Elective		3
		15
SEMESTER IV		
MAR 217	Domestic Electric Cooking Equipment	3
MAR 218	Domestic Gas and Microwave Cooking Equipment	3
MAR 240	Professional Service Skills	3
MGT 153	Small Business Management	3
† Elective		3
		15
Minimum Hours Required:		61

† Electives — To be chosen from the following listed courses, any course in Air Conditioning with approval of the instructor, or other courses with prior approval of the Division Chair

ACR 703	Cooperative Work Experience	3
ACR 704	Cooperative Work Experience	4
BUS 105	Introduction to Business	3
CHM 101	General Chemistry	4
COM 132	Applied Communications and Speech	3
CS 175	Introduction to Computer Science	3
MGT 157	Small Business Bookkeeping and Accounting Practices	3
MTH 130	Business Mathematics	3
SPE 105	Fundamentals of Public Speaking	3

MANAGEMENT CAREERS — ADMINISTRATIVE MANAGEMENT OPTION

(Associate Degree)

The Administrative Management option offers a continuation of the traditional management and business studies. This option is designed for students seeking a detailed examination of management practices, techniques, and theories.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
ACC 201	Principles of Accounting I**	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
† Elective		3
		15
SEMESTER IV		
MGT 242	Personnel Administration	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
	Social Science elective or Humanities elective	3
† Elective		3
		18
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — MID-MANAGEMENT OPTION

(Associate Degree)

The Mid-Management option is a cooperative plan with members of the business community whereby the student attends college classes in management and related courses and concurrently works at a regular, paid, part-time or full-time job in a sponsoring business firm. To enter the Mid-Management option, students must make formal application and be interviewed by a member of the Mid-Management faculty before final acceptance will be granted.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 150	Management Training	4
MGT 154	Management Seminar: Role of Supervision	2
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
		15
SEMESTER II		
MGT 151	Management Training	4
MGT 155	Management Seminar: Personnel Management	2
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
HUM 101	Introduction to the Humanities	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		18
SEMESTER III		
MGT 250	Management Training	4
MGT 254	Management Seminar: Organizational Development	2
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 251	Management Training	4
MGT 255	Management Seminar: Business Strategy, the Decision Process and Problem Solving	2
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required:		63

† Elective — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.



MANAGEMENT CAREERS — SALES, MARKETING, AND RETAIL MANAGEMENT OPTION

(Associate Degree)

The Sales, Marketing, and Retail Management option is designed to prepare students for career opportunities in retail management, sales, or marketing. Students specialize in courses in retail management, sales, and marketing. Students also have the opportunity to work in sales, marketing, or retail areas through a sponsoring business firm.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 137	Principles of Retailing	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
MGT 230	Salesmanship	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
† Elective		3
		18
SEMESTER III		
MGT 233	Advertising and Sales Promotion	3
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
RDM 703	Cooperative Work Experience	3
		15
SEMESTER IV		
ECO 202	Principles of Economics II	3
RDM 245	Sales Management	3
RDM 246	Management and Marketing Cases	3
RDM 803	Cooperative Work Experience	3
	Social Science elective or Humanities elective	3
		15
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 212	Special Problems in Business	1
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — SMALL BUSINESS MANAGEMENT OPTION

(Associate Degree Program)

The Small Business Management option is designed to assist owners and managers of small businesses in developing the skills and techniques necessary for operation. This option is also designed for students who plan to become owners or operators of small businesses.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 153	Small Business Management	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
†Elective		3
		15
SEMESTER II		
MGT 157	Small Business Bookkeeping and Accounting Practices	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
MGT 206	Principles of Marketing	3
MGT 211	Small Business Operations	3
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 210	Small Business Capitalization, Acquisition and Finance	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
†Elective		3
		15
Minimum Hours Required		60

† Electives — May be selected from the following:

MGT 212	Special Problems in Business	1
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

**Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MOTORCYCLE MECHANICS

(Certificate)

This program is designed to train students to meet entry level requirements in the field of Motorcycle Mechanics. This will include diagnosis, repair, and maintenance of foreign and domestic motorcycles. Included in this program is the study of carburetion, ignition, and electrical systems, engine overhaul and tune-up, and motorcycle chasis. Throughout the entire program an emphasis is placed on the latest factory recommended techniques.

		CREDIT HOURS
SEMESTER I		
MM 104	Motorcycle Service Principles	3
MM 105	Motorcycle Tune-Up	3
MM 106	Motorcycle Two Stroke Engine/Transmission	3
		9
SEMESTER II		
MM 107	Motorcycle Four Stroke Engine/Transmission	3
MM 108	Motorcycle Electrical Systems	3
MM 109	Motorcycle Chassis and Drive Systems	3
		9
SEMESTER III		
MM 703	Cooperative Work Experience or	3
MM 704	Cooperative Work Experience	(4)
		3-4
Minimum Hours Required:		21

OFFICE CAREERS — ADMINISTRATIVE ASSISTANT OPTION

(Associate Degree)

The primary objective of the Administrative Assistant Option to the Office Careers Program is to prepare students for positions as assistants to administrators within public and private firms and agencies. Emphasis in this program is on the development of organizational and management skills in addition to basic office skills.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
BUS 105	Introduction to Business	3
† Elective		3
		17-18
SEMESTER II		
† OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
† OFC 273	Advanced Typing or	2
† Elective		
OFC 231	Business Communications	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting	
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
† Electives		6
		17
SEMESTER IV		
OFC 256	Office Management or	3
BUS 237	Organizational Behavior	
HUM 101	Introduction to Humanities	3
† Electives		9
		15
Minimum Hours Required:		66

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

OFFICE CAREERS — LEGAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent legal secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 159	Beginning Shorthand or	
OFC 103	Speedwriting	4
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 167	Legal Terminology and Transcription	3
OFC 231	Business Correspondence	3
# OFC 266	Advanced Shorthand	4
OFC 273	Advanced Typing or	2
† Elective		(3)
CS 175	Introduction to Computer Science	3
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 274	Legal Office Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		15-16
Minimum Hours Required:		67

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — PROFESSIONAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 159	Beginning Shorthand or	4
OFC 103	Speedwriting	
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		<u>15-16</u>
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		<u>17-18</u>
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
CS 175	Introduction to Computer Science	3
# OFC 266	Advanced Shorthand	4
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
OFC 273	Advanced Typing or	2
† Elective		(3)
		<u>18-19</u>
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
† Electives		6-7
		<u>15-17</u>
Minimum Required Hours:		67

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.



OFFICE CAREERS — RECORDS MANAGEMENT OPTION

(Associate Degree)

This program is designed to train students who wish to enter the ever-growing field of Records Management. Four technical courses will prepare the students to enter a comprehensive records management program in an organization which exerts control over the creation, distribution, retention, utilization, storage, retrieval, protection, preservation, and final disposition of all types of records. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 150	Filing Practices	3
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		14-15
SEMESTER II		
OFC 152	Introduction to Records Management	3
OFC 162	Office Procedures	3
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
OFC 250	Records Control	3
OFC 273	Advanced Typing or	2
† Elective		
CS 175	Introduction to Computer Science	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		17
SEMESTER IV		
OFC 252	Micrographics	3
OFC 265	Word Processing Practices and Procedures	3
HUM 101	Introduction to Humanities	3
† Electives		6-7
		15-16
Minimum Required Hours:		64

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

OFFICE CAREERS — GENERAL OFFICE

(Certificate)

The General Office Certificate Program is designed to provide the student with a basic working knowledge and skills in various office activities. A general knowledge of business concepts and procedures is provided.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Electives		7
		19
SEMESTER II		
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		7
		16
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Accounting Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
‡ ACC 132	Bookkeeping II or	3
† Elective		
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		8
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

‡ Required if ACC 131 was taken previously.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Office Clerical Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 162	Office Procedures	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
OFC 165	Introduction to Word Processing	3
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 166	Intermediate Shorthand***	4
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OUTBOARD MARINE ENGINE MECHANICS

(Certificate)

This program is designed to train students to meet entry level requirements in the field of Outboard Marine Engine Mechanics. This will include theory, diagnosis, repair, overhaul and maintenance of outboard marine engines. Included in this program is the study of outboard marine engine fuel, electrical and ignition systems, engine overhaul and tune-up, and lower units. Throughout the entire program an emphasis is placed on accepted shop techniques used throughout the outboard marine engine service industry.

		CREDIT HOURS
SEMESTER I		
OE 114	Outboard Engine Service Principles	3
OE 115	Outboard Engine Tune-Up	3
OE 116	Outboard Engine Powerhead Overhaul	3
		<u>9</u>
SEMESTER II		
OE 117	Outboard Engine Lower Unit Overhaul	3
OE 118	Outboard Engine Electrical Systems	3
OE 723	Cooperative Work Experience or	3
OE 724	Cooperative Work Experience	(4)
		<u>9-10</u>
Minimum Hours Required:		18

RETAIL DISTRIBUTION AND MARKETING — COMMERCIAL DESIGN AND ADVERTISING

(Associate Degree)

This program is designed to prepare a student for employment as a graphic artist in the fields of advertising, display, illustration, publications, packaging design, and software production. During the first year of the program students will take basic courses in drawing and design, plus courses in business, communications, economics, and psychology. In the second year, students will be studying courses in commercial art in addition to business courses and also have the option of working in the commercial art area through a sponsoring business firm.

		CREDIT HOURS
SEMESTER I		
ART 110	Design I	3
ART 114	Drawing I	3
ART 210	Commercial Art	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
ACC 201	Principles of Accounting I or	
ACC 131	Bookkeeping I	
		15
SEMESTER II		
ART 111	Design II	3
ART 115	Drawing II	3
ART 211	Commercial Art II	3
COM 132	Applied Composition and Speech II or	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
		15
SEMESTER III		
ART 122	Advertising Design	3
MGT 206	Principles of Marketing	3
RDM 247	Simulated Business Training I or	3
RDM 703	Cooperative Work Experience	
PSY 131	Human Relations	3
SPE 105	Fundamentals of Public Speaking	3
		15
SEMESTER IV		
ART 213	Commercial Design Group	3
ECO 201	Principles of Economics I	3
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
RDM 713	Cooperative Work Experience	3
Elective		3
		18
Minimum Hours Required:		63

Suggested Electives:

MGT 136	Principles of Management	3
MGT 137	Principles of Retailing	3
RDM 246	Marketing and Management Cases	3

RETAIL DISTRIBUTION AND MARKETING — FASHION MARKETING

(Associate Degree)

This two-year program is designed to prepare students for career opportunities in fashion marketing. Upon completion of the program, the student will receive an Associate in Applied Arts and Sciences Degree. Credit can be earned for on-the-job experience.

		CREDIT HOURS
SEMESTER I		
RDM 291	Fashion Merchandising	3
RDM 703	Cooperative Work Experience	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MGT 137	Principles of Retailing	3
MTH 130	Business Mathematics	3
		18
SEMESTER II		
RDM 292	Fashion Design	3
RDM 803	Cooperative Work Experience	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 230	Salesmanship	3
Elective		3
		18
SEMESTER III		
RDM 290	Fashion Buying	3
ACC 201	Accounting I or	3
ACC 131	Bookkeeping I	
MGT 206	Principles of Marketing	3
SPE 105	Fundamentals of Public Speaking	3
Elective		3
		15
SEMESTER IV		
DES 135	Textiles	3
ECO 201	Principles of Economics I	3
MGT 233	Advertising and Sales Promotion	3
PSY 131	Human Relations	3
Elective		3
		15
Minimum Hours Required:		66
Suggested Electives:		
CS 250	Contemporary Topics in Computer Science	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
RDM 245	Sales Management	3
RDM 246	Marketing and Management Cases	3

SMALL ENGINE MECHANICS

(Certificate)

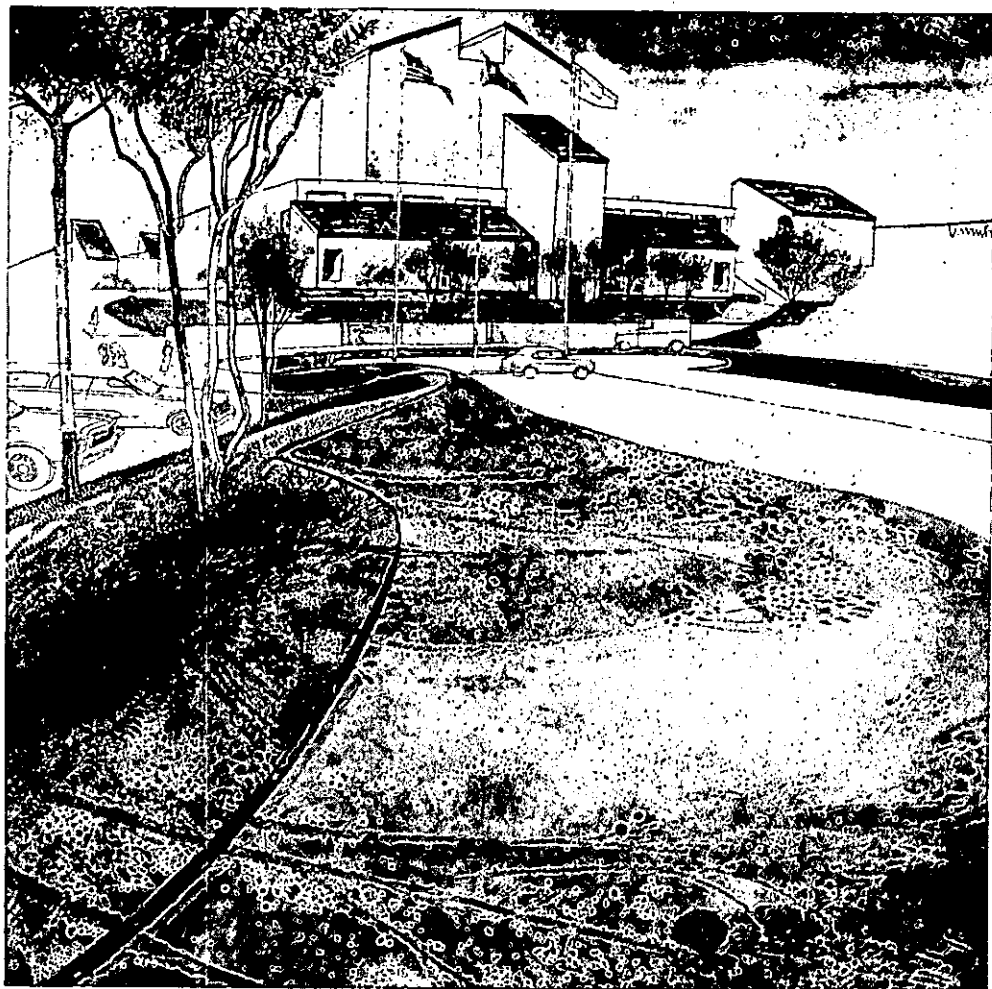
This program is designed to train students to meet entry level requirements in the field of Small Engine Mechanics. This will include theory, diagnosis, repair, overhaul and maintenance of small engines used on lawn mowers, garden tractors, and other small equipment. Included in this program is the study of small carburetion and electrical systems, engine overhaul and tune-up, and belt, chain, and direct drive power systems. Throughout the entire program an emphasis is placed on accepted shop techniques used throughout the small engine powered equipment industry.

		CREDIT HOURS
SEMESTER I		
SE 124	Small Engine Service Principles	3
SE 125	Small Engine Tune-Up	3
SE 126	Small Engine Two-Stroke Overhaul	3
		<u>9</u>
SEMESTER II		
SE 127	Small Engine Four-Stroke Overhaul	3
SE 128	Small Engine Electrical Systems	3
SE 733	Cooperative Work Experience or	3
SE 734	Cooperative Work Experience	(4)
		<u>9-10</u>
Minimum Hours Required:		18



Eastfield College

Information, Administration, Faculty



EASTFIELD COLLEGE

Eastfield College serves the eastern part of Dallas County, including East Dallas, Garland, and Mesquite. Sometimes known as the "Educational Village" because of its unique architecture, it is located on 244 acres at the intersection at Interstate 30 and Motley Drive in Mesquite. Eastfield began operation in 1970 and has continually strived to assess the educational and cultural needs of students and the community in order to provide the finest in educational services.

Eastfield provides a full range of Academic Transfer programs balanced with Technical/Occupation Programs that are designed to equip students for rewarding careers in Metroplex businesses and industries. In addition, thousands of people each semester find rewarding growth opportunities through the extensive Community Service course offerings.

The Campus

The Eastfield campus rises impressively from the plains of eastern Dallas County and is the scene of many seasonal athletic events held on its beautiful grass covered playing fields.

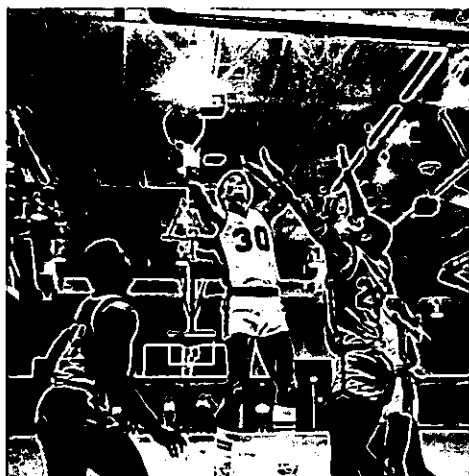
Functional building clusters give students easy access to classrooms and labs and the overall aesthetic effect has earned Eastfield several architectural awards of excellence. The careful landscape planning includes many trees, shrubs and terraced areas as well as a beautiful outdoor swimming pool. In addition, the campus boasts an outstanding performance hall which serves the community for a variety of fine arts events.

Accreditation

- Eastfield College is a member of
- The Southern Association of Colleges and Schools
 - The American Association of Community and Junior Colleges
 - Southern Association of Junior Colleges
 - Association of Texas Colleges and Universities
 - The League for Innovation in the Community College

Eastfield is recognized and sanctioned by the Coordinating Board of the Texas College and University System and the Texas Education Agency, and is an Affirmative Action Equal Opportunity Institution.





EASTFIELD COLLEGE ADMINISTRATION

President	Eleanor Ott	324-7600
Vice President of Instruction	Jerry Henson	324-7196
Vice President of Student Services	Lee Graupman	324-7610
Vice President of Business Services	Richard A. Solo	324-7603
Associate Dean, Technical/Occupational Programs	Lu McClellan	324-7198
Associate Dean, Learning Resources	Robert L. Lhota	324-7168
Assistant Dean of Community Services Programs	Carolyn Stock	324-7113
Administrative Assistant	Felix Zamora	324-7181
Director of Public Information	Vicki Matustik	324-7629
Director of Student Development	David Amidon	324-7185
Director of Counseling	Larry G. Carter	324-7106
Director of Admissions and Registrar	Bobbie J. Trout	324-7100
Director of Financial Aids and Placement	Furman Milton	324-7188
Director of Health Services	Cheri Reynolds	324-7190

DIVISION CHAIRPERSONS

Business	Victor Rizzo	324-7116
Communication, Developmental Studies	Karin Lemme	324-7124
Humanities	John Stewart	324-7132
Math and Engineering	John Daigh	324-7672
Physical Education and Technology	Wilbur Dennis	324-7140
Science and Technology	Edward Ruggiero	324-7143
Social Science and Human Services	Richard Cinclair	324-7156

EASTFIELD COLLEGE FACULTY AND STAFF

Allison, Joe F.	Mathematics
Stephen F. Austin State College, B.S.; Texas A&M Univ., M.Ed., Ph.D.	
Amidon, David C. Jr.	Director of Student Development
Univ. of Houston, B.A., M.Ed., Further Study, East Texas State Univ.	
Arnold, Jackie	Auto Body
Study, East Texas State Univ., Paris Junior College, General Motors	
Attner, Donnelle K.	Mid-Management
Univ. of North Carolina at Chapel Hill, B.A.; Univ. of Oklahoma, M.Ed.	
Bailey, Kenneth	Graphic Arts
Balvin, Kenneth	Physical Education
Springfield College, B.S., M.S.; Further Study, Ohio State Univ., Azusa Pacific College	
Baynham, James D.	Mid-Management
Eastfield College, A.A.S.; Abilene Christian Univ., B.B.A., M.S.	
Bennett, James R.	Developmental Mathematics
Univ. of Texas at Austin, B.A.; Univ. of Houston, M.S.; Further Study, East Texas State Univ.	
Blair, Oscar T.	Physical Education
North Texas State Univ., B.S., M.S.; Further study, North Texas State Univ., Texas Woman's Univ., East Texas State Univ.	
Boldt, Chris E.	Mathematics
Texas Tech Univ., B.B.A.; Texas Christian Univ., M.S.; East Texas State Univ., Ed.D.; Further study, Texas Christian Univ., North Texas State Univ., Univ. of Texas at Austin, Syracuse Univ., Univ. of Colorado, Univ. of Hawaii, Stanford Univ.	
Bowers, James	Developmental Reading
Arizona State Univ., B.A., M.A.	
Bradshaw, Curt	Jazz
Northern Iowa, B.S.; North Texas State Univ., M.M.	
Bradshaw, Patti J.	Child Development
North Texas State Univ., B.S., M.Ed.	
Brown, Beverlye	English
Birmingham Southern College, B.S.; Univ. of Alabama, M.A.; Further study, East Texas State Univ., North Texas State Univ.	
Brown, Emmett D.	Counseling
North Texas State Univ., B.A., M.Ed.; Further study, El Centro College, Prairie View A&M, Naval School of Photography	
Brumbach, Virginia	English
Cumberland College, A.A., Western Kentucky State Univ., B.A.; Baylor Univ., M.A., North Texas State Univ., Ed.D.; Post-doctoral, Texas Tech Univ., North Texas State Univ., Texas Christian Univ.	
Burden, Jacqueline	History
State Univ. of New York College at Buffalo, B.A.; Univ. of Michigan, M.A.; Further study, Univ. of Pittsburgh	
Carandang, Amado I.	Philosophy
King's College, B.A.; Univ. of Notre Dame, M.A., Ph.D.; Further study California Institute of Asian Studies, San Francisco Brock Univ., Ontario	
Carpenter, Robert W.	Accounting
North Texas State Univ., B.B.A., M.B.A. C.P.A. State of Texas; Further study, North Texas State Univ., Western State College of Colorado	
Carr, Laura V.	Training Paraprofessionals for the Deaf Program
Illinois State Univ., B.S.; New York Univ., M.A.; Further study, East Texas State Univ.	
Carter, James Damon	Automotive Technology
Southern Methodist Univ., NIASE; Further study, General Motors Training Center	
Carter, Larry	Director of Counseling
Texas Tech Univ., B.B.A.; East Texas State Univ., M.S., Ed.D.	
Cate, Franklin M.	History
East Texas State Univ., B.A.; Univ. of Virginia, M.A.; Further study: Univ. of Texas, Vanderbilt Univ.	

- Choate, Charles T. Journalism
Southeastern Oklahoma State. B.A.; East Texas State Univ., M.S.; Further study: San Francisco State Univ., East Texas State Univ.
- Christian, Allen L. Mathematics
Arlington State College. B.S.; East Texas State Univ., M.S.; North Texas State Univ., Ed.D.
- Cinclair, Richard Division Chairman, Social Science
Northern State College., B.S.; Univ. of Wisconsin, M.S.; Ball State Univ., Ph.D.
- Clarke, Curtis R. Mid-Management
Southern Methodist Univ., B.B.A., M.B.A.; Further study: Southern Methodist Univ., North Texas State Univ., Univ. of Texas at Arlington
- Clayton, Glenn N., Jr. English
North Texas State Univ., B.A., M.A.; Further study: East Texas State Univ., North Texas State Univ.
- Clinton, Doyle L. Spanish
Univ. of Southern Mississippi, B.A.; Univ. of Alabama, M.A.; Further study: Louisiana State Univ.
- Daigh, John D. Division Chairman, Mathematics and Engineering
United States Military Academy. B.S.; Univ. of Illinois, M.S., Ph.D.; Professional Engineer Registration
- Dale, Charles W. Electronics
Southeastern State College of Oklahoma, B.S.; Southern Illinois Univ., M.S.; East Texas State Univ., Ed.D.
- Dennis, Vivian A. Mathematics
East Texas State Univ., B.A., M.S., D.Ed.; Further study: North Texas State Univ.
- Dennis, Wilbur L. Division Chairman, Physical Education
North Texas State Univ., B.S., M.S., M.Ed.; Further study: East Texas State Univ.
- DiPietro, Lawrence N. Learning Resource Center
Rutgers Univ., B.A., Drexel Univ., M.S.L.S.; Further study: North Texas State Univ.
- Drake, Helan N. English
Southern Methodist Univ., B.A.; North Texas State Univ., M.A.; Further study: East Texas State Univ.
- Erwin, Robert J. Theatre
Univ. of South Florida, B.A.; Univ. of Alberta, M.F.A.; Further study: Paul Mann's Acting Workshop, New York City
- Etheredge, John W. Counseling
Baylor Univ., B.A., M.S.; Further study: Univ. of Houston, Baylor Univ., Texas A&M Univ.
- Ewing, George E. Drafting
North Texas State Univ., B.S., M.S.; Univ. of Arkansas, Ed.D.
- Felder, Bob Business
Sam Houston State Univ., B.A., M.A.
- Flickner, Robert E. Physical Education
Bethel College, B.S.; Kansas Univ., M.S.
- Forrest, Mary L. Speech
North Texas State Univ., B.A.; Southern Methodist Univ., M.F.A.; Further study: North Texas State Univ.
- Fountaine, Oliver J. Mathematics
Tillotson College, B.S.; Univ of Denver, M.A.
- Gormly, Donna A. English
Texas Woman's Univ., B.A., M.A.; Further study: Texas Christian Univ.
- Graupman, Lee Vice President of Student Services
LaCrosse State Univ., B.S.; Western State College of Colorado, M.A.; Further study, Fresno State College, San Francisco State College
- Hall, Harvey Air Conditioning and Refrigeration
- Hamilton, Hance H. Chemistry
Texas A&M Univ., B.S., Ph.D.
- Hegar, E. Aylene Counselor, Psychology
Texas Tech Univ., B.A.; North Texas State Univ., M.Ed., Ed.D.
- Helton, Charles E. Director of Appraisal Center/CAI Lab
East Texas State Univ., B.S.; Further study: East Texas State Univ.
- Henry, Robert M. Physical Education
Southern Methodist Univ., B.A.; Univ. of Illinois, M.S.; Further study: Univ. of Texas, North Texas State Univ., East Texas State Univ., Texas Tech Univ., Texas A&M Univ.

- Henson, Jerry C. Vice President of Instruction
Hardin-Simmons Univ., B.A.; Southwestern Baptist Theological Seminary, B.D.; Baylor Univ., Ph.D.
- Herd, Clarence W. Automotive Technology
East Texas State Univ., B.A.; Further study: East Texas State Univ.
- Hill, H. Rayburn Government
Paris Junior College, A.A.; East Texas State Univ., B.S., M.S.; Further study, Univ. of Oklahoma, East Texas State Univ.
- Hinkle, John L. English
Baylor Univ., B.A.; East Texas State Univ., M.A.; Further study: Baylor Univ., East Texas State Univ.
- Holloway, Ralph Director of Instructional Development
Amarillo College, A.A.; Hardin-Simmons Univ., B.A.; North Texas State Univ., M.L.S.; Further study: University of Texas at Austin, East Texas State Univ.
- Holman, Morris H. History
East Texas State Univ., B.A., M.A.; Dallas Theological Seminary, M.A.B.S.; Further study: North Texas State Univ.
- Holt, Diane R. Sociology
Univ. of Utah, B.S., M.S.; Union Graduate School, Ph.D.; Further study: Univ. of California at Los Angeles, San Diego State Univ.
- Hughes, W. Tim Jr. History, Government
Henderson State Teachers College, B.S.E.; George Peabody College for Teachers, M.A.; Further study: Baylor Univ., East Texas State Univ., Univ. of the Americas, Texas A&M Univ.
- Hutchins, Michael E. Drafting
East Texas State Univ., B.S., M.S., Ed.D.
- Jeffus, Larry Welding
Hiwassee College, A.A.; Univ. of Tennessee, B.S.; Further study, Univ. of Tennessee
- Jessen, Joel A. Counselor
Univ. of Iowa, B.A., M.A.
- John, Margaret Counselor
Austin College, B.A.; East Texas State Univ., M.A.
- Karner, Albert M. Air Conditioning and Refrigeration
Study: Univ. of Oklahoma, Oklahoma State Univ., Univ. of Tulsa
- Kennedy, Pat Child Development
North Texas State Univ., B.A., M.S.
- King, H. Gill Anthropology, Biology
Southern Methodist Univ., B.A., M.A., Ph.D.
- Kirkpatrick, James Michael Drafting
Oklahoma City Univ., B.I.A.; North Texas State Univ., M.Ed., Ed.D.
- Knight, Carl E. Biology
Michigan State Univ., B.S., M.S., Ph.D.
- Koeppen, Larry G. Counselor
North Texas State Univ., B.S., M.Ed.; Further study: North Texas State Univ.
- Kugler, Ellen Assistant Director of Student Development
Colorado State Univ., B.A., M.Ed.
- Latham, Jim Auto Body Technology
East Texas State Univ., B.A.; Further study: East Texas State Univ., Texas A&M Univ.
- Lemme, Karin Division Chairman, Communications/Developmental Studies
Northern Illinois Univ., B.S.; Illinois State Univ., M.S.; Further study: East Texas State Univ.
- Lhota, Bob Associate Dean, LRC
St. Vincent College, B.A., M.A.; Univ. of Pittsburgh, M.L.S.; Pacific Western Univ., Ph.D.
- Lopez, Frank Mathematics
Southwest Texas State College, B.S.; Univ. of Texas at Austin, M.A.; Further study: Texas A&M Univ.
- Lucky, Harrell C. Music
Bethany Nazarene College, B.M.Ed.; Southwestern Baptist Seminary, M.C.M., D.M.E.; Further study: Academy of Music, Vienna, Austria
- Lynch, Maurice Director of Physical Plant

- Madriguera, Enric F. Music
Royal Conservatory of Music, Madrid, Spain; Oscar Espla Conservatory of Music, Alicante, Spain; East Carolina Univ.
- Martin, Diane M. English
North Texas State Univ., B.A.; California State College at Fullerton, M.A.; Further study: East Texas State Univ., Univ. of Texas at Austin
- Martinez, Ivan D. Government
Florida State Univ., B.A., M.S.
- Massey, Aaron W. Counselor
Southwest Texas State, B.S.; East Texas State Univ., M.S.; Further study: East Texas State Univ., North Texas State Univ., Abilene Christian Univ., Texas A&M Univ.
- Mathus, Don L. Physical Education
South Plains College, A.A.; Texas Tech Univ., B.S., M.S.; Further study: North Texas State Univ.
- Matustik, Vicki B. Director of Public Information
North Texas State Univ., B.A.
- Matzen, Brent E. Art
Southwestern Univ., B.A.; Univ. of Dallas, M.A., M.F.A.
- McAden, Winston Air Conditioning and Refrigeration
Texas Tech Univ., B.S.; Further study: Southern Methodist Univ.
- McClellen, Lu Associate Dean, Technical/Occupational Programs
Baylor Univ., B.A.; East Texas State Univ., M.Ed., Ed.D.
- McClung, Ray O. Counselor, Psychology
Texas A&M Univ., B.S.; Univ of Illinois, M.S.; North Texas State Univ., Ph.D.
- McCoy, David L. Photography
Southeastern State College of Oklahoma, B.A.; East Texas State Univ., M.S., Ph.D.
- McMahon, Jerry D. Chemistry
Texas Tech Univ., B.S.; Princeton Univ., M.A.
- McNeill, Earldene Child Development
North Texas State Univ., B.S.; Southern Methodist Univ., M.L.A.
- Milton, Furman D. Director of Financial Aids and Placement
Troy State Univ., B.S., East Texas State Univ., M.Ed., Ph.D.
- Moorhead, Michael English
Texas Tech Univ., B.A., M.A.; Further study: Texas Tech Univ.
- Mouledous, Pierrette M. Piano
Performer's Certificate, Ecole Normale de Musique, Southern Methodist Univ., M.M.
- Neil, Mary Lou English
Texas Christian Univ., B.A.; Univ. of Dallas, M.A.; Further study: Univ. of Dallas
- Olson, Margot Instructional Development Consultant
Carnegie-Mellon Univ., B.S.; Florida State Univ., M.S., Ph.D.
- Ott, Eleanor President
Rice Univ., B.A.; Southern Methodist Univ., M.A.
- Palmar, Ursula J. Training Paraprofessionals for the Deaf Program
Salve Regina College, B.A.; Univ. of Arizona, M.S.; Further study: Univ. of Arizona
- Penney, Jane A. Sociology/Human Services
East Texas State Univ., B.S., M.S.
- Phillips, Harry Music
State Univ. College at Potsdam, New York, B.S.; Univ. of Michigan, M.M.; Boston Univ., Mus. A.D.
- Phillips, Jim G. Counselor
East Texas State Univ., B.A., M.A., Ph.D.; Further study: North Texas State Univ.
- Pilot, Theo Child Development
University of Maryland, B.S.; Texas Woman's Univ., M.S.
- Pitt, J. Michael Physics
Southern Methodist Univ., B.S.E.E.; Univ of Texas at Austin, Ph.D.
- Pleasant, P. Leon Jr. Accounting
North Texas State Univ., B.B.A.; East Texas State Univ., M.B.A.; Further study: East Texas State Univ.
- Preston, David E. Sociology
East Texas State Univ., B.S., M.S.; North Texas State Univ., Ed.D.

- Priest, Andy J. Automotive Technology and Engineering
North Texas State Univ., B.S.; Southern Methodist Univ., M.L.A.; Further study: East Texas State Univ.
- Privette, Parnell Electronics
Univ. of Texas at Austin, B.S.E.E.
- Purdy, Earlyne Secretarial Science
North Texas State Univ., B.S.; East Texas State Univ., M.S.
- Rawlins, John Clayton Electronics
Southern Methodist Univ., B.S.E.E.; East Texas State Univ., M.S.Ed.
- Reeves, Ed R. Biology
West Texas Univ., B.S.; East Texas State Univ., M.S.; Further study: Texas Tech Univ.
- Reynolds, Cheri Director of Health Services
Texas Woman's Univ., B.S.; Further study: Texas Woman's Univ.
- Rice, Nina D. Physical Education
Univ. of Central Arkansas, B.S.; George Peabody College, M.A.; Texas Woman's Univ., Ph.D.
- Richardson, Douglas M. Mid-Management
North Texas State Univ., B.B.A., M.B.A.; Further study: East Texas State Univ.
- Rizzo, Victor J. Division Chairman, Business
Southwest Texas State Univ., B.B.A., M.B.A.; North Texas State Univ., Ph.D. Candidate
- Robinson, Yvonne Secretarial Science
D.C. Teachers College, B.S.; North Texas State Univ., M.B.E.; East Texas State Univ., Ed.D.
- Roy, DeWayne Welding
- Ruggiero, Edward Division Chairman, Science
Fordham Univ., B.S.; City Univ. of New York, M.S.; Further study: City Univ. of New York, Univ. of Texas at Dallas
- St. Clair, Anita J. Secretarial Science
Abilene Christian College, B.S.E.; North Texas State Univ., M.B.E.; Further study: Southern Methodist Univ., North Texas State Univ., East Texas State Univ.
- Sanders, Marja-Terttu Spanish
El Centro College, A.A.; North Texas State Univ., B.A., M.A.; Further study: East Texas State Univ., Texas Tech Univ.
- Schmitt, Allan B. Electronics
Univ. of Texas at Austin, B.E.S., M.S.E.E., Ph.D.E.E.
- Schrup, Sara J. Art
Art Institute of Chicago, B.F.A.; Univ. of Dallas, M.A., M.F.A.
- Scott, Ray R. Physics
North Texas State Univ., B.A.; East Texas State Univ., M.S.; Purdue Univ., M.S.; Further study: East Texas State Univ.
- Sharp, Robert G. American History
Whitworth College B.A.; Purdue Univ., M.A.; Further study: Univ. of Denver, Univ. of New Mexico
- Sherrill, Theodore B. III Biology
Lamar State Univ., B.S.; East Texas State Univ., M.S.; Further study: Southern Methodist Univ., North Texas State Univ., East Texas State Univ.
- Shofner, Robert W. English
East Texas State Univ., B.S., M.A.
- Slovak, Pauline A. English
Univ. of Arkansas at Monticello, B.S.E.; East Texas State Univ., M.A. Ed. D.
- Smith, Maryle Bea Business
North Texas State Univ., B.B.A., M.B.E.; Further study: East Texas State Univ.
- Solganick, Harvey English, German Philosophy
North Texas State Univ., B.A., M.Ed., Southern Methodist Univ., M.I.A.; Further study: Univ. of Texas at Arlington, Univ. of Dallas, Univ. of Texas at Dallas, Univ. of California at Santa Barbara
- Solo, Richard A. Vice-President of Business Services
Villanova Univ., B.S., Certified Public Accountant; Further studies: Univ. of Dallas
- Starling, Susanne American History
Baylor Univ., B.A.; North Texas State Univ., M.A., Further study North Texas State Univ.
- Stewart, John D. Division Chairman, Humanities, Music
East Texas State Univ., B.M.Ed., M.Ed.; Indiana Univ., Ph.D.

-
- Stover, Harryette B. English
Southern Methodist Univ., B.A, M.A.; Further study: North Texas State Univ., East Texas State Univ.
- Streeter, C. Allen Engineering
Louisiana State Univ., B.S., M.S.; Further Study: Southern Methodist Univ.; Professional Engineer
Registration
- Streng, Adolf C., Jr. Psychology
Texas Lutheran College, B.A.; Wartburg Seminary, M.Div.; The Univ. of Chicago, M.A.; Roosevelt Univ.,
M.A.; Further study: Univ. of Maine, Iowa State Univ., Univ. of Colorado
- Swinding, James A. Developmental Reading
Daytona Beach Community College, A.A. Florida State Univ., B.A., M.S.; Further study: Univ. of Nevada,
East Texas State Univ.
- Thorne, John M. Accounting
East Texas State Univ., B.B.A., M.B.A.; Further Study: Univ. of Oklahoma
- Thornton, Carolyn Counseling
Univ. of Cincinnati, B.A.; East Texas State Univ., M.S.
- Tinsley, Sammy J. Developmental Mathematics
Ouachita Baptist Univ., B.A.; Univ of Mississippi, M.S., Ph.D.
- Trout, Bobbie Registrar
Univ. of Texas at Austin, B.A.; Univ. of Texas at Dallas, M.A.
- Weaver, Gayle M. Biology
East Texas State Univ., B.S., M.S.; Univ of Oklahoma, M.S.; East Texas State Univ., Ph.D.; Further
study: Oak Ridge Institute of Nuclear Studies
- Weeks, Roger D. Business
East Texas State Univ., B.B.A., M.B.A.; Further study: Univ. of Missouri
- Whisnant, Robert A., Jr. Humanities
Univ. of South Florida, B.A., M.A.; Further study: East Texas State Univ.
- Williams, Jerome Biology
East Texas State Univ., B.S., M.S.; Further study: East Texas State Univ., North Texas State Univ.
- Wilson, Mary C. English
East Texas State Univ., B.A., M.A.; Further study: Texas Christian Univ., Southern Methodist Univ., East
Texas State Univ.
- Winn, Jerry M. Developmental Mathematics
Oklahoma Univ., B.S.E.E.; Southern Methodist Univ., M.S.
- Wisdom, Hardy Auto Body Technology
North Texas State Univ., B.S.
- Zamora, Felix Administrative Assistant to the President
School for International Training, B.S.; Southern Methodist Univ., M.P.A.



Eastfield College

Curriculum Patterns
For Technical/Occupational Programs



ACCOUNTING ASSOCIATE

(Associate Degree)

The Accounting Associate two-year program is designed to prepare a student for a career as a junior accountant in business, industry and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles.

The Associate in Applied Arts and Sciences Degree is awarded for successful completion of at least 63 credit hours as outlined below. Students desiring a less comprehensive program that emphasizes bookkeeping procedures and practices should consider the General Office Certificate with elective emphasis on accounting careers. The General Office Certificate is available in the Office Careers Program.

		CREDIT HOURS
SEMESTER I		
ACC 201	Principles of Accounting I	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or*	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
OFC 160	Office Machines	3
		<u>15</u>
SEMESTER II		
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or*	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
† OFC 172	Beginning Typing	3
		<u>15</u>
SEMESTER III		
ACC 203	Intermediate Accounting I	3
ACC 204	Managerial Accounting	3
ECO 201	Principles of Economics I	3
GVT 201	American Government	3
† Electives		3-6
		<u>15-18</u>
SEMESTER IV		
ACC 238	Cost Accounting or	3
ACC 239	Income Tax Accounting	
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
† Electives		3-6
		<u>15-18</u>
Minimum Hours Required:		63

† Electives — A minimum of 9 credit hours must be selected from the following:

ACC 205	Business Finance	3
ACC 207	Intermediate Accounting II	3
ACC 238	Cost Accounting	3
ACC 239	Income Tax Accounting	3
ACC 703-713 803-813	Cooperative Work Experience	3
ACC 704-714 804-814	Cooperative Work Experience	4
BUS 143	Personal Finance	3
BUS 237	Organizational Behavior	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science and Data Processing	4
MGT 206	Principles of Marketing	3
PSY 105	Introduction to Psychology or Human Relations	3
PSY 131		
SPE 105	Fundamentals of Public Speaking	3
Any CS or DP Programming course		

* ENG 101 and ENG 102 may be substituted for COM 131 and COM 132 provided that SPE 105 is also taken.

‡ Students who can demonstrate proficiency by previous training, experience, or placement tests may substitute a course from the electives listed for this program.

AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

(Associate Degree)

This program furnishes both the theory and practice required to qualify a person for employment in the various areas of the air conditioning and refrigeration industry.

		CREDIT HOURS
SEMESTER I		
ACR 111	Principles of Refrigeration	3
ACR 113	Fundamentals of Electricity	3
ACR 115	Unit Air Conditioning Systems	3
ACR 117	Domestic Refrigeration	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
DFT 182	Technician Drafting	2
		<u>17</u>
SEMESTER II		
ACR 112	Properties of Air	3
ACR 114	Heat Load Analysis	3
ACR 116	Summer Air Conditioning Systems	3
ACR 118	Winter Air Conditioning Systems	3
HST 101	History of the United States or	3
PSY 131	Human Relations	
MTH 195	Technical Mathematics	3
		<u>18</u>
SEMESTER III		
ACR 221	Refrigeration Loads	3
ACR 223	Medium Temperature Refrigeration Systems	3
ACR 227	Low Temperature Refrigeration Systems	3
ACR 229	Refrigeration Equipment Selection	3
ACC 131	Bookkeeping I	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		<u>18</u>
SEMESTER IV		
ACR 222	Advanced Systems	3
ACR 224	System Testing and Balancing	3
ACR 228	Air Conditioning System Equipment Selection	3
ACR 230	Energy Conservation	3
ACR 803	Cooperative Work Experience	3
		<u>15</u>
Minimum Hours Required:		68

AIR CONDITIONING AND REFRIGERATION

(Certificate)

This program will qualify the student to install, repair, and maintain equipment in the fields of domestic refrigeration, commercial refrigeration, and air conditioning, cooling or heating systems.

		CREDIT HOURS
SEMESTER I		
ACR 111	Principles of Refrigeration	3
ACR 113	Fundamentals of Electricity	3
ACR 115	Unit Air Conditioning Systems	3
ACR 117	Domestic Refrigeration	3
MTH 195	Technical Mathematics	3
		15
SEMESTER II		
ACR 112	Properties of Air	3
ACR 114	Heat Load Analysis	3
ACR 116	Summer Air Conditioning Systems	3
ACR 118	Winter Air Conditioning Systems	3
		12
SEMESTER III		
ACR 221	Refrigeration Loads	3
ACR 223	Medium Temperature Refrigeration Systems	3
ACR 227	Low Temperature Refrigeration Systems	3
ACR 229	Refrigeration Equipment Selection	3
ACR 803	Cooperative Work Experience	3
		15
Minimum Hours Required:		42

AUTO BODY TECHNOLOGY

(Associate Degree)

This program introduces the student to all facets of auto body repair and painting. Emphasis is placed upon the development of the necessary skills and knowledge required to function successfully in this industry. The program of study includes technical aspects of metal behavior combined with correct repair and refinishing procedures.

		CREDIT HOURS
SEMESTER I		
AB 111	Basic Metal Principles*	3
AB 112	Applied Basic Metal Principles*	2
AB 121	Basic Paint Principles*	3
AB 122	Applied Basic Paint Principles*	2
AB 245	Welding for Auto Body or	3
WE 101	Basic Welding Principles	
MTH 195	Technical Mathematics	3
		16
SEMESTER II		
AB 113	Minor Metal Repair*	3
AB 114	Applied Minor Metal Repair*	2
AB 123	Paint Blending and Spot Repair Techniques*	3
AB 124	Applied Paint Blending and Spot Repair Techniques*	2
COM 131	Applied Composition and Speech	3
PHY 131	Applied Physics	4
		17
SEMESTER III		
AB 211	Major Panel Replacement*	3
AB 212	Applied Major Panel Replacement*	2
AB 213	Major Collision and Frame Repair	3
PSY 131	Human Relations	3
† Elective		4
		15
SEMESTER IV		
AB 139	Body Shop Operations	3
AB 221	Advanced Paint Techniques*	3
AB 222	Applied Advanced Paint Techniques*	2
AB 235	Estimating	3
AB 803	Cooperative Work Experience or	3
AB 804	Cooperative Work Experience	(4)
		14-15
Minimum Hours Required:		62

† Electives — Must be selected from the following:

AT 118	Electrical Systems	4
AT 221	Heating and Air Conditioning	4
AT 225	Front End	4

*Must be enrolled in concurrently (at the same time): AB 111/112, AB 113/114, AB 121/122, AB 123/124, AB 211/212, AB 221/222

AUTO BODY TECHNOLOGY**(Certificate)**

This program is designed to train a student in all facets of auto body and repair and painting. Emphasis is placed upon those skills needed to train the student to become a successful auto body repair person. This program offers the student a certificate in Auto Body Technology upon successful completion of the program.

		CREDIT HOURS
SEMESTER I		
AB 111	Basic Metal Principles*	3
AB 112	Applied Basic Metal Principles*	2
AB 121	Basic Paint Principles*	3
AB 122	Applied Basic Paint Principles*	2
AB 123	Paint Blending and Spot Repair Techniques*	3
AB 124	Applied Paint Blending and Spot Repair Techniques*	2
AB 245	Welding for Auto Body or	3
WE 101	Basic Welding Principles	
		18
SEMESTER II		
AB 113	Minor Metal Repair*	3
AB 114	Applied Minor Metal Repair*	2
AB 211	Major Panel Replacement*	3
AB 212	Applied Major Panel Replacement*	2
AB 221	Advanced Paint Techniques*	3
AB 222	Applied Advanced Paint Techniques*	2
		15
SEMESTER III		
AB 139	Body Shop Operations	3
AB 213	Major Collision and Frame Repair	3
AB 235	Estimating	3
AB 803 or	Cooperative Work Experience	3
AB 804	Cooperative Work Experience	(4)
		12-13
Minimum Hours Required:		45

*Must be enrolled in concurrently (at the same time): AB 111/112, AB 113/114, AB 121/122, AB 123/124, AB 211/212, AB 221/222

AUTOMOTIVE TECHNOLOGY

(Associate Degree)

The purpose of this program is to prepare students for entry level employment as an automotive technician. This program of study will include theory, diagnosis, repair, overhaul and maintenance of automobiles. Emphasis is placed on operational theory, practical skills and accepted shop procedures.

		CREDIT HOURS
SEMESTER I		
AT 108	Minor Vehicle Services	4
AT 110	Engine Repair I	4
AT 112	Engine Repair II	4
COM 131	Applied Composition and Speech I	3
MTH 195	Technical Mathematics	3
		18
SEMESTER II		
AT 114	Engine Analysis and Tune-Up	4
AT 116	Fuel and Emission Systems	4
AT 118	Electrical Systems	4
PHY 131	Applied Physics	4
		16
SEMESTER III		
AT 221	Heating and Air Conditioning	4
AT 223	Brake Systems	4
AT 225	Front End Systems	4
† Elective		3-4
		15-16
SEMESTER IV		
AT 227	Standard Transmissions and Drive Trains	4
AT 229	Automatic Transmissions I	4
AT 231	Automatic Transmissions II	4
AT 703	Cooperative Work Experience or	3
AT 714	Cooperative Work Experience	(4)
‡ Elective		3
		18-19
Minimum Hours Required:		67

† Elective — Must be selected from the following:

AB 245	Welding for Auto Body	3
BUS 105	Introduction to Business	3
WE 101	Basic Welding and Cutting Practices	3
AT 803	Cooperative Work Experience or	3
AT 814	Cooperative Work Experience	(4)

‡ Elective — Must be selected from the following:

GVT 201	American Government	3
HD 105	Basic Processes of Interpersonal Relationship	3
HUM 101	Introduction to the Humanities	3
PSY 131	Human Relations	3

AUTOMOTIVE TECHNOLOGY

(Certificate)

The purpose of this program is to train persons for entry level positions in the field of Automotive Technology. A certificate is issued upon successful completion of the following listed courses.

		CREDIT HOURS
SEMESTER I		
AT 108	Minor Vehicle Services	4
AT 110	Engine Repair I	4
AT 112	Engine Repair II	4
		<u>12</u>
SEMESTER II		
AT 114	Engine Analysis and Tune-Up	4
AT 116	Fuel and Emission Systems	4
AT 118	Electrical Systems	4
		<u>12</u>
SEMESTER III		
AT 221	Heating and Air Conditioning	4
AT 223	Brake Systems	4
AT 225	Front End Systems	4
		<u>12</u>
SEMESTER IV		
AT 227	Standard Transmissions and Drive Trains	4
AT 229	Automatic Transmissions I	4
AT 231	Automatic Transmissions II	4
AT 703	Cooperative Work Experience or	3
AT 714	Cooperative Work Experience	(4)
		<u>15-16</u>

Minimum Hours Required:

51



CHILD DEVELOPMENT ASSOCIATE

(Associate Degree)

The Child Development program offers students an in-depth study of young children from birth to twelve years of age in conjunction with the Parent/Child Study Center that provides students day-to-day involvement with young children. The program is designed to enable students to provide an optimal learning and caring environment for children.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services**	4
CD 140	Early Childhood Development, 0-3 Years**	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
SOC 101	Introduction to Sociology	3
† Elective		3-4
		<u>16-17</u>
SEMESTER II		
CD 137	Early Childhood Learning Environments, Activities and Materials**	4
CD 141	Early Childhood Development, 3-5 Years**	3
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	(3)
CD 814	Cooperative Work Experience	(4)
HD 106	Personal and Social Growth or	3
PSY 105	Introduction to Psychology	
HST 102	History of the United States	3
† Elective		3
		<u>18-20</u>
SEMESTER III		
CD 100	Directed Participation in Early Childhood Programs* or	4
CD 233	Directed Participation in Early Childhood Programs	
CD 239	Studies in Child Guidance**	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
GVT 201	American Government	3
† Elective		2-4
		<u>15-17</u>

SEMESTER IV

CD 150	Nutrition, Health and Safety of the Young Child**	3
CD 200	Application of Child Development Learning Theories* or	4
CD 244	Application of Child Development Learning Theories	
HUM 101	Introduction to the Humanities	3
SOC 203	Marriage and the Family	3
† Electives		2-4
		15-17

Minimum Hours Required:

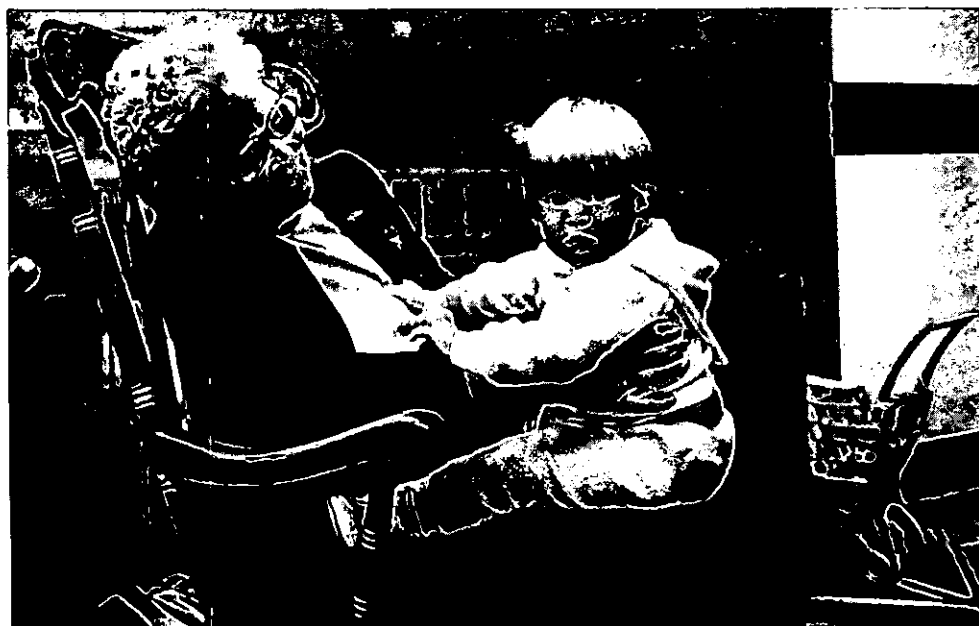
64

† Electives — Must be selected from the following:

CD 125	Infant and Toddler Learning Environments, Activities, and Materials	4
CD 127	Early Childhood Development, 5-12 Years	3
CD 203	Parents and the Child Caregiver/Teacher	3
CD 209	Early Childhood Development Special Projects	3
CD 236	The Special Child: Growth and Development	3
CD 238	Introduction to Administration of Child-Care Programs	3
CD 246	Advanced Administrative Practices for Child-Care Facilities	3
CD 250	Supportive Services for Exceptional Children	3
CD 251	Learning Programs for Children with Special Needs	3
CD 253	Abuse Within the Family	3
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	3
CD 814	Cooperative Work Experience	4
TPD 141	Beginning Sign Language	4

* CD 100 and CD 200 are taken as one-hour courses concurrently with the six (6) required CD courses (**) and two (2) of the following CD electives: CD 125, CD 127, CD 203, CD 238, or CD 246.

CD 100 and CD 200 are repeated for credit for a total of eight (8) hours and are *equivalent to CD 233 and CD 244*.



CHILD DEVELOPMENT — SPECIAL CHILD CERTIFICATE

(Certificate)

This certificate program is planned to emphasize the needs of special children and their families.

		CREDIT HOURS
SEMESTER I		
CD 140	Early Childhood Development, 0-3 Years	3
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 236	The Special Child: Growth and Development	3
CD 239	Studies in Child Guidance	3
HD 106	Personal and Social Growth	3
		<u>15</u>
SEMESTER II		
CD 141	Early Childhood Development, 3-5 Years	3
CD 250	Supportive Services for Exceptional Children	3
CD 251	Learning Programs for Children with Special Needs	4
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	(3)
CD 814	Cooperative Work Experience	(4)
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
† Elective		<u>3-4</u>
		<u>18-21</u>
Minimum Hours Required:		33

† Elective — Must be selected from the following:

CD 125	Infant and Toddler Learning Environments, Activities, and Materials	4
CD 127	Early Childhood Development, 5-12 Years	3
CD 253	Abuse Within the Family	3
TPD 141	Beginning Sign Language	4

CHILD DEVELOPMENT — ADMINISTRATIVE OPTION

(Certificate)

This one-year program will provide an opportunity for the student to study administrative procedures for child care facilities.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services	4
CD 140	Early Childhood Development, 0-3 Years* or	3
CD 141	Early Childhood Development, 3-5 Years	
CD 238	Introduction to Administration of Child Care Programs	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 131	Applied Composition and Speech	3
		16
SEMESTER II		
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 239	Studies in Child Guidance	3
CD 246	Advanced Administrative Practices for Child Care Facilities	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 132	Applied Composition and Speech	3
HD 106	Personal and Social Growth or	3
PSY 105	Introduction to Psychology	
		18
Minimum Hours Required:		34

*CD 100 and/or CD 200 — To be taken as one (1) credit-hour courses concurrently with each required child development course listed above. Check with the instructor before enrolling.

CHILD DEVELOPMENT — INFANT-TODDLER OPTION

(Certificate)

This one-year program provides for an in-depth study of infant-toddler growth and development, programs and services.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services	4
CD 140	Early Childhood Development, 0-3 Years	3
CD 239	Studies in Child Guidance	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 131	Applied Composition and Speech	3
		<u>16</u>
SEMESTER II		
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 125	Infant and Toddler Learning Environments, Activities and Materials	4
CD 203	Parents and the Child Caregiver/Teacher	3
CD 100	Directed Participation of Early Childhood Programs* or	3
CD 200	Application of Child Development Learning Theories*	
COM 132	Applied Composition and Speech	3
HUM 101	Introduction to the Humanities	3
		<u>19</u>
Minimum Hours Required:		35

*CD 100 and/or CD 200 — To be taken as one (1) credit-hour courses concurrently with each required child development course listed above. Check with the instructor before enrolling.

CDA TRAINING CERTIFICATE

(Certificate)

This certificate program provides course work to assist the student to prepare for the CDA (Child Development Associate) assessment process. Students interested in applying for this national credential should consult a Child Development instructor.

		CREDIT HOURS
SEMESTER I		
CD 135	Introduction to Early Childhood Programs and Services	4
CD 140	Early Childhood Development, 0-3 Years	3
CD 150	Nutrition, Health and Safety of the Young Child	3
CD 239	Studies in Child Guidance	3
HD 106	Personal and Social Growth	3
† Elective		3-4
		<u>19-20</u>
SEMESTER II		
CD 137	Early Childhood Learning Environments, Activities, and Materials	4
CD 141	Early Childhood Development, 3-5 Years	3
CD 812	Cooperative Work Experience or	2
CD 813	Cooperative Work Experience or	(3)
CD 814	Cooperative Work Experience	(4)
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
† Elective		3-4
† Elective		3-4
		<u>18-22</u>
Minimum Hours Required:		37

† Electives — Must be selected from the following:

CD 125	Infant and Toddler Learning Environments, Activities, and Materials	4
CD 203	Parents and the Child Caregiver/Teacher	3
CD 209	Early Childhood Development Special Projects	3
CD 236	The Special Child: Growth and Development	3
CD 238	Introduction to Administration of Child-Care Programs	3
CD 246	Advanced Administrative Practices for Child-Care Facilities	3
CD 250	Supportive Services for Exceptional Children	3
CD 251	Learning Programs for Children with Special Needs	4
CD 253	Abuse Within the Family	3
TPD 141	Beginning Sign Language	4

DATA PROCESSING PROGRAMMER

(Associate Degree)

This curriculum is intended for the preparation of entry-level or trainee computer programmers who will work in an applications setting to support the general, administrative, and organizational information processing function of industry, commerce, business and government service. It is designed as a two-year career program to prepare students for jobs. Graduates should be able to work in conjunction with a systems analyst in the programming environment usually found in a medium to large job shop. It is intended to provide a sufficient foundation so that graduates with experience and continued learning may advance in career paths appropriate to their own particular interests and abilities.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
BUS 105	Introduction to Business or	3
MGT 136	Principles of Management	
DP 137	Data Processing Mathematics or any business math*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 201	Principles of Accounting I**	3
		15
SEMESTER II		
DP 133	Beginning Programming (COBOL)	4
DP 138	Systems Analysis and Data Processing Logic	3
ECO 201	Principles of Economics I or	3
ECO 202	Principles of Economics II	
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		16
SEMESTER III		
DP 136	Intermediate Programming (COBOL)	4
DP 142	RPG Programming or	3
DP 244	Basic Programming	
DP 233	Operating Systems and Communications	4
ACC 203	Intermediate Accounting or	3
ACC 238	Cost Accounting	
† Elective		3-4
		17-18
SEMESTER IV		
DP 231	Advanced Programming (ALC)	4
DP 232	Applied Systems	4
DP 236	Advanced COBOL Techniques or other 200 level DP or CS course	3-4
Any approved DP or CS course		3-4
		14-16
Minimum Hours Required:		62

† Electives — Must be selected from the following:

Any DP or CS course (including DP 700-800 Cooperative Work Experience)

DP 129	Data Entry Concepts	4
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
MTH 202	Introductory Statistics	3
ENG 210	Technical Writing	3
BUS 105	Introduction to Business	3
ECO 201	Principles of Economics I	3

* MTH 111, MTH 112, MTH 130 or an equivalent business math course

** ACC 131 — Bookkeeping I, and ACC 132 — Bookkeeping II may be substituted for
ACC 201 — Principles of Accounting

NOTE: Students may obtain credit toward a degree or certificate for only one of each of the pairs of courses listed below:

DP 133 or CS 184

DP 231 or CS 186

DP 244 or CS 182

CS 175 or CS 174



DIGITAL ELECTRONICS TECHNOLOGY

(Associate Degree)

This curriculum is designed to prepare a graduate to work as a technician on devices that require digital circuits such as computers, test equipment, automatic control units and central distribution systems. The student will learn schematic interpretation, test equipment usage and technical communications.

		CREDIT HOURS
SEMESTER I		
ET 190	D.C. Circuits and Electrical Measurements	4
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
DFT 182	Technical Drafting*	2
MTH 195	Technical Mathematics**	3
† Technical Elective(s)		4
		16
SEMESTER II		
ET 191	A.C. Circuits	4
ET 192	Digital Computer Principles	3
ET 193	Active Devices	4
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
MTH 196	Technical Mathematics**	3
		17
SEMESTER III		
ET 260	Sinusoidal Circuits	4
ET 261	Pulse and Switching Circuits	4
ET 263	Digital Computer Theory	4
† Technical Elective(s)		4
		16
SEMESTER IV		
ET 264	Digital Systems	4
ET 265	Digital Research	3
ET 266	Computer Applications	4
ET 267	Microprocessors	4
		15
Minimum Hours Required		64

† Electives — Must be selected from the following:

ET 194	Instrumentation	3
ET 238	Linear Integrated Circuits	4
ET 268	Advanced Microprocessors	4
ET 704	Cooperative Work Experience	4
ET 713	Cooperative Work Experience	3
ET 802	Cooperative Work Experience	2
CHM 101	General Chemistry	4
CS 175	Introduction to Computer Science	3
EGR 101	Engineering Analysis	2
EGR 186	Manufacturing Processes	2
EGR 204	Electrical Systems Analysis	3
CS 181	Introduction to Fortran Programming	3
PHY 111	Introduction to General Physics	4
PHY 131	Applied Physics	4

* DFT 184, DFT 231, or EGR 105 may be substituted.

**MTH 101 and MTH 104 may be substituted for MTH 195. MTH 105, MTH 121, MTH 124, MTH 225, MTH 226 may be substituted for either MTH 195 or MTH 196.

DRAFTING AND DESIGN TECHNOLOGY

(Associate Degree)

This program prepares the student for employment in a wide range of industries as a drafter or engineering aide. Information in related fields is provided to enable the student to work effectively with the engineer and professional staff. Enrollment in Drafting Cooperative Work Experience Courses (Co-op) provides on-the-job experience while in the program

	CREDIT HOURS
SEMESTER I	
DFT 183 Basic Drafting	4
DFT 135 Reproduction Processes	2
COM 131 Applied Composition and Speech or	3
ENG 101 Composition and Expository Reading	
MTH 195 Technical Mathematics or	3
MTH 101 College Algebra	
‡ Technical Elective	3
	15
SEMESTER II	
DFT 160 Manufacturing Fundamentals	2
Drafting Course*	3-4
Drafting Course* or Co-op**	3
COM 132 Applied Composition and Speech or	3
ENG 102 Composition and Literature	
MTH 196 Technical Mathematics or	3
MTH 102 Plane Trigonometry	
	14-15
SEMESTER III	
Drafting Course*	3-4
EGR 106 Descriptive Geometry	3
‡ Technical Elective or Co-op**	3
GVT 201 American Government or	3
HST 101 History of the United States	
HD 105 Basic Processes of Interpersonal Relationships or	3
PSY 131 Human Relations	
	15-16
SEMESTER IV	
Drafting Course*	3
Drafting Course* or Co-op**	3
‡ Technical Elective	3
PHY 131 Applied Physics	4
GVT 202 American Government or	3
HST 102 History of the United States	
	16
Minimum Hours Required:	60

* Drafting Courses to be selected from the following:

DFT 136	Geological and Land Drafting	3
DFT 184	Intermediate Drafting	3
DFT 185	Architectural Drafting	4
DFT 230	Structural Drafting	3
DFT 231	Electronic Drafting	3
DFT 232	Technical Illustration	3
DFT 234	Advanced Technical Illustration	4
DFT 235	Building Equipment (Mechanical and Electrical)	3
DFT 236	Piping and Pressure Vessel Design	3
DFT 245	Computer Aided Design	3
DFT 250	Sheet Metal Design	3
DFT 251	Industrial Design	3

** Drafting Co-op Courses to be selected from the following:

DFT 703	Cooperative Work Experience	3
DFT 713	Cooperative Work Experience	3
DFT 803	Cooperative Work Experience	3
DFT 813	Cooperative Work Experience	3
DFT 704	Cooperative Work Experience	4
DFT 714	Cooperative Work Experience	4
DFT 804	Cooperative Work Experience	4
DFT 814	Cooperative Work Experience	4

† Technical Electives may be selected from Drafting, Applied Science or Engineering Technologies as approved by the Drafting Department



DRAFTING AND DESIGN TECHNOLOGY — ELECTRONIC DESIGN OPTION

(Associate Degree)

This option prepares the student for employment as a drafter or engineering aide in a wide range of electronic industries. Information in related fields is provided to enable the student to work effectively with the engineer and professional staff. Enrollment in Drafting Cooperative Work Experience Courses (Co-op) provides on-the-job experience while in the program

		CREDIT HOURS
SEMESTER I		
DFT 160	Manufacturing Fundamentals or	2
EGR 186	Manufacturing Processes	
DFT 183	Basic Drafting	4
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ET 190	D.C. Circuits and Electrical Measurements	4
MTH 195	Technical Mathematics or	3
MTH 101	College Algebra	
		16
SEMESTER II		
DFT 231	Electronic Drafting	3
DFT 240	Printed Circuit Design	3
DFT 245	Computer Aided Design or	3
GA 134	Basic Camera Operations	
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
MTH 196	Technical Mathematics or	3
MTH 102	Plane Trigonometry	
		15
SEMESTER III		
DFT 241	Integrated Circuit Design	3
DFT 243	Advanced Printed Circuit Design	3
EGR 101	Engineering Analysis	2
EGR 106	Descriptive Geometry	3
ET 250	Principles of Electronic Integrated Circuits	4
		15
SEMESTER IV		
DFT 232	Technical Illustration	3
DFT 242	Advanced Integrated Circuit Design or	3
DFT 247	Applied Printed Circuit Design	
PSY 131	Human Relations	3
† Elective		3
‡ Technical Elective		3
		15
Minimum Hours Required:		61
† Elective — May be selected from the following:		
CS 174	Fundamentals of Computing	3
ET 192	Digital Computer Principles	3
Drafting, Engineering, Graphic Arts and Cooperative Work Experience courses.		

‡ Technical elective may be selected from applied science, engineering, and cooperative work experience courses.

GRAPHIC COMMUNICATIONS

(Associate Degree)

The student's understanding of graphic processes is developed for employment in a commercial printing firm or a publication facility such as a newspaper or magazine. Students also learn production and management concepts and techniques useful in the field of graphic communications including photography and journalism.

		CREDIT HOURS
SEMESTER I		
GA 131	Graphic Processes	3
GA 140	Offset Printing	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
JN 101	Introduction to Mass Communications	3
OFC 172	Beginning Typing	3
		15
SEMESTER II		
GA 134	Basic Camera Operations	3
GA 136	Copy Preparation	3
COM 132	Applied Composition and Speech or	3
SPE 105	Fundamentals of Public Speaking	
MTH 130	Business Mathematics	3
PHO 110	Introduction to Photography and Photo- Journalism	3
		15
SEMESTER III		
GA 206	Graphic Projects	3
GA 714	Cooperative Work Experience	4
JN 102	Introduction to Mass Communications	3
OFC 165	Introduction to Word Processing	3
PHO 120	Commercial Photography I	3
		16
SEMESTER IV		
GA 240	Offset Printing II	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
JN 103	News Gathering and Writing	3
PHO 121	Commercial Photography II or	4
GA 814	Cooperative Work Experience	
PHO 207	Photography for Publications	3
		16
Minimum Hours Required:		62

GRAPHIC ARTS

(Certificate)

This certificate program provides the student with skill development opportunities in the field of Graphic Arts. Successful completion of this certificate program qualifies a person for employment in a commercial printing firm or in the printing division of a large company.

		CREDIT HOURS
SEMESTER I		
GA 131	Graphic Processes	3
GA 140	Offset Printing I	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MTH 139	Applied Mathematics	3
OFC 172	Beginning Typing	3
		15
SEMESTER II		
GA 134	Basic Camera Operations	3
GA 136	Copy Preparation	3
COM 132	Applied Composition and Speech or	3
SPE 105	Fundamentals of Public Speaking	
PSY 131	Human Relations	3
† Elective		3-4
		15-16
Minimum Hours Required:		30

†Elective — Must be selected from the following:

GA 714	Cooperative Work Experience	4
DFT 232	Technical Illustration	3
PHO 110	Introduction to Photography and Photo-Journalism.	3

MANAGEMENT CAREERS — ADMINISTRATIVE MANAGEMENT OPTION

(Associate Degree)

The Administrative Management option offers a continuation of the traditional management and business studies. This option is designed for students seeking a detailed examination of management practices, techniques, and theories.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
ACC 201	Principles of Accounting I**	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
† Elective		3
		15
SEMESTER IV		
MGT 242	Personnel Administration	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
	Social Science elective or Humanities elective	3
† Elective		3
		18
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — MID-MANAGEMENT OPTION

(Associate Degree)

The Mid-Management option is a cooperative plan with members of the business community whereby the student attends college classes in management and related courses and concurrently works at a regular, paid, part-time or full-time job in a sponsoring business firm. To enter the Mid-Management option, students must make formal application and be interviewed by a member of the Mid-Management faculty before final acceptance will be granted.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 150	Management Training	4
MGT 154	Management Seminar: Role of Supervision	2
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
		15
SEMESTER II		
MGT 151	Management Training	4
MGT 155	Management Seminar: Personnel Management	2
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
HUM 101	Introduction to the Humanities	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		18
SEMESTER III		
MGT 250	Management Training	4
MGT 254	Management Seminar: Organizational Development	2
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 251	Management Training	4
MGT 255	Management Seminar: Business Strategy, the Decision Process and Problem Solving	2
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required:		63

† Elective — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — PURCHASING MANAGEMENT OPTION

(Associate Degree)

This option is designed to develop the fundamental skills and knowledge which enable individuals to assume technical and decision making positions within the purchasing function of profit and non-profit organizations.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 160	Principles of Purchasing	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER II		
MGT 220	Materials Management	3
ACC 201	Principles of Accounting I**	3
COM 132	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER III		
MGT 206	Principles of Marketing	3
MGT 280	Industrial Management	3
CS 175	Introduction to Computer Science	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 224	Quality Assurance	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required		60

† Electives — May be selected from the following:

MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
ACC 202	Principles of Accounting II	3
BUS 237	Organizational Behavior	3
MTH 202	Introductory Statistics	3
OFC 231	Business Communications	3
TRT 287	Physical Distribution Management I	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

OFFICE CAREERS — ADMINISTRATIVE ASSISTANT OPTION

(Associate Degree)

The primary objective of the Administrative Assistant Option to the Office Careers Program is to prepare students for positions as assistants to administrators within public and private firms and agencies. Emphasis in this program is on the development of organizational and management skills in addition to basic office skills.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
BUS 105	Introduction to Business	3
† Elective		3
		17-18
SEMESTER II		
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
‡ OFC 273	Advanced Typing or	2
† Elective		
OFC 231	Business Communications	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting	
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
† Electives		6
		17
SEMESTER IV		
OFC 256	Office Management or	3
BUS 237	Organizational Behavior	
HUM 101	Introduction to Humanities	3
† Electives		9
		15
Minimum Hours Required:		66

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178,taken cumulatively will be equivalent to OFC 172.

OFFICE CAREERS — LEGAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent legal secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 159	Beginning Shorthand or	
OFC 103	Speedwriting	4
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		<u>15-16</u>
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		<u>17-18</u>
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 167	Legal Terminology and Transcription	3
OFC 231	Business Correspondence	3
# OFC 266	Advanced Shorthand	4
OFC 273	Advanced Typing or	2
† Elective		(3)
CS 175	Introduction to Computer Science	3
		<u>18-19</u>
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 274	Legal Office Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		<u>15-16</u>
Minimum Hours Required:		67

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — PROFESSIONAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 159	Beginning Shorthand or	4
OFC 103	Speedwriting	
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
CS 175	Introduction to Computer Science	3
# OFC 266	Advanced Shorthand	4
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
OFC 273	Advanced Typing or	2
† Elective		(3)
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
† Electives		6-7
		15-17
Minimum Required Hours:		67

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate)

The General Office Certificate Program is designed to provide the student with a basic working knowledge and skills in various office activities. A general knowledge of business concepts and procedures is provided.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Electives		7
		19
SEMESTER II		
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		7
		16
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Accounting Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing**	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
‡ ACC 132	Bookkeeping II or	3
† Elective		
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		8
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

‡ Required if ACC 131 was taken previously.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Office Clerical Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 162	Office Procedures	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
OFC 165	Introduction to Word Processing	3
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 166	Intermediate Shorthand***	4
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

SOCIAL WORK ASSOCIATE

(Associate Degree)

This program will develop competencies for students to enter employment in paraprofessional positions as social work associates in various social service agencies. The program combines human services courses and other studies with special emphasis given to actual social service agency involvement and work.

		CREDIT HOURS
SEMESTER I		
HS 131	Orientation to Human Services	3
ENG 101	Composition and Expository Reading	3
PSY 105	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
† Elective		3-4
		<u>15-16</u>
SEMESTER II		
ENG 102	Composition and Literature	3
PSY 201	Developmental Psychology	3
SOC 102	Social Problems	3
SOC 206	Introduction to Social Work	3
† Elective		3-4
		<u>15-16</u>
SEMESTER III		
HS 233	Counseling for the Paraprofessional	3
HS 244	Social Work Problems and Practices	3
HS 803	Cooperative Work Experience*	3
PSY 205	Psychology of Personality	3
SOC 203	Marriage and Family	3
		<u>15</u>
SEMESTER IV		
HS 235	Introduction to Mental Health	3
HS 245	Social Work Problems and Practices	3
HS 813	Cooperative Work Experience*	3
SOC 204	American Minorities	3
† Elective		3-4
		<u>15-16</u>
Minimum Hours Required:		60

† Electives — Must be selected from the following:

ANT 101	Cultural Anthropology	3
BIO 116	Biological Science	4
CD 140	Early Childhood Development, 0-3 Years	3
GVT 201	American Government	3
GVT 202	American Government	3
HST 101	History of the United States	3
HST 102	History of the United States	3
HUM 101	Introduction to the Humanities	3
PEH 101	Fundamentals of Health	3
PEH 257	Advanced First Aid and Emergency Care	3
PSY 207	Social Psychology	3
RD 101	Effective College Reading	3
SOC 205	Introduction to Social Problems	3
SOC 231	Urban Social Problems	3
SPA 101	Beginning Spanish	4

* HS 703, HS 704, HS 713, HS 714, HS 802, HS 804, HS 812, HS 814, may be taken with consent of instructor.



SOCIAL WORK ASSOCIATE

(Certificate)

		CREDIT HOURS
SEMESTER I		
HS 131	Orientation to Human Services	3
COM 131	Applied Composition and Speech*	3
HD 107	Developing Leadership Behavior	3
PSY 131	Human Relations**	3
SOC 101	Introduction to Sociology	3
		15
SEMESTER II		
HS 233	Counseling for the Paraprofessional	3
HS 235	Introduction to Mental Health	3
HS 244	Social Work Problems and Practices	3
HS 703	Cooperative Work Experience	3
SOC 206	Introduction to Social Work	3
		15
Minimum Hours Required:		30

* English 101 may be substituted with the approval of the program coordinator.

** Psychology 105 may be substituted with the approval of the program coordinator.

TRAINING PARAPROFESSIONALS FOR THE DEAF

(Associate Degree)

This program is designed to train individuals at a paraprofessional level to work with the deaf. Course work will provide skills to work as an interpreter for the deaf, educational assistant, media specialist, aide with the multiply-handicapped, or house parent in residential schools.

		CREDIT HOURS
SEMESTER I		
TPD 140	Introduction to Deafness	3
TPD 141	Beginning Sign Language	4
TPD 142	Communication Theory	3
TPD 147	Language Development for the Deaf	3
TPD 148	Receptive Fingerspelling	1
ENG 101	Composition and Expository Reading	3
		17
SEMESTER II		
TPD 143	Intermediate Sign Language	4
TPD 145	Classroom Management or	3
† Elective		
TPD 146	The Deaf Adult	2
TPD 242	Media for the Deaf or	3
TPD 247	Special Problems in Deafness*	
ENG 102	Composition and Literature	3
		15
SEMESTER III		
TPD 240	Advanced Sign Language	4
TPD 247	Special Problems in Deafness* or	3
† Elective		
TPD 250	Reverse Interpreting	3
TPD 802	Cooperative Work Experience	2
Elective		3
		15
SEMESTER IV		
TPD 230	Ethics and Specifics of Interpreting	4
TPD 241	Audiometry	3
TPD 247	Special Problems in Deafness* or	3
† Elective		
TPD 248	Rehabilitation of the Multiply-Handicapped Deaf	3
TPD 251	Educational/Specialized Signs	4
TPD 803	Cooperative Work Experience	3
		21
Minimum Hours Required:		68

† Electives — Must be selected from the following:

HD 105	Basic Processes of Interpersonal Relationships	3
HD 106	Personal and Social Growth	3
PSY 105	Introduction to Psychology	3
PSY 201	Developmental Psychology	3

*TPD 247 may be repeated for credit as topics vary

TRAINING PARAPROFESSIONALS FOR THE DEAF

(Certificate)

This certificate program will offer training for working with the deaf in a range of occupational settings, with primary emphasis on those students in vocational training, educational environments and community agencies.

		CREDIT HOURS
SEMESTER I		
TPD 140	Introduction to Deafness	3
TPD 141	Beginning Sign Language	4
TPD 142	Communication Theory	3
TPD 147	Language Development for the Deaf	3
TPD 148	Receptive Fingerspelling	1
ENG 101	Composition and Expository Reading	3
		17
SEMESTER II		
TPD 143	Intermediate Sign Language	4
TPD 146	The Deaf Adult	2
TPD 247	Special Problems in Deafness or	3
† Elective		
TPD 248	Rehabilitation of the Multiply-Handicapped Deaf	3
ENG 102	Composition and Literature	3
		15
Minimum Hours Required:		32
† Electives — Must be selected from the following:		
HD 105	Basic Processes of Interpersonal Relationships	3
HD 106	Personal and Social Growth	3
PSY 105	Introduction to Psychology	3
PSY 201	Developmental Psychology	3

TRANSPORTATION TECHNOLOGY

(Associate Degree)

The objectives of the Transportation Technology Program are to prepare trained entry-level manpower for the transportation industry of North Texas with the ability to advance into management positions such as traffic managers, terminal managers, safety specialists, ICC practitioners and other related areas.

		CREDIT HOURS
SEMESTER I		
TRT 144	Introduction to Transportation	3
TRT 146	Transportation and Traffic Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics I	
		15
SEMESTER II		
TRT 145	Introduction to Rates and Tariffs	3
TRT 147	Economics of Transportation	3
TRT 713	Cooperative Work Experience or	3
† Elective		3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
MGT 136	Principles of Management	3
		15
SEMESTER III		
TRT 240	Interstate Commerce Law I	3
TRT 249	Applied Rates and Tariffs	3
TRT 287	Physical Distribution Management I	3
TRT 803	Cooperative Work Experience or	3
† Elective		
ACC 201	Principles of Accounting I or	3
ACC 131	Bookkeeping I	
		15
SEMESTER IV		
TRT 241	Interstate Commerce Law II	3
TRT 288	Physical Distribution Management II	3
TRT 813	Cooperative Work Experience or	3
† Elective		
ACC 202	Principles of Accounting II or	
ACC 132	Bookkeeping II	3
† Business Elective		3
		15
Minimum Hours Required:		60

continued

† Electives — Must be selected from Business Electives listed below or the following:

GVT 201	American Government	3
GVT 202	American Government	3
HD 107	Developing Leadership Behavior	3
HST 101	History of the United States	3
HST 102	History of the United States	3
MTH 112	Mathematics for Business and Economics II	3
SPE 105	Fundamentals of Public Speaking	3

‡ Business Elective — Must be selected from the following:

TRT 250	Studies in Transportation Technology*	1
ACC 205	Business Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
CS 175	Introduction to Computer Science	3
ECO 201	Principles of Economics I	3
ECO 202	Principles of Economics II	3
MGT 206	Principles of Marketing	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* TRT 250 may be repeated with different emphasis for elective credit.

WELDING TECHNOLOGY

(Associate Degree)

The Welding Technology program is designed to prepare the student in the basic processes of oxyacetylene and arc welding plus many specialized welding applications as options to fit the specific needs of the student. In addition, instruction is offered in related support areas such as metallurgy, tooling, drafting, pattern layout and characteristics of materials. Thus, the program offers preparation for both entry level jobs as well as welding inspectors.

The student will be required to purchase a basic set of tools which will be used in class and later on the job. Tool lists will be given out by the instructor during the first week of classes.

		CREDIT HOURS
SEMESTER I		
WE 111	Oxyfuel I	2
WE 112	Oxyfuel II	2
WE 113	Shielded Metal Arc Welding I	2
WE 114	Shielded Metal Arc Welding II	2
DFT 182	Technician Drafting	2
MTH 195	Technical Mathematics	3
COM 131	Applied Composition and Speech	3
		16
SEMESTER II		
WE 115	Shielded Metal Arc Welding II	4
WE 117	General Metal Layout	3
WE 118	Welding Inspection and Quality Control	4
PSY 131	Human Relations	3
WE 703	Cooperative Work Experience or	3
† Elective		
		17
SEMESTER III		
WE 211	Gas Tungsten Arc Welding I	2
WE 212	Gas Tungsten Arc Welding II	2
WE 214	Gas Metal Arc Welding I	2
WE 215	Gas Metal Arc Welding II	2
WE 217	Basic Welding Metallurgy	3
PHY 131	Applied Physics	4
		15
SEMESTER IV		
WE 116	Shielded Metal Arc Welding IV	4
WE 213	Gas Tungsten Arc Welding III	4
WE 216	Gas Metal Arc Welding III	4
WE 219	Welding Design	3
† Elective		2
		17
Minimum Hours Required:		65

continued

† Electives must be selected from the following:

ACC 131	Bookkeeping I
ACC 132	Bookkeeping II
GVT 201	American Government
MTH 111	Mathematics for Business and Economics
WE 218	Applied Welding Metallurgy
WE 220	Special Welding Application I

WELDING TECHNOLOGY

(Certificate)

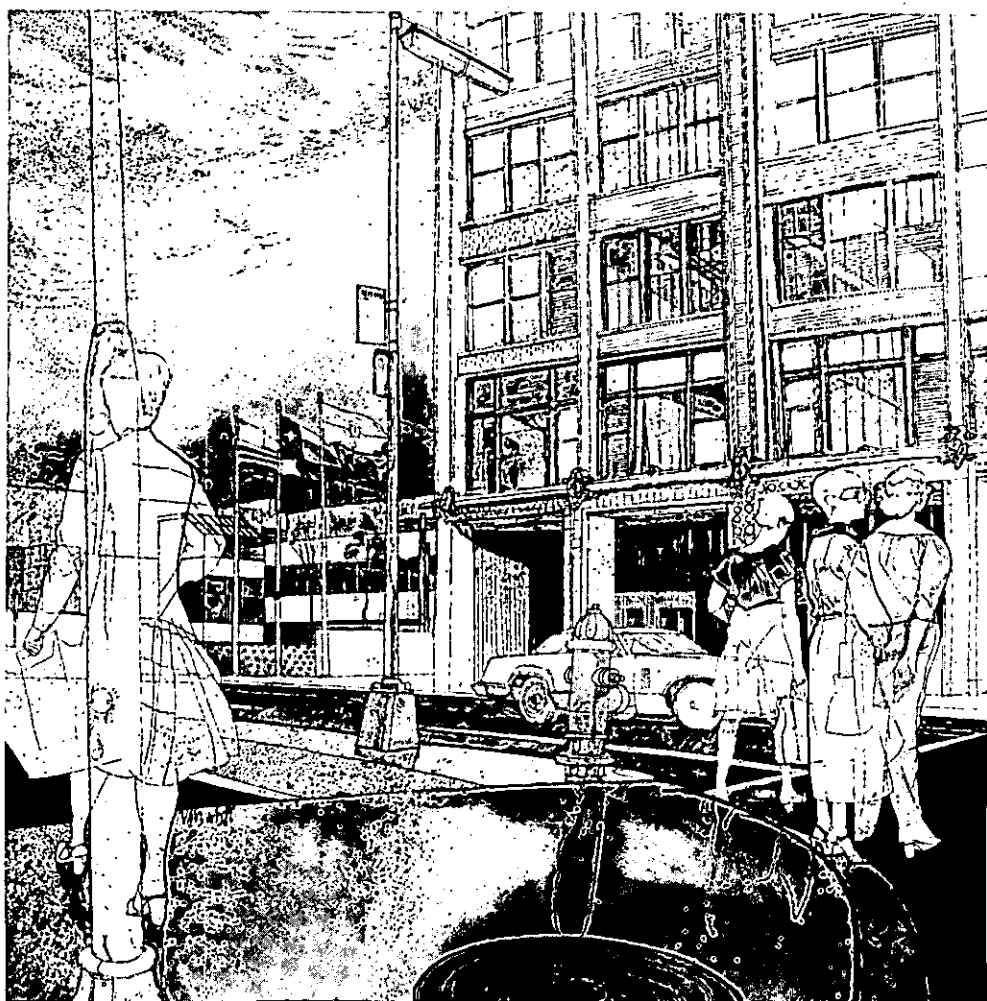
		CREDIT HOURS
SEMESTER I		
WE 111	Oxyfuel I	2
WE 112	Oxyfuel II	2
WE 113	Shielded Metal Arc Welding I	2
WE 114	Shielded Metal Arc Welding II	2
WE 211	Gas Tungsten Arc Welding I	2
WE 212	Gas Tungsten Arc Welding II	2
WE 214	Gas Metal Arc Welding I	2
WE 215	Gas Metal Arc Welding II	2
		16
SEMESTER II		
WE 115	Shielded Metal Arc Welding III	4
WE 116	Shielded Metal Arc Welding IV	4
WE 117	General Metal Layout	3
WE 213	Gas Tungsten Arc Welding III*	4
WE 216	Gas Metal Arc Welding III*	4
		19
Minimum Hours Required:		35

* WE 704 Cooperative Work Experience may be substituted for WE 213 or WE 216.



El Centro College

Information, Administration, Faculty



EL CENTRO COLLEGE

El Centro College, opened in 1966, was the first college in the Dallas County Community College District to begin operation. Located at the "hub" of the District in the heart of a revitalized downtown Dallas, El Centro plays a vital role in both the educational and cultural environment of the city.

El Centro students find downtown Dallas to be a veritable laboratory in which to test their classroom experience. In the halls of government, the corporate office suites, the retail shops, and the communications and banking centers, students can observe the working world of this growing and prosperous city. Many downtown workers take advantage of El Centro's convenient location to brush up on their job skills, work toward a career change, or enjoy one of the College's many non-credit recreational courses, like stained-glass making or conditioning exercise.

El Centro places a great deal of value on offering people opportunities to meet a wide range of goals. There is no typical El Centro student. They are of all ages and come from all walks of life. Their common goal is to use the rich educational resources of El Centro to fulfill individual needs for growth.

But beyond that, El Centro is a fun place to be — a place of music, art, theatre and dance. A place where college and community work hand in hand to make good things happen.

The Campus

El Centro College covers a two square block site in the West End Historic District of downtown Dallas. It is bounded by Main, Lamar, Elm and Market Streets. The campus combines the best of traditional and modern architecture. A turn-of-the-century building renovated to accommodate classrooms is joined to a new wing of modern facilities. Outstanding features include two modern theatres, a ballet studio, Health Occupations labs and the Food Service Program kitchens. A landscaped green space with a terraced outdoor amphitheatre completes the campus and adds beauty to the surrounding downtown environment.

Accreditation

El Centro College is a member of

- The Southern Association of Colleges and Schools
- The American Association of Community and Junior Colleges
- The Association of Texas Colleges and Universities
- The League for Innovation in the Community College.

El Centro is recognized and sanctioned by the Coordinating Board of the Texas College and University System and the Texas Education Agency, and is an Affirmative Action Equal Opportunity Institution.





EL CENTRO COLLEGE ADMINISTRATION

President	Queen F. Randall	746-2178
Vice President of Instruction	Carlos Gonzalez	746-2182
Vice President of Student Services	Michael A. Rooney	746-2177
Vice President of Business Services	Bill Fishback	746-2193
Dean of Instructional Services	Herb Ruffin	746-2186
Associate Dean, Learning Resources	Ruth Watkins	746-2292
Associate Dean, Technical/Occupational	Ray Witherspoon	746-2252
Associate Dean, Health Occupations	Kay Kiefer	746-2392
Associate Dean, Extended Day Programs	Shirl Wilson	746-2184
Assistant Dean, Community Services		746-2191
Director of Admissions and Registrar	Robert Bennett	746-2311
Director of Counseling	Kenneth Berryman	746-2172
Director of Public Information		746-2152
Director of Financial Aid	Elizabeth Disco-Allan	746-2199
Director of Security	George Doughty	746-2233
Director of Student Development	Howard Finney	746-2230
Information Systems User Coordinator	Derone Head	746-2436
Director of Physical Plant	Bobby Hunt	746-2245
Assistant Dean, Health Occupations	Michael Laman	746-2176
Assistant Director of Community Services	Judy Pouncey	746-2191
Assistant Dean, Health Occupations	Carol Speyerer	746-2479
Assistant to the President	Janice Trammell	746-2262
Director of Student Health Services	Jean Wyckoff	746-2268

DIVISION CHAIRPERSONS

Business	Ron Stimson	746-2344
Communications	Randy Conine	746-2328
Developmental Studies	Mamie McKnight	746-2401
Humanities	John Gunter	746-2354
Health Occupations	Kay Kiefer	746-2392
Science and Mathematics	Raymond Canham	746-2376
Social Science	Rhuwan Rountree	746-2360

EL CENTRO COLLEGE FACULTY AND STAFF

Alexander, Lavern E.	A.D. Nursing
Tuskegee Institute, B.S.; Texas Woman's Univ., M.S. R.N.	
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Incarnate Word College, B.S.; Antioch College, M. Ed., R.N.	
Alford, Marshall E.	Counselor
Baylor Univ. B.A.; East Texas State Univ., M.Ed.	
Anderson, Diane	Vocational Nursing
Baylor Univ., B.S.N.	
Anderson, Sharon J.	Counselor
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Arnold-Roquemore, Brenda J.	A.D. Nursing
Texas Woman's Univ., B.S., M.S.	
Babcock, Rosa B.	Learning Resources Consultant
Smith College, B.A.; North Texas State Univ., M.L.S.	
Bailey, Peter Wells	Counseling
Harvard College, A.B.	
Barnhart, William G.	Accounting
Lamar Univ., B.B.A.; Western State College of Colorado, M.A.	
Beasley, Sharman	Legal Assistant
Univ. of Texas at Austin, B.A.	
Bell, Mildred J.	Counselor
Huston-Tillotson College, B.A.; Texas Southern Univ., M.Ed.; Washington State Univ., Professional Counseling Certificate; Nova Univ., Ed.D.	
Bennett, Robert C.	Director of Admissions/Registrar
Univ. of Colorado, B.A.; Univ. of Toronto, M.A.	
Berry, John W.	Mid-Management
Prairie View A&M Univ., B.B.A.; East Texas State Univ., M.B.A.	
Berryman, Ken	Director of Counseling
East Texas State Univ., B.S., M.S.	
Blackshear, Reba D.	Law and Accounting
Troy State Univ., B.S.; Samford Univ., M.S.; Southern Methodist Univ., M.L.A.	
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Baylor Univ., B.S.N.; East Texas State Univ., M.S.; Kansas City General Hospital School of Nursing, R.N.	
Booth, Dorothy J.	Psychology
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Bornman, Laura	A.D. Nursing
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Bread, Aubrey H.	Radiography Technology
Parkland School of Radiographic Technology, R.T., A.R.R.T.	
Brown, Sue Buckner	Dental Assisting
Baylor College of Dentistry, B.S.; Univ. of Missouri, Kansas City, M.S.	
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Univ. of London, B.Sci.; Univ. of Alberta, Ph.D.	
Cathey-Honeycutt, Barbara	A.D. Nursing
Texas Woman's Univ., B.S.N., M.S.	
Chambers, Robert W.	English
North Texas State Univ., B.A., M.A.	
Chapman, Avon	Learning Resources Media Services Coordinator
East Texas State Univ., B.S., M.Ed.	
Chapoton, Jean	A.D. Nursing
University of Maryland, B.S.N.; M.S.N.	
Chatman, Blossie	A.D. Nursing
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Cheney, Bobby W.	History
Southern Methodist Univ., B.A., M.A.	

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Claborn, JoCarol	A.D. Nursing
Odessa Jr. College, A.D.N.; Texas Woman's Univ., B.S.N., M.S.	
Clendenen, Kay	Surgical Technology
Univ. of Texas Medical Branch, B.S.N.	
Clifton, John F.	Developmental Math
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Coteman, Juliette	Medical Office Assisting
Four "C" Business College, Certified Medical Assistant	
Collard, Lorraine	A.D. Nursing
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Conine, Randy	Chairperson, Div. of Communication
El Centro College, A.A.; Univ. of Texas at Arlington, B.A., M.A.	
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North Texas State Univ., B.A.; Southern Methodist Univ., M.A.	
Currier, Glenn	Sociology
Univ. of St. Thomas, B.A.; Sam Houston State Univ., M.A.	
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David, Joe	Library, Resources Consultant
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Deen, Gary	Developmental Writing
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Colorado State Univ., B.A.; Univ. of Colorado, M.A.	
Dooley, Jessie	Vocational Nursing
Baylor Univ. School of Nursing, R.N.	
Doughty, George E.	Director of Campus Security
Florida State Univ., B.A.; Certificate in Law Enforcement; Southern Methodist Univ., M.L.A.	
Fauley, Carlotta	Vocational Nursing
Washington Univ. of Nursing, R.N.; East Texas State Univ., B.S.	
Field, Barbara	A.D. Nursing
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Finch, Mildred N.	Mathematics
Wiley College, B.S.; Reed College, M.A.T.	
Finney, Howard	Director of Student Development
East Texas State Univ., B.S.; M.S.	
First, Kiar	Coordinator, Vocational Nursing
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Fishback, Bill	Vice President of Business Services
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Fuqua, Cliff	Radiography Technology
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Gonzalez, Carlos	Vice President of Instruction
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Gordon, Betty	Vocational Nursing
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Gray, Sylvia S.	Coordinator of Placement & Cooperative Education
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Harla, Bob	Respiratory Therapy
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Harper, Sandra	Vocational Nursing
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Harris, Helen	Developmental Reading
East Texas State Univ., B.S.; Towson State Univ., M.Ed.	
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Lamar Univ., B.B.A., M.B.A., M.S.; Louisiana State Univ., Ph.D.	
Henslee, Jimmie J.	Accounting
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Hitt, Frances F.	Nutrition/Dietetics
Auburn Univ., B.S.; Univ. of Alabama, M.S.; Texas Woman's Univ., Ph.D.	

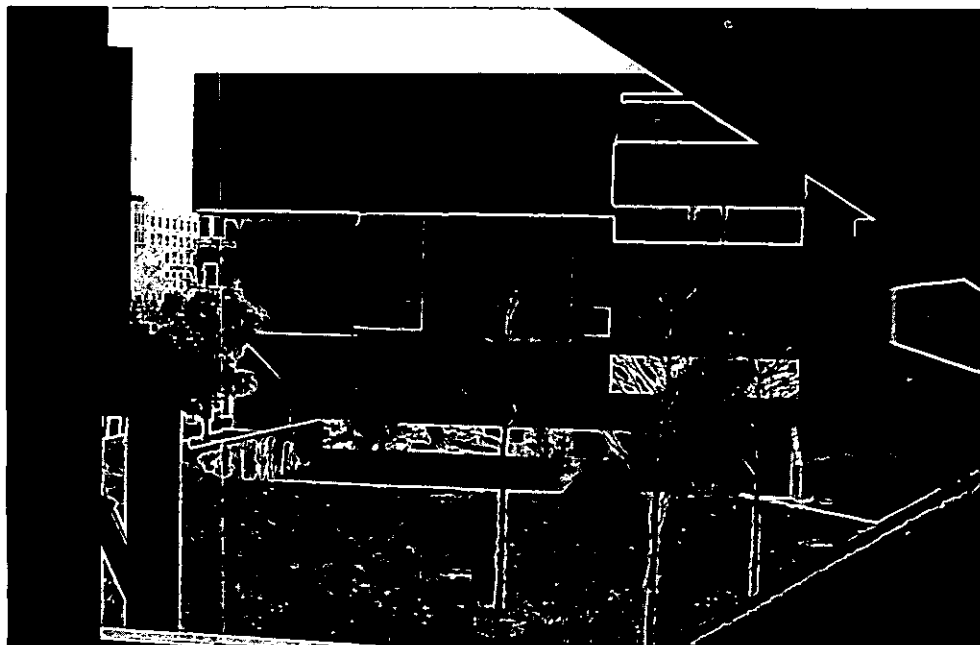
Hogarth, Bruce	Mid-Management
Univ. of Omaha, B.S., B.A.; North Texas State Univ., M.B.A.	
Holmes, Beverly	Library Systems Coordinator
Barnard College, B.A.; Texas Woman's Univ., M.L.S.	
Huchingson, John D.	Coordinator of Physical Education/Health
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Hucks, Louise	Vocational Nursing
Columbia Hospital School of Nursing, Diploma in Nursing	
Hughes, James P.	Data Processing
Marquette Univ., B.S.E.E.; Southern Methodist Univ., M.B.A.; North Texas State Univ., Ph.D.	
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Johnson, Barbara	A.D. Nursing
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Johnson, Rosa Lee	Physical Education
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Jones, Jerry C.	Music
Evansville Univ., B.M.E.; Southern Methodist Univ., M.M.	
Joy, Marlene	Counselor
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Katsigris, Costas	Director of Food Services and Hospitality Institute
Columbia College, A.B.; Columbia Univ. Graduate School of Business, M.S.	
Kaye, Randallynn	Dance
Formerly with Eliot Feld American Ballet Dance Company and Ruth Page International Ballet Company	
Kelso, Genell O.	English and Speech
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Lambert, Judy	Developmental Writing
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Landenberger, Anita M.	Secretarial Careers
Indiana State Univ., B.S., M.S., C.P.S.	
Larsen, Leonard R.	Police Science
Abilene Christian Univ., B.S.; Univ. of Texas at Dallas, M.A.	
Lautz, Vanita	Medical Lab. Tech.
East Texas State Univ., B.A.; Baylor Univ. Medical Center School of Technology, M.T. (ASCP); Central Michigan Univ., M.A.	
Litle, Marianne	Radiography Technology
Parkland School of Radiologic Technology, R.T., A.R.R.T.; Univ. of Texas Health Science Center, B.S.	
Logan, Ralph H.	Chemistry
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Masal, Mary S.	Respiratory Therapy
Richland College, A.A.	
McCullough, Marion W.	Dental Assistant
Success Business College; National Board of the American Dental Assistant Association, C.D.A.	
McGown, Caroline	English
Texas Christian Univ., B.A.; Texas Woman's Univ., M.A.	
McKnight, Marnie L.	Chairperson, Div. of Developmental Studies
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- Meals, Madeleine Vocational Nursing
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- Mejorado, Ray Respiratory Therapy
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- Menchaca, Richard V. Developmental Reading
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- Michaels, Barbara A.D. Nursing
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- Mims, Robert L. Jr. Geology/Physics
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- Minnett, John Respiratory Therapy
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- Monschke, Shirley Developmental Mathematics
North Texas State Univ., B.S., M.Ed.
- Montgomery, Barbara History
Univ. of Illinois, B.S.; California State Univ., M.A.; Loyola Univ. of Chicago, Ph.D.
- Moore, John W., Jr. Counselor
Grambling Univ., B.S.; Prairie View A&M Univ., M.Ed.
- Moore, H. Paxton II English
Univ. of Texas, B.A.; Texas Christian Univ., M.A.
- Morgan, Charlie R. Counselor
East Texas State Univ., B.S., M.S.
- Mosby, Larry E. Drafting and Design Technology
Prairie View A&M College, B.S.; North Texas State Univ., M.S.
- Murphey, Patricia A.D. Nursing
Texas Woman's Univ., B.S., M.S.
- Murray, Darrel Interior Design
Univ. of Oklahoma, B.A.; Parsons School of Design, N.Y. City, Certificate
- Myers, H. Wayne Biology
Emporia State Univ., B.A., M.S.
- Nelson, Elizabeth A.D. Nursing
St. Olaf College, B.A.; Texas Woman's Univ., M.S.
- Norman, Lois A.D. Nursing
Baylor Univ., B.S.N.; Texas Woman's Univ., M.S.
- O'Neal, Kay A.D. Nursing
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- Page, Jean Counselor
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- Patterson, Sandra A.D. Nursing
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- Paup, Arlene Data Processing
Temple Univ., B.S.; Drexel Univ., M.S.
- Perdue, Beth A.D. Nursing
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- Phillips, Abra M. Developmental Mathematics
Paul Quinn College, B.S.; East Texas State Univ., M.Ed.
- Pickett, Marilyn Vocational Nursing
St. Lukes Hospital School of Nursing, R.N.
- Plog, Claudia E. Data Processing
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Potter, Frances M.	Apparel Design
Southern Methodist Univ., Certificate in Costume Designing	
Pouncey, Judy	Asst. Director of Community Services
North Texas State Univ., B.S.	
Pouncy, Gene E.	English
Southern Methodist Univ., B.F.A., M.L.A.	
Powers-Prather, Ann	A.D. Nursing
Paris Junior College, A.D.N.; Univ. of Texas at Arlington, B.S.N., M.S.N.	
Pritchett, Kathy	A.D. Nursing
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Purnell, Melvin J.	Dance
Formerly with the Arthur Hall Afro American Dance Ensemble, The Dance Theatre of Harlem	
Randall, Queen F.	President
Lincoln Univ., B.S.; Indiana Univ., M.A.; Nova Univ., M.A.	
Ramsey, George E.	Spanish
Southern Methodist Univ., B.A.; Texas Christian Univ., M.A.	
Reaves, Catherine	A.D. Nursing
Louisiana State Univ., B.S.N.; Texas Woman's Univ., M.S.N.	
Reding, Diana L.	A. D. Nursing
Hartwick College, B.S., R.N.; East Texas State Univ., M.S.	
Rippetoe, William L.	Mathematics
East Central State College, B.S.; Southeastern State College, M.T.	
Robinson, Emily B.	Office Careers
Abilene Christian Univ., B.S.E.; North Texas State Univ., M.B.E.	
Robinson, Judith Christine	Radiography Technology
Physicians & Surgeons, R.T., A.R.R.T.	
Rooney, Michael A.	Vice President of Student Services
Washburn Univ., B.A.; Univ. of Hawaii, M.Ed.; St. Louis Univ. Ph.D.	
Rountree, Rhuwan C.	Chairperson, Div. of Social Sciences
East Texas State Univ., B.A., M.A.	
Rouze, Pamela	Developmental Writing/Reading
North Texas State Univ., B.A.; Texas Woman's Univ., M.Ed.	
Ruffin, Herb	Dean of Instructional Services
Wichita State Univ., B.A., M.Ed.; Univ. of Kansas, Ed.D.	
Rust, Tommy	Respiratory Therapy
El Centro College, A.A.; Univ. of Texas Health Science Center, C.R.T.T., R.R.T., B.S.	
Scardina, Patricia G.	Data Processing
Baton Rouge Business School	
Schenken, Nancy	A.D. Nursing
Univ. of Iowa, B.S.N.; Texas Woman's Univ., M.S.	
Schrup, John E.	Art
Univ. of Wisconsin, B.S., M.S., M.F.A.	
Schuster, Patrick B.	Police Science
Univ. of Texas at Arlington, B.A.	
Seaton, Norman	Data Processing
Univ. of Plano, B.A.; El Centro College A.A.S., A.A.	
Silverman, Pincus	English
Denver Univ., B.A.; Southern Methodist Univ., M.Ed.; North Texas State Univ., Ed.D.	
Simonetti-Arnold, Lucille	Art
Hunter College, B.A.; Univ. of Dallas, M.A.; The Cooper Union, Certificate of Art	
Slaughter, Margie N.	A.D. Nursing
El Centro College, A.D.; Texas Woman's Univ., B.S.N., M.S.	
Smith, Dana F.	Art
Stephens College, A.A.; Univ., of Texas, B.S. in Arts; North Texas State Univ., M.A.	
Smith, Laura V.	Vocational Nursing
Oak Park Hospital School of Nursing, R.N.; East Texas State Univ., B.S., M.S.	

Sortor, Susan	Respiratory Therapy
Washtenaw College, R.R.T.	
Sparks, Lura	Vocational Nursing
Allen Memorial Hospital, L.V.N.	
Speyerer, Carol	Asst. Dean of Health Occupations
Incarinate Word College, B.S.; Texas Woman's Univ., M.S., R.N.	
Spinola, Jackie S.	Biology
Texas A&M, B.S.; Univ. of Hawaii, M.S.	
Stahl, Dana	A.D. Nursing
Oklahoma Baptist Univ., B.S.; Texas Woman's Univ., M.S.	
Steffen, Rosemarie	A.D. Nursing
Texas Woman's Univ., B.S.N., M.S.N.	
Steudtner, Cheryl	A.D. Nursing
Univ. of Kansas, B.S.N., R.N.; Texas Woman's Univ. M.S.	
Stimson, Ronald	Chairperson, Div. of Business
Kent State Univ., B.S., M.Ed.	
Stirman, Nan E.	Dental Assistant
Board of the American Dental Asst. Assoc., C.D.A.; El Centro College, A.A.S.; Dallas Baptist College, B.C.A.	
Swope, John Dee	Architecture and Interior Design
Texas Tech Univ., B. Arch.; Registered Architect in State of Texas	
Thomas, Charles Edward	Theatre and Humanities
West Texas State Univ., B.A., M.A.; Actor's Equity; Screen Actors Guild; American Guild of Variety Artists	
Thomas, Joe P.	Chemistry
Texas Wesleyan College, B.S.; Oklahoma State Univ., M.S.	
Thorson, Marcelyn M.	Apparel Design
Pratt Institute, B.S.	
Tolentino, Albert E.	Counselor
New Mexico Highlands Univ., B.A., M.A.	
Trammell, Deborah	A.D. Nursing
Univ. of Virginia, B.S.N., M.S.N.	
Trewin, Sylvia	Apparel Design
El Centro College, A.A.A.S.; Iowa State Univ., B.S.; North Texas State Univ., M.F.A.	
Trotter, Robert S, Jr.	Government
Univ. of Texas, B.A.; North Texas State Univ., M.Ed., Ed.D.	
Varneff, Gayle M.	A.D. Nursing
Univ. of Texas, B.S.N., M.S.N.	
Viveros, Pat	Radiography
Orange Memorial School of Radiologic Technology, A.A.R.T.	
Ward, Joyce	Dance
Whitworth College, B.A.	
Watkins, Ruth	Assoc. Dean of LRC
California State Univ. at Los Angeles, B.A., M.A.	
Watts, Mary Grace	Radiography Technology
Spohn Hospital School of Radiologic Technology, R.T., A.R.R.T., Univ. of Texas Health Science Center, B.S.	
Wesson, Jerry W.	Human Development
East Texas State Univ., B.S., M.S., Ed.D.	
Wilder, Beatrice V.T.	A.D. Nursing
Dillard Univ., B.S.N.; Texas Woman's Univ., M.S.N.	
Wilson, Doris P.	Business
Prairie View A&M Univ., B.S.; Teachers College, Columbia Univ., M.A.	
Wilson, Shirl	Assoc. Dean, Extended Day Programs
Eastfield College, A.A.; Abilene Christian Univ., B.S.	

Winborn, Martha	Mathematics
North Texas State Univ., B.A.; Southern Methodist Univ., M.A.	
Witherspoon, Joseph Ray	Assoc. Dean, Tech Occ.
North Texas State Univ., B.B.A.; Southern Methodist Univ., M.L.A.	
Wyckoff, Jean B.	Director, Health Center
Riverside General, R.N.; Univ. of Pittsburgh, B.S.N.Ed., M.L.; Royal Institute Public Health & Hygiene, M.R.I.P.H.H.; Texas Woman's Univ. Ph.D.	
Young, Gordon D.	Art
Univ. of Nebraska, B.F.A.; Tulane Univ., M.F.A.	
Young, Lee	Interior Design
Univ. of Oklahoma, B.A., M.B.A.	
Young, Lois J.	Vocational Nursing
Baptist Hospital School, R.N.	
Zerwekh, JoAnn	A.D. Nursing
Univ. of Arizona, B.S.N.; Univ. of Texas at Arlington, M.S.N.	
Zimmermann, George A.	Date Processing
Fordham Univ., B.S.; Univ. of Texas at Dallas, M.A.S.	





El Centro College

Curriculum Patterns
For Technical/Occupational Programs



ACCOUNTING ASSOCIATE

(Associate Degree)

The Accounting Associate two-year program is designed to prepare a student for a career as a junior accountant in business, industry and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles.

The Associate in Applied Arts and Sciences Degree is awarded for successful completion of at least 63 credit hours as outlined below. Students desiring a less comprehensive program that emphasizes bookkeeping procedures and practices should consider the General Office Certificate with elective emphasis on accounting careers. The General Office Certificate is available in the Office Careers Program.

		CREDIT HOURS
SEMESTER I		
ACC 201	Principles of Accounting I	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or*	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
OFC 160	Office Machines	3
		<u>15</u>
SEMESTER II		
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or*	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
† OFC 172	Beginning Typing	3
		<u>15</u>
SEMESTER III		
ACC 203	Intermediate Accounting I	3
ACC 204	Managerial Accounting	3
ECO 201	Principles of Economics I	3
GVT 201	American Government	3
† Electives		3-6
		<u>15-18</u>
SEMESTER IV		
ACC 238	Cost Accounting or	3
ACC 239	Income Tax Accounting	
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
† Electives		3-6
		<u>15-18</u>
Minimum Hours Required:		63

† Electives — A minimum of 9 credit hours must be selected from the following:

ACC 205	Business Finance	3
ACC 207	Intermediate Accounting II	3
ACC 238	Cost Accounting	3
ACC 239	Income Tax Accounting	3
ACC 703-713	Cooperative Work Experience	3
803-813		
ACC 704-714	Cooperative Work Experience	4
804-814		
BUS 143	Personal Finance	3
BUS 237	Organizational Behavior	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science and	4
	Data Processing	
MGT 206	Principles of Marketing	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
SPE 105	Fundamentals of Public Speaking	3
Any CS or DP Programming course		

* ENG 101 and ENG 102 may be substituted for COM 131 and COM 132 provided that SPE 105 is also taken.

‡ Students who can demonstrate proficiency by previous training, experience, or placement tests may substitute a course from the electives listed for this program.

APPAREL DESIGN

(Associate Degree)

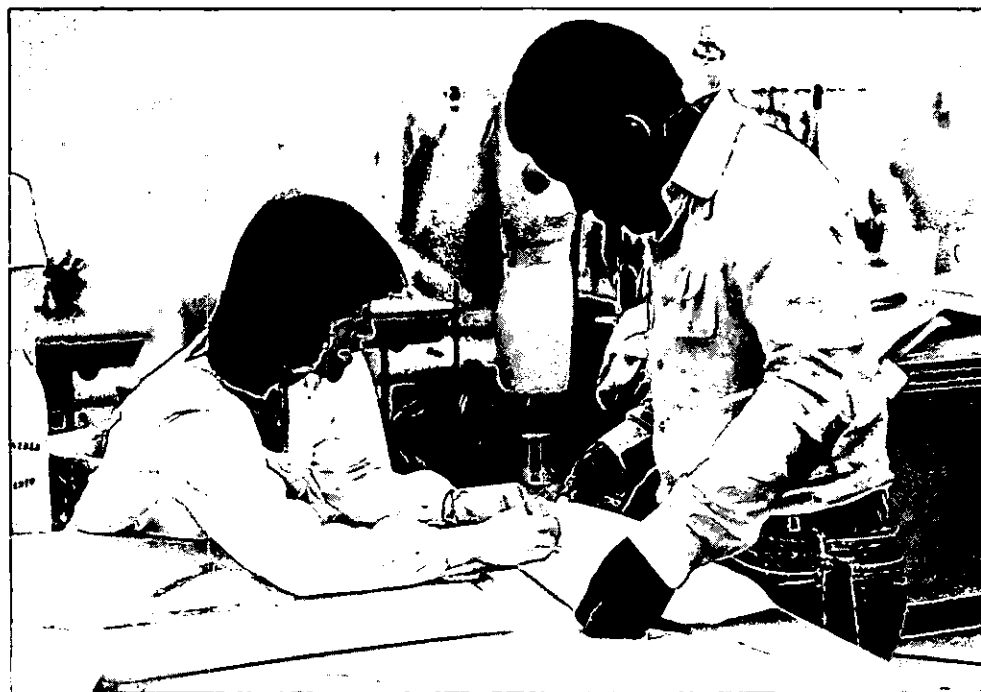
The apparel designer converts the design idea into an industrial paper pattern used in the mass production of clothing. New style trends each season demand individual creative thinking to develop saleable designs. Upon successful completion of the program the student enters a woman's wear or children's wear manufacturing company as an assistant in the design department.

ADMISSION TO THE PROGRAM

1. Contact the Counseling Division to schedule a time to take the design Indicator Test. Priority of entry is by date of application.
2. Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
DES 128	Introduction to Mass Production and Apparel (1st 8 weeks)	2
DES 129	Industrial Garment Construction (1st 8 weeks)	1
DES 234	History of Costume	3
DES 110	Basic Color Theory and Application	3
PDD 151	Pattern Drafting I (2nd 8 Weeks)	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
		15
SEMESTER II		
DES 135	Textiles	3
DES 136	Fashion Sketching	3
DES 235	History of Costume	3
PDD 152	Pattern Drafting II (1st 8 Weeks)	3
PDD 153	Pattern Drafting III (2nd 8 Weeks)	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		18
SEMESTER III		
DES 229	Advanced Garment Construction	3
PDD 254	Pattern Drafting IV (1st 3 Weeks)	3
PDD 255	Pattern Drafting V (2nd 8 Weeks)	3
APP 232	Design Development I	3
APP 237	Style Trends and Research I	2
PSY 105	Introduction to Psychology or	3
HD 105	Basic Processes of Interpersonal Relationships	
		17

SEMESTER IV		
PDD 256	Pattern Drafting VI (1st 8 Weeks)	3
PDD 257	Pattern Drafting VII (2nd 8 Weeks)	3
APP 233	Design Development I	3
APP 238	Style Trends and Research II	2
DES 140	Draping or	1
PDD 812	Cooperative Work Experience or	2
PDD 813	Cooperative Work Experience or	3
PDD 814	Cooperative Work Experience	4
BUS 105	Introduction to Business	3
HUM 101	Introduction to Humanities	3
		18-21
Minimum Hours Required:		68-71



ARCHITECTURAL TECHNOLOGY

(Associate Degree)

This program is designed to meet the flexible requirements of the student for preparation for employment within the construction industry - architect's office, engineer or contractor's office or material supplier - or for the student who wishes to continue the study of architecture or environmental design at a senior institution.

	CREDIT HOURS
SEMESTER I	
ARC 130 Architectural Graphics I	3
ARC 134 Freehand Drawing I	3
ARC 146 Architectural Design, Grade I	3
ARC 150 Building Technology I - Methods and Materials	3
ARC 128 History of Architecture I	3
	15
SEMESTER II	
ARC 133 Architectural Graphics II	3
ARC 135 Freehand Drawing II	3
ARC 147 Architectural Design, Grade I	3
ARC 153 Construction Drawings I - Wood Frame	3
ARC 129 History of Architecture II	3
	15
SEMESTER III	
ARC 230 History of Modern Architecture	3
Architecture Elective*	3
Architecture Elective*	3
English or Communications	3
Algebra or Technical Math	3
	15
SEMESTER IV	
Architecture Elective*	3
Architecture Elective*	3
Architecture Elective*	3
Architecture Elective*	3
English or Communications	3
	15
Minimum Hours Required:	60

* Architectural Electives:

ARC 220	Personalities in Art and Architecture
ARC 226	Survey of Interior Architecture I
ARC 227	Survey of Interior Architecture II
ARC 232	Basic Architectural Photography
ARC 240	Media Skills I
ARC 241	Media Skills II
ARC 242	Presentation I
ARC 243	Presentation II
ARC 245	Design Sketching
ARC 246	Architectural Design — Grade I
ARC 247	Architectural Design — Grade II
ARC 251	Building Technology II — Heavy Construction
ARC 252	Building Technology III — Specifications
ARC 254	Construction Drawings II — Steel Frame
ARC 255	Construction Drawings III — Concrete and Masonry
ARC 256	Construction Drawings IV — Detailing

ARCHITECTURAL DRAFTING

(Certificate)

Upon completion of the architectural courses listed below, the student will be issued a certificate in architectural drafting from El Centro College.

		CREDIT HOURS
SEMESTER I		
ARC 130	Architectural Graphics I	3
ARC 134	Freehand Drawing I	3
ARC 146	Architectural Design, Grade I	3
ARC 150	Building Technology I - Methods and Materials	3
ARC 128	History of Architecture I	3
		15
SEMESTER II		
ARC 133	Architectural Graphics II	3
ARC 135	Freehand Drawing II	3
ARC 147	Architectural Design, Grade I	3
ARC 153	Construction Drawings I - Wood Frame	3
ARC 129	History of Architecture II	3
		15
Minimum Hours Required		30



ASSOCIATE DEGREE NURSING

(Associate Degree)

The Associate Degree Nursing Program is a two-year program of study which requires 66 credit hours for an Associate Degree in Applied Arts and Sciences. Upon completion of the program and complying with minimum standards for testing prescribed by the board of Nursing Examiners for the State of Texas, the student is eligible to write the State Board Test Pool Examination for qualifications as a registered nurse. Students are required to be covered by professional liability insurance.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission to El Centro College.
2. Contact Counseling Office for admission packet.
3. Admission to the first nursing course occurs twice a year, August and January. The curriculum plan must be followed in sequence under the plan entered.
4. Biology courses must be completed in the semester as indicated below or prior to the semester indicated. A "C" grade is required to enroll in the next nursing course.

JANUARY ADMISSION		CREDIT HOURS
Prerequisite to Program Admission		
* BIO 120	Introduction to Human Anatomy and Physiology or	4
BIO 221	Anatomy and Physiology I	
SEMESTER I		
NUR 141	Nursing I	7
** BIO 121	Introduction to Human Anatomy and Physiology or	4
BIO 222	Anatomy and Physiology II	
ENG 101	Composition and Expository Reading	3
PSY 105	Introduction to Psychology	3
		17
SEMESTER II		
NUR 142	Nursing II	7
** BIO 216	General Microbiology	4
ENG 102	Composition and Literature	3
PSY 201	Developmental Psychology	3
		17
SEMESTER III		
NUR 250	Nursing IV	9
SOC 101	Introduction to Sociology	3
		12
SUMMER SESSION		
NUR 240	Nursing III	4
SEMESTER IV		
NUR 255	Nursing V	9
Elective		3
		12
Minimum Hours Required		66

* Biology 115 recommended prior to Biology 120 if no previous high school biology.

** Must be completed with a grade of "C" prior to enrolling in Nursing 250.

ASSOCIATE DEGREE NURSING

(Associate Degree)

The Associate Degree Nursing Program is a two-year program of study which requires 66 credit hours for an Associate Degree in Applied Arts and Sciences. Upon completion of the program and complying with minimum standards for testing prescribed by the board of Nursing Examiners for the State of Texas, the student is eligible to write the State Board Test Pool Examination for qualifications as a registered nurse. Students are required to be covered by professional liability insurance.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission to El Centro College.
2. Contact Counseling Office for admission packet.
3. Admission to the first nursing course occurs twice a year, August and January. The curriculum plan must be followed in sequence under the plan entered.
4. Biology courses must be completed in the semester as indicated below or prior to the semester indicated. A "C" grade is required to enroll in the next nursing course.

AUGUST ADMISSION		CREDIT HOURS
Prerequisite to Program Admission		
* BIO 120	Introduction to Human Anatomy and Physiology or	4
BIO 221	Anatomy and Physiology I	
SEMESTER I		
NUR 141	Nursing I	7
** BIO 121	Introduction to Human Anatomy and Physiology or	4
BIO 222	Anatomy and Physiology II	
ENG 101	Composition and Expository Reading	3
PSY 105	Introduction to Psychology	3
		17
SEMESTER II		
NUR 142	Nursing II	7
** BIO 216	General Microbiology	4
ENG 102	Composition and Literature	3
PSY 201	Developmental Psychology	3
		17
SUMMER SESSION		
NUR 240	Nursing III	4
SEMESTER III		
NUR 250	Nursing IV	9
SOC 101	Introduction to Sociology	3
		12
SEMESTER IV		
NUR 255	Nursing V	9
Elective		3
		12
Minimum Hours Required		66

* Biology 115 recommended prior to Biology 120 if no previous high school biology.

** Must be completed with a grade of "C" prior to enrolling in Nursing 250.

DATA PROCESSING PROGRAMMER

(Associate Degree)

This curriculum is intended for the preparation of entry-level or trainee computer programmers who will work in an applications setting to support the general, administrative, and organizational information processing function of industry, commerce, business and government service. It is designed as a two-year career program to prepare students for jobs. Graduates should be able to work in conjunction with a systems analyst in the programming environment usually found in a medium to large job shop. It is intended to provide a sufficient foundation so that graduates with experience and continued learning may advance in career paths appropriate to their own particular interests and abilities.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
BUS 105	Introduction to Business or	3
MGT 136	Principles of Management	
DP 137	Data Processing Mathematics or any business math*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 201	Principles of Accounting I**	3
		15
SEMESTER II		
DP 133	Beginning Programming (COBOL)	4
DP 138	Systems Analysis and Data Processing Logic	3
ECO 201	Principles of Economics I or	3
ECO 202	Principles of Economics II	
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		16
SEMESTER III		
DP 136	Intermediate Programming (COBOL)	4
DP 142	RPG Programming or	3
DP 244	Basic Programming	
DP 233	Operating Systems and Communications	4
ACC 203	Intermediate Accounting or	3
ACC 238	Cost Accounting	
† Elective		3-4
		17-18
SEMESTER IV		
DP 231	Advanced Programming (ALC)	4
DP 232	Applied Systems	4
DP 236	Advanced COBOL Techniques or other 200 level DP or CS course	3-4
Any approved DP or CS course		3-4
		14-16
Minimum Hours Required:		62

† Electives — Must be selected from the following:

Any DP or CS course (including DP 700-800 Cooperative Work Experience)		
DP 129	Data Entry Concepts	4
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
MTH 202	Introductory Statistics	3
ENG 210	Technical Writing	3
BUS 105	Introduction to Business	3
ECO 201	Principles of Economics I	3

* MTH 111, MTH 112, MTH 130 or an equivalent business math course

**ACC 131 — Bookkeeping I, and ACC 132 — Bookkeeping II may be substituted for
ACC 201 — Principles of Accounting

NOTE: Students may obtain credit toward a degree or certificate for only one of each of the pairs of courses listed below:

- DP 133 or CS 184
- DP 231 or CS 186
- DP 244 or CS 182
- CS 175 or CS 174



INFORMATION SYSTEMS

(Associate Degree)

This curriculum is intended for the preparation of students interested in systems work or other four-year degree programs. The curriculum includes many of the basic data processing courses as well as the basic requirements for four-year programs. There is a heavy emphasis on accounting. Students who plan to obtain baccalaureate degrees should determine what school they wish to transfer to and then seek assistance of a counselor in planning their program to meet the requirements of the particular college to which they plan to transfer.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission to El Centro College.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
DP 133	Beginning Programming (COBOL)	4
MTH 111	Mathematics for Business and Economics I	3
ENG 101	Composition and Expository Reading	3
ACC 201	Principles of Accounting I	3
		16
SEMESTER II		
DP 136	Intermediate Programming (COBOL)	4
MTH 112	Mathematics for Business and Economics II	3
ENG 102	Composition and Literature	3
BUS 105	Introduction to Business	3
ACC 202	Principles of Accounting II	3
		16
SEMESTER III		
DP 142	RPG Programming or	3
DP 244	BASIC Programming	
MGT 136	Principles of Management	3
ACC 203	Intermediate Accounting or	3
ACC 238	Cost Accounting or	
ACC 239	Income Tax Accounting	
ECO 201	Principles of Economics I	3
† Elective		3
		15
SEMESTER IV		
DP 231	Advanced Programming (ALC)	4
DP 700-800	Cooperative Work Experience or	3-4
† Elective		
BUS 234	Business Law	3
ACC 204	Managerial Accounting	3
ECO 202	Principles of Economics II	3
		16-17

Minimum Hours Required:

63-64

† Recommended Electives

DP 232 Applied Systems

DP 233 Operating Systems and Communications

DP 240 Telecommunications I

Any DP or CS course not listed

PSY 105 Introduction to Psychology

Sophomore English or American History or Government or Humanities



SMALL COMPUTER SYSTEMS INFORMATION SPECIALIST

(Associate Degree)

With the tremendous growth of small computers, an increased need for one who can function in a programmer/analyst/operator position within a small shop exists. This curriculum is intended to prepare students for such employment. It may also serve as a career path for those completing the operations certificate program, as all courses within that curriculum can be applied to the first year of this curriculum.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission to El Centro College.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
DP 139	Technician	3
DP 137	Data Processing Math or any business mathematics*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
		15
SEMESTER II		
DP 140	Operations-Console	4
DP 243	Computer Center Management or	3-4
DP or CS	Elective (including Data Entry Concepts)	
DP 700-800	Cooperative Work Experience	3-4
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
ACC 132	Bookkeeping II or	3
ACC 202	Principles of Accounting II	
		16-18
SEMESTER III		
DP 133	Beginning Programming (COBOL)	4
BUS 105	Introduction to Business	3
DP 233	Operating Systems and Communications	4
DP 138	Systems Analysis and Data Processing Logic	3
		14
SEMESTER IV		
DP 232	Applied Systems	4
DP 136	Intermediate Programming (COBOL) or	3-4
DP or CS	Elective	
MGT 136	Principles of Management	3
ECO 201	Principles of Economics I	3
DP 142	RPG Programming or	3
DP 244	BASIC Programming	
		16-17
Minimum Hours Required:		61-64

* MTH 111, MTH 112, MTH 130 or an equivalent business mathematics course.

DATA PROCESSING OPERATOR

(Certificate)

This certificate program is designed to develop skills and knowledge necessary to meet the demands of computer operations in today's modern business world and to prepare students to function as operator-trainees in any business data processing environment. Typical operator-trainee categories include RJE terminal operator, micro-computer operator, mini-computer operator, I/O or peripheral device operator, junior computer operator, or possibly console computer operator. The program includes both classroom and laboratory work directed by experienced professionals using large equipment.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission to El Centro College.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
DP 139	Technician	3
DP 137	Data Processing Math or any business mathematics*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
		15
SEMESTER II		
DP 140	Operations-Console	4
DP 243	Computer Center Management or	3-4
DP or CS	Elective (including Data Entry Concepts)	
DP 700-800	Cooperative Work Experience	3-4
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
ACC 132	Bookkeeping II or	3
ACC 202	Principles of Accounting II	
		16-18
Minimum Hours Required:		31-33

* MTH 111, MTH 112, MTH 130 or an equivalent business mathematics course.

KEY ENTRY/DATA CONTROL PROGRAM

(Certificate)

The primary objective of this curriculum is to produce well prepared data entry device operators for entry level positions in local area industries. A secondary objective of this curriculum is to provide data entry operators with sufficient background to enable them, with further on-the-job training, to progress into other positions such as data entry supervisor, data control clerk, data control supervisor, tape/disk librarian, computer operator, documentation specialist, or possibly programmer.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission to El Centro College.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
DP 129	Data Entry Concepts	4
BUS 105	Introduction to Business	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
		16
SEMESTER II		
DP 137	Data Processing Math or any business mathematics*	3
DP 139	Technician	3
DP or CS Elective		3-4
ACC 132	Bookkeeping II or	3
ACC 202	Principles of Accounting II	
OFC 160	Office Machines	3
		15-16
Minimum Hours Required:		31-32

* MTH 111, MTH 112, MTH 130 or an equivalent business mathematics course.

DENTAL ASSISTING TECHNOLOGY

(Certificate)

This program prepares the student for area employment in private dental offices and dental clinics. In addition to classroom work, students receive clinical experience in dental clinics, dental schools, and other health agencies in the community.

The program is designed so that the student is awarded a certificate of completion in one year and may complete a required number of support courses either before or after the program to receive an Associate in Applied Arts and Sciences. The student will also be eligible to write the certification examination offered by the Dental Assisting National Board to become a "Certified Dental Assistant."

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission to El Centro College.
2. Contact counseling office for admission packet.

Students are required to carry professional liability insurance.

ACCREDITATION

The Dental Assistant Program has received full accreditation status from the Commission on Dental Accreditation of the American Dental Association.

	CREDIT HOURS
SEMESTER I	
DA 140 Introduction to the Dental Profession	1
DA 136 General & Dental Anatomy & Physiology	4
DA 142 Dental Assisting I	3
DA 143 Dental Microbiology and Pathology	2
DA 144 Dental Materials I	4
DA 145 Dental Roentgenology I	2
DA 146 Dental Assisting II	2
English or Communications	3
	<u>21</u>
SEMESTER II	
DA 240 Dental Materials II	2
DA 241 Dental Roentgenology II	2
DA 242 Dental Office Administration II	3
DA 243 Dental Assisting Clinic Seminar I	3
DA 249 Dental Assisting Internship I	4
DA 245 Dental Office Administration II	3
DA 246 Preventive Dentistry	3
OFC 172 Beginning Typing	3
	<u>23</u>
SUMMER SEMESTER (6 weeks only)	
DA 250 Dental Assisting Clinic Seminar II	1
DA 252 Dental Assisting Internship II	3
	<u>4</u>
Minimum Hours Required:	48

Students who wish to continue for the second year must complete a minimum of 60 credit hours to obtain the Associate in Applied Science Degree.

The following courses are suggested:

HD 105	Basic Processes of Interpersonal Relationships	3
BIO 123	Human Anatomy and Physiology	4
Electives		<u>5</u>
		12

DRAFTING AND DESIGN TECHNOLOGY

(Associate Degree)

This program prepares the student for employment in a wide range of industries as a drafter or engineering aide. Information in related fields is provided to enable the student to work effectively with the engineer and professional staff. Enrollment in Drafting Cooperative Work Experience Courses (Co-op) provides on-the-job experience while in the program

	CREDIT HOURS
SEMESTER I	
DFT 183 Basic Drafting	4
DFT 135 Reproduction Processes	2
COM 131 Applied Composition and Speech or	3
ENG 101 Composition and Expository Reading	
MTH 195 Technical Mathematics or	3
MTH 101 College Algebra	
‡ Technical Elective	3
	15
SEMESTER II	
DFT 160 Manufacturing Fundamentals	2
Drafting Course*	3-4
Drafting Course* or Co-op**	3
COM 132 Applied Composition and Speech or	3
ENG 102 Composition and Literature	
MTH 196 Technical Mathematics or	3
MTH 102 Plane Trigonometry	
	14-15
SEMESTER III	
Drafting Course*	3-4
EGR 106 Descriptive Geometry	3
‡ Technical Elective or Co-op**	3
GVT 201 American Government or	3
HST 101 History of the United States	
HD 105 Basic Processes of Interpersonal Relationships or	3
PSY 131 Human Relations	
	15-16
SEMESTER IV	
Drafting Course*	3
Drafting Course* or Co-op**	3
‡ Technical Elective	3
PHY 131 Applied Physics	4
GVT 202 American Government or	3
HST 102 History of the United States	
	16
Minimum Hours Required:	60

*Drafting Courses to be selected from the following:

DFT 136	Geological and Land Drafting	3
DFT 184	Intermediate Drafting	3
DFT 185	Architectural Drafting	4
DFT 230	Structural Drafting	3
DFT 231	Electronic Drafting	3
DFT 232	Technical Illustration	3
DFT 234	Advanced Technical Illustration	4
DFT 235	Building Equipment (Mechanical and Electrical)	3
DFT 236	Piping and Pressure Vessel Design	3
DFT 245	Computer Aided Design	3
DFT 250	Sheet Metal Design	3
DFT 251	Industrial Design	3

**Drafting Co-op Courses to be selected from the following:

DFT 703	Cooperative Work Experience	3
DFT 713	Cooperative Work Experience	3
DFT 803	Cooperative Work Experience	3
DFT 813	Cooperative Work Experience	3
DFT 704	Cooperative Work Experience	4
DFT 714	Cooperative Work Experience	4
DFT 804	Cooperative Work Experience	4
DFT 814	Cooperative Work Experience	4

‡ Technical Electives may be selected from Drafting, Applied Science or Engineering Technologies as approved by the Drafting Department



FIRE PROTECTION TECHNOLOGY

(Associate Degree)

The curriculum is primarily designed to provide professional training for firemen. Students who do not work for a fire department may be admitted to the program after a review of their background by the FPT consultant, the FPT counselor or the Social Science division chairperson. Three courses are offered each long semester at night on a flip-flop basis to accommodate work shift changes. The following curriculum guide is designed for full-time students; those attending part-time will find the program takes considerably longer. The sequence of FPT courses through 1988 may be obtained by contacting the Social Science division. Students may enter the sequence at the beginning of any long semester. The sequence is designed to cycle the student through the entire program

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission to El Centro College.

		CREDIT HOURS
SEMESTER I		
FPT 131	Introduction to Fire Protection	3
FPT 132	Fire Prevention Theory and Application	3
* FPT 241	Advanced Fire Loss Statistical Systems	3
ENG		3
MTH 130	Business Mathematics	3
SEMESTER II		
FPT 135	Introduction to Fire Administration	3
FPT 136	Fire Investigation and Arson	3
* FPT 240	Fire Insurance Fundamentals	3
SPE		3
GVT		3
SEMESTER III		
FPT 139	Fire Operations Strategy	4
* FPT 239	Fire Service Communications	3
FPT 231	Fire Protection Through Building Construction	3
CHM 115	General Chemistry	4
SEMESTER IV		
FPT 232	Protection Systems in Industry	3
CHM 170	Chemistry of Flammable Materials	3
* FPT 238	Fire Safety Education	3
CHM 116	General Chemistry	4
SEMESTER V		
FPT 233	Fire Protection Systems	3
FPT 234	Industrial Fire Protection II	3
* FPT 237	Hazardous Materials	3
**PSY 105	Introduction to Psychology	3

SEMESTER VI

FPT 235	Fire Administration II	3
FPT 243	Technical Writing for Firefighters	3
* FPT 236	Legal Aspects of Fire Protection	3
** SOC 101	Introduction to Sociology or	3
HD 105	Basic Processes of Interpersonal Relationships	

Minimum Hours Required: 69

* FPT electives (Any two will be chosen)

** Recommended electives

FOOD SERVICE DIETETIC TECHNICIAN

(Associate Degree)

The Dietetic Technician Program trains men and women to assume responsible positions in the institutional field of food service such as hospitals, extended care facilities, nursing homes, and community nutrition programs.

Before completing this program, the student will be required to work a minimum of 640 hours in an approved work station — equal time to be spent in food preparation and in supervision. A weekly seminar enables the student to discuss his or her work experiences in a classroom setting.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
FS 119	Food Service Equipment	3
FS 120	Basic Food Preparation	3
FS 124	Food Service Sanitation and Safety	3
COM 131	Applied Composition and Speech* or	3
ENG 101	Composition and Expository Reading	
FS 132	Food Purchasing, Handling, and Storage	3
		15
SEMESTER II		
FS 122	Advanced Food Preparation	3
FS 138	Food Service Cost Control or	3
MTH 130	Business Mathematics or	
ACC 131	Bookkeeping I or	
ACC 201	Principles of Accounting I	3
FS 135	Nutrition and Menu Planning	3
FS 136	Supervisory Techniques in Food Service	3
COM 132	Applied Composition and Speech* or	3
ENG 102	Composition and Literature	
HD 105	Basic Processes of Interpersonal Relationships or	3
HD 107	Developing Leadership Behavior or	
PSY 105	Introduction to Psychology or	
SOC 101	Introduction to Sociology	
		18
SEMESTER III		
FS 220	Quantity Food Preparation and Service	4
FS 237	Organization and Management	3
FS 242	Community Nutrition	4
FS 804	Cooperative Work Experience	4
HST 101	History of the United States** or	3
GVT 201	American Government	
		18

SEMESTER IV

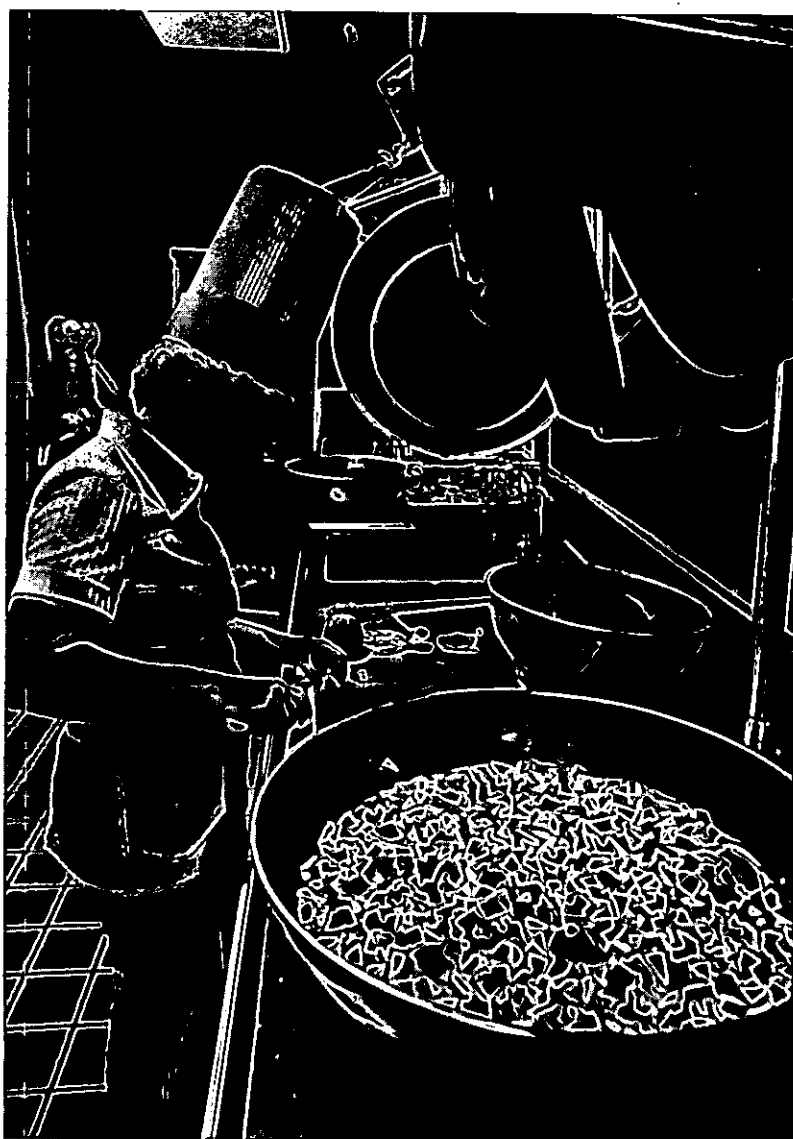
FS 222	Advanced Quantity Food Preparation and Service	4
FS 243	Clinical Nutrition or	4
FS 244	Child Nutrition	
FS 814	Cooperative Work Experience	4
HST 102	History of the United States** or	3
GVT 202	American Government	
		15

Minimum Hours Required:

66

* COM 131 and COM 132 must be taken but ENG 101 and ENG 102 may be substituted.

**HST 101 and HST 102 must be taken but GVT 201 and GVT 202 may be substituted.



FOOD SERVICE DIETETIC ASSISTANT

(Certificate)

The Dietetic Technician Program trains men and women to assume responsible positions in the institutional field of food service such as hospitals, extended care facilities, nursing homes, school lunch programs, and college dormitories. Courses in nutrition and dietetics, basic and quantity food preparation, and institutional food service management are the core of the curriculum.

Before completing this program, the student will be required to work a minimum of 320 hours in an approved work station — equal time to be spent in food preparation and in supervision. A weekly seminar enables the student to discuss his or her work experiences in a classroom setting.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
FS 120	Basic Food Preparation	3
FS 124	Food Service Sanitation and Safety	3
FS 119	Food Service Equipment	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics	3
		<u>15</u>
SEMESTER II		
FS 122	Advanced Food Preparation	3
FS 132	Food Purchasing, Handling and Storage	3
FS 135	Nutrition and Menu Planning	3
FS 136	Supervisory Techniques	3
FS 814	Cooperative Work Experience	4
		<u>16</u>
Minimum Hours Required:		31

FOOD SERVICE DIETETIC ASSISTANT

(Certificate)

The Dietetic Technician Program trains men and women to assume responsible positions in the institutional field of food service such as hospitals, extended care facilities, nursing homes, school lunch programs, and college dormitories. Courses in nutrition and dietetics, basic and quantity food preparation, and institutional food service management are the core to the curriculum.

Before completing this program, the student will be required to work a minimum of 320 hours in an approved work station — equal time to be spent in food preparation and in supervision. A weekly seminar enables the student to discuss his or her work experiences in a classroom setting.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
FS 120	Basic Food Preparation	3
FS 124	Food Service Sanitation and Safety	3
FS 119	Food Service Equipment	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics	3
		<u>15</u>
SEMESTER II		
FS 122	Advanced Food Preparation	3
FS 132	Food Purchasing, Handling and Storage	3
FS 135	Nutrition and Menu Planning	3
FS 136	Supervisory Techniques	3
FS 814	Cooperative Work Experience	4
		<u>16</u>
Minimum Hours Required:		31

FOOD SERVICE OPERATIONS

(Associate Degree)

The Food Service Operations Program trains students to assume responsible positions in the commercial sector of the food service industry. Courses are geared to cover the various operational functions of restaurants, hotel food service, cafeterias, coffee shops, and other types of fast food service.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
FS 132	Food Purchasing, Handling, and Storage	3
FS 119	Food Service Equipment	3
FS 120	Basic Food Preparation	3
FS 124	Food Service Sanitation and Safety	3
COM 131	Applied Composition and Speech* or	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics	3
		<u>18</u>
SEMESTER II		
FS 122	Advanced Food Preparation	3
FS 138	Food Service Cost Control	3
FS 135	Nutrition and Menu Planning	3
FS 136	Supervisory Techniques in Food Service	3
COM 132	Applied Composition and Speech* or	3
ENG 102	Composition and Literature	
		<u>15</u>
SEMESTER III		
HST 101	History of the United States** or	3
GVT 201	American Government	
FS 220	Quantity Food Preparation and Service	4
FS 804	Cooperative Work Experience	4
HD 105	Basic Processes of Interpersonal Relationships or	3
HD 107	Developing Leadership Behavior or	
PSY 105	Introduction to Psychology or	
SOC 101	Introduction to Sociology	
† Elective		3
		<u>17</u>
SEMESTER IV		
FS 222	Advanced Quantity Food Preparation and Service	4
FS 233	Food Service Marketing	3
FS 814	Cooperative Work Experience	4
HST 102	History of the United States** or	3
GVT 202	American Government	
† Elective		3
		<u>17</u>
Minimum Hours Required:		67

† Electives — Six (6) credit hours must be selected from the following:

FS 140	Elementary Baking Training	3
FS 245	Advanced Pastry Shop Training	3
FS 238	Garde Manger Training	3
FS 239	Saucier Training	3
FS 247	Beverage Operations and Service	3
ACC 201	Principles of Accounting I	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
PEH 257	Advanced First Aid and Emergency Care	3
ECO 201	Principles of Economics I	3
FS 201	Special Topics in Food Service	1
FS 202	Special Topics in Food Service	2
FS 203	Special Topics in Food Service	3

* COM 131 and COM 132 must be taken but ENG 101 and ENG 102 may be substituted.

** HST 101 and HST 102 must be taken but GVT 201 and GVT 202 may be substituted.

HOTEL—MOTEL OPERATIONS

(Associate Degree)

The Hotel-Motel Operations Program trains students to assume responsible positions in hotels and motels of various sizes and types.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
HMO 110	Principles of Hotel Administration	3
HMO 114	Front Office Procedures	3
COM 131	Applied Composition and Speech* or	3
ENG 101	Composition and Expository Reading	
HST 101	History of the United States** or	3
GVT 201	American Government	
FS 124	Food Service Sanitation	3
MTH 130	Business Mathematics	3
		<u>18</u>
SEMESTER II		
HMO 112	Hotel-Motel Housekeeping	3
HMO 116	Hotel-Motel Engineering	3
COM 132	Applied Composition and Speech* or	3
ENG 102	Composition and Literature	
HST 102	History of the United States** or	3
GVT 202	American Government	
HD 105	Basic Processes of Interpersonal Relationships or	3
PSY 105	Introduction to Psychology or	
SOC 101	Introduction to Sociology or	
SOC 102	Social Problems	
FS 136	Supervisory Techniques in Food Service	3
		<u>18</u>
SEMESTER III		
HMO 210	Hotel-Motel Sales Development	3
HMO 212	Hotel-Motel Accounting	3
HMO 804	Cooperative Work Experience***	4
† Electives		6
		<u>16</u>
SEMESTER IV		
FS 247	Beverage Operations and Service	3
HMO 214	Hotel-Motel Law	3
HMO 216	Hotel-Motel Property Management	3
HMO 814	Cooperative Work Experience***	4
† Elective		3
		<u>16</u>
Minimum Hours Required:		68

† Electives — Nine hours of electives must be selected from the following:

FS 119	Food Service Equipment	3
FS 132	Food Service Purchasing	3
FS 135	Nutrition and Menu Planning	3
FS 138	Food Service Cost Control	3
ACC 131	Bookkeeping I	3
ACC 201	Principles of Accounting I	3
MGT 136	Principles of Management	3
OFC 231	Business Communications	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
PEH 257	Advanced First Aid and Emergency Care	3
HMO 201	Special Topics in Hotel-Motel Administration	1
HMO 202	Special Topics in Hotel-Motel Administration	2
HMO 203	Special Topics in Hotel-Motel Administration	3

* COM 131 and COM 132 must be taken but ENG 101 and ENG 102 may be substituted.

** HST 101 and HST 102 must be taken but GVT 201 and GVT 202 may be substituted.

*** Before completing this program, the student will be required to work a minimum of 640 hours in an approved work station — of a hotel or motel. A weekly seminar enables the student to discuss his or her experiences in a classroom setting.

INTERIOR DESIGN

(Professional Certificate in Interior Design)
(Associate Degree)

Dallas has become a major design and market center. Increased commercial and residential construction and remodeling has created the demand for interior designs of new public buildings, offices, and homes. There are many opportunities for qualified interior designers.

The interior designer provides design solutions for environmental spaces of public structures and private residences. In the designer's presentation the needs of the client are met by shaping the physical environment. The organization of art, space, furniture, fabric, equipment, and lighting demands coordination by the designer. New materials for buildings and furnishings require new creative approaches; opportunities are challenging and rewarding.

A knowledge of construction and materials, both structural and decorative, is essential for the planning of aesthetic yet functional spaces. The interior designer joins forces with the architect and landscape designer in achieving the total design concept in the environment of today and for the future.

The program consists of six semesters of study in Interior Design and related courses. However, a student may file for a Applied Arts and Sciences degree after successful completion of the first two years of the program. A professional certificate is awarded upon successful completion of all courses identified in the six semester curriculum. The certificate qualifies the graduate to enter the profession of interior design as a beginning professional.

This program is fully accredited by F.I.D.E.R. (Foundation for Interior Design Education Research).

ADMISSION TO THE PROGRAM

1. Contact the Counseling Division for scheduling a time to take the Design Indicator Test.
2. Fulfill all requirements for admission at El Centro College.

			CREDIT HOURS
SEMESTER I			
INT 120	Basic Planning		3
INT 121	Basic Color Theory for Interior Design		3
INT 144	Philosophy of Design		1
ART 105	Survey of Art History		3
ART 110	Design I		3
DES 135	Textiles*		3
			16
SEMESTER II			
INT 123	Advanced Planning and Perspective		3
INT 124	Color and Lighting		3
INT 225	Architectural Drawing I		3
ART 106	Survey of Art History		3
HD 105	Basic Processes of Interpersonal Relationships*		3
			15

(All Interior and Design courses must be successfully completed before a student will be admitted into the second year of study.)

SEMESTER III

INT 222	History of Interior Arts I	5
INT 226	Architectural Drawing II	3
INT 233	Fabrications**	3
INT 235	Inner Space Composition and Presentation	3
SOC 102	Social Problems	3
		17

SEMESTER IV

INT 223	History of Interior Arts II	5
INT 224	Interior Graphics and Illustration	3
INT 240	Design Sources	1
ARC 245	Design Sketching	3
COM 132	Applied Composition and Speech	3
MGT 230	Salesmanship or	3
ACC 131	Bookkeeping I or	
ACC 201	Accounting I	
		18

(All Interior and Architecture courses must be successfully completed before a student will be admitted into the third year of study.)

SEMESTER V

INT 237	Advanced Principles of Interior Design	4
INT 345	History of Modern Design	5
INT 801 (802, 803)	Cooperative Work Experience*** or	1-2-3
INT 341	Special Project	
		10-12

SEMESTER VI

INT 238	Client Psychology Survey and Business Procedures	4
INT 239	Principles of Commercial Interior Design	4
INT 343	Research and Presentation	2
		10

Minimum Hours Required: 86-88

* DES 135 and HD 105 may be taken alternately in either the Fall or Spring semester

** ARC 245 and INT 233 may be taken alternately in either the Fall or Spring semester.

*** INT 801 is a cooperative work experience for which the student will be assigned to an approved local work environment for the semester in order to acquire on-the-job training experience. INT 341 may be substituted for INT 801 only due to rare circumstances. This substitution must be approved by the Interior Design faculty well in advance of the proposed deviation from the preferred curriculum.

LEGAL ASSISTANT

(Associate Degree)

The Legal Assistant Program is an associate degree program designed to prepare the student to function as a technically qualified assistant to a lawyer. The program was developed at the request of and in conjunction with the Dallas Bar Association. The four-semester curriculum consists of legal technology courses combined with liberal arts and business courses.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
LA 131	Introduction to Legal Technology	3
LA 135	Texas Legal Systems	3
GVT 201	American Government	3
ENG 101	Composition and Expository Reading	3
ACC 201	Principles of Accounting I	3
		<u>15</u>
SEMESTER II		
LA 133	Law of Real Property and Real Estate Transactions	3
LA 134	Principles of Family Law	3
OFC 231	Business Communications	3
ACC 202	Principles of Accounting II	3
LA 139	Legal Research and Drafting	2
Support Course*		3
		<u>17</u>
SEMESTER III		
LA 231	Wills, Trusts, and Probate Administration	3
LA 225	Business Organizations	3
LA 227	Civil Litigation	3
Support Course*		3
† LA Elective		2, 3 or 4
		<u>14-16</u>
SEMESTER IV		
LA 234	Personal Property, Sales and Credit Transactions	3
LA 235	Techniques of Legal Practice and Procedure	4
LA 233	Income Taxation and Legal Accounting	3
Support Course*		3
† LA Elective		3 or 4
		<u>16-17</u>
Minimum Hours Required:		62-65

* Required Support Courses:

The student will be required to take 3 courses from the support courses listed below:

BUS 234	Business Law
GVT 202	American Government
BUS 237	Organizational Behavior
SOC 101	Introduction to Sociology
CS 175	Introduction to Computer Science
HD 105	Basic Processes of Interpersonal Relationships
ECO 201	Principles of Economics
PHI 105	Logic
POL 134	Criminal Evidence and Procedure

† Required Elective Courses:

The student will be required to take 2 courses from the LA Elective courses below:

LA 803 or 804	Cooperative Work Experience
LA 813 or 814	Cooperative Work Experience
LA 236	Legal Office Management
LA 248	Constitutional and Criminal Law
LA 251	Complex Litigation and the Anti-Trust and Securities Laws
LA 255	Oil and Gas Law
LA 232	Torts and Insurance Law and Claims Investigation

MANAGEMENT CAREERS — ADMINISTRATIVE MANAGEMENT OPTION

(Associate Degree)

The Administrative Management option offers a continuation of the traditional management and business studies. This option is designed for students seeking a detailed examination of management practices, techniques, and theories.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
ACC 201	Principles of Accounting I**	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
† Elective		3
		15
SEMESTER IV		
MGT 242	Personnel Administration	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
	Social Science elective or Humanities elective	3
† Elective		3
		18
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — MID-MANAGEMENT OPTION

(Associate Degree)

The Mid-Management option is a cooperative plan with members of the business community whereby the student attends college classes in management and related courses and concurrently works at a regular, paid, part-time or full-time job in a sponsoring business firm. To enter the Mid-Management option, students must make formal application and be interviewed by a member of the Mid-Management faculty before final acceptance will be granted.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 150	Management Training	4
MGT 154	Management Seminar: Role of Supervision	2
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
		15
SEMESTER II		
MGT 151	Management Training	4
MGT 155	Management Seminar: Personnel Management	2
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
HUM 101	Introduction to the Humanities	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		18
SEMESTER III		
MGT 250	Management Training	4
MGT 254	Management Seminar: Organizational Development	2
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 251	Management Training	4
MGT 255	Management Seminar: Business Strategy, the Decision Process and Problem Solving	2
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required:		63

continued

† Elective — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — SMALL BUSINESS MANAGEMENT OPTION

(Associate Degree Program)

The Small Business Management option is designed to assist owners and managers of small businesses in developing the skills and techniques necessary for operation. This option is also designed for students who plan to become owners or operators of small businesses.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 153	Small Business Management	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
†Elective		3
		15
SEMESTER II		
MGT 157	Small Business Bookkeeping and Accounting Practices	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
MGT 206	Principles of Marketing	3
MGT 211	Small Business Operations	3
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 210	Small Business Capitalization, Acquisition and Finance	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
†Elective		3
		15
Minimum Hours Required		60

† Electives — May be selected from the following:

MGT 212	Special Problems in Business	1
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

**Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MEDICAL ASSISTING TECHNOLOGY

(Associate Degree)

This program provides specialized training in which the student develops basic skills and knowledge necessary to function as an administrative and clinical medical-office assistant. Employment is available in medical offices, clinics, hospitals and other organizations requiring a background in medical office procedures.

The program is designed so that the student may complete a required number of support courses either before or after taking the medical assisting courses and receive an associate degree in applied arts and sciences.

A student must, in addition to satisfying certificate requirements for the college, comply with the minimum standards for testing prescribed by the Certifying Board of the American Association of Medical Assistants before being able to sit for the National Board Examination.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission to El Centro College.
 2. Conference with counselor and/or program coordinator.
 3. New students may enter in fall or spring semester.
- Students are required to be covered by professional liability insurance.

ACCREDITATION

The educational program for Medical Assistants has been accredited by the Committee on Allied Health Education and Accreditation in collaboration with the American Association of Medical Assistants, Inc.

			CREDIT HOURS
SEMESTER I			
BIO 123	Applied Anatomy and Physiology		4
* OFC 174	Intermediate Typing**		2
MA 150	Orientation to Medical Office Careers		1
MA 151	Medical Terminology**		4
MA 152	Medical Law and Ethics		2
MA 153	Medical Office Microbiology and Sterilization Procedures		3
			16
SEMESTER II			
MA 160	Medical Transcription		4
MA 161	Medical Office Administrative and Management Procedures		3
MA 162	Medical Office Bookkeeping and Insurance Procedures		3
MA 163	Medical Office Clinical Medical Assisting Procedures		3
MA 164	Medical Office Pharmacology and Drug Administration		3
			16
SUMMER SESSION I			
MA 170	Medical Office X-Ray Orientation and Electromedical Instrumentation		3
MA 171	Medical Office Laboratory Procedures (Summer Only)		3
			6

SUMMER SESSION II

MA 172	Medical Assisting Externship (A minimum of 180 hours of supervised externship may be offered Fall, Spring, or Summer)	6

SEMESTER III

ENG 101	Composition and Expository Reading and	6
ENG 102	Composition and Literature or	
COM 131	Applied Composition and Speech and	
COM 132	Applied Composition and Speech	
HUM 101	Introduction to the Humanities or	3
HD 105	Basic Processes of Interpersonal Relationships	

 9

SEMESTER IV

PSY 105	Introduction to Psychology	3
PEH 257	Advanced First Aid and Emergency Care	3

† Elective		3

 9

Minimum Hours Required: 62

* If typing skills can be demonstrated with a minimum of 50 correct wpm, OFC 174 will not be required.

** OFC 174 and MA 151 must be completed in the first semester in order for the student to progress according to the outlined schedule.

† Elective may be any 3-credit hour course.

MEDICAL ASSISTING TECHNOLOGY

(Certificate)

This program provides specialized training in which the student develops basic skills and knowledge necessary to function as an administrative and clinical medical-office assistant. Employment is available in medical offices, clinics, hospitals and other organizations requiring a background in medical office procedures.

The program is designed so that the student may receive a certificate in one year. A student must, in addition to satisfying certificate requirements for the college, comply with the minimum standards for testing prescribed by the Certifying Board of the American Association of Medical assistants before being able to sit for the National Board Examination.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission to El Centro College.
 2. Conference with counselor and/or program coordinator.
 3. New students may enter in fall or spring semester.
- Students are required to be covered by professional liability insurance.

ACCREDITATION

The Educational Program for Medical Assistants has been accredited by the Committee on Allied Health Education and Accreditation in collaboration with the American Association of Medical Assistants, Inc.

		CREDIT HOURS
SEMESTER I		
BIO 123	Applied Anatomy and Physiology	4
* OFC 174	Intermediate Typing**	2
MA 150	Orientation to Medical Office Careers	1
MA 151	Medical Terminology**	4
MA 152	Medical Law and Ethics	2
MA 153	Medical Office Microbiology and Sterilization Procedures	3
		16
SEMESTER II		
MA 160	Medical Transcription	4
MA 161	Medical Office Administrative and Management Procedures	3
MA 162	Medical Office Bookkeeping and Insurance Procedures	3
MA 163	Medical Office Clinical Medical Assisting Procedures	3
MA 164	Medical Office Pharmacology and Drug Administration	3
		16

SUMMER SESSION I

MA 170	Medical Office X-Ray Orientation and Electromedical Instrumentation	3
MA 171	Medical Office Laboratory Procedures (Summer Only)	3
		6

SUMMER SESSION II

MA 172	Medical Assisting Externship (A minimum of 180 hours of supervised externship may be offered Fall, Spring, or Summer)	6

Minimum Hours Required: 44

* If typing skills can be demonstrated with a minimum of 50 correct wpm, OFC 174 will not be required.

** OFC 174 and MA 151 must be completed in the first semester in order for the student to progress according to the outlined schedule.



MEDICAL LABORATORY TECHNICIAN

(Associate Degree)

This two-year program prepares the student to perform tests and related duties in a medical laboratory under the supervision of a medical technologist. The program is a balanced curriculum of science, liberal arts, and technical courses including appropriate assignments in medical laboratories in the area.

Upon successful completion of the program, the student is awarded an associate degree in applied arts and sciences. In order to be eligible to take the National Certifying Examination for Medical Laboratory Technician Associate Degree, a student must, in addition to satisfying degree requirements, comply with the minimum standards prescribed by the American Society of Clinical Pathologists. Students are required to be covered by professional liability insurance.

		CREDIT HOURS
SEMESTER I		
BIO 101	General Biology	4
CHM 101	General Chemistry	4
MLT 133	Hematology	4
MLT 135	Urinalysis	3
* MTH 101	College Algebra	3
		18
SEMESTER II		
BIO 102	General Biology	4
CHM 102	General Chemistry	4
MLT 138	Immunology	4
PSY 105	Introduction to Psychology or	3
HD 105	Basic Processes of Interpersonal Relationships	
		15
SUMMER SESSION (12 Weeks)		
MLT 139	Clinical Practice I	8
SEMESTER III		
BIO 221	Anatomy and Physiology	4
CHM 203	Quantitative Analysis	4
ENG 101	Composition and Expository Reading	3
MLT 229	Medical Microbiology I	4
		15
SEMESTER IV		
BIO 222	Anatomy and Physiology	4
ENG 102	Composition and Literature	3
MLT 231	Clinical Chemistry	4
MLT 236	Medical Microbiology II	4
		15
SUMMER SESSION (12 Weeks)		
MLT 238	Clinical Practice II	8
Minimum Hours Required:		79

* Students without two-years of high school algebra will take MTH 093 and then MTH 101.

MEDICAL TRANSCRIPTION

(Certificate)

This nine-month certificate program prepares the student to function as a medical typist and/or medical transcriptionist. Job opportunities are available in physicians' offices, hospitals and clinics, the health insurance industry, public and private health foundations and institutions, medical schools and research centers.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission to El Centro College.
2. Conference with counselor and/or program coordinator.

		CREDIT HOURS
SEMESTER I		
BIO 123	Applied Anatomy and Physiology	4
OFC 172	Beginning Typing or	3
* OFC 174	Intermediate Typing	(2)
MA 150	Orientation to Medical Office Careers	1
MA 151	Medical Terminology	4
MA 152	Medical Law and Ethics	2
Oral or Written Communications		3
		16-17
SEMESTER II		
OFC 162	Office Procedures	3
OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
* MA 160	Medical Transcription	4
MA 161	Medical Office Administrative and Management Procedures	3
Oral or Written Communications		3
		15
Minimum Hours Required:		31-32

* If typing skills can be demonstrated with a minimum of 50 correct wpm, OFC 174 will not be required. A typing skill of 35 wpm must be attained before enrollment in MA 160.

OFFICE CAREERS — ADMINISTRATIVE ASSISTANT OPTION

(Associate Degree)

The primary objective of the Administrative Assistant Option to the Office Careers Program is to prepare students for positions as assistants to administrators within public and private firms and agencies. Emphasis in this program is on the development of organizational and management skills in addition to basic office skills.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
BUS 105	Introduction to Business	3
† Elective		3
		17-18
SEMESTER II		
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
‡ OFC 273	Advanced Typing or	2
† Elective		
OFC 231	Business Communications	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting	
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
† Electives		6
		17
SEMESTER IV		
OFC 256	Office Management or	3
BUS 237	Organizational Behavior	
HUM 101	Introduction to Humanities	3
† Electives		9
		15
Minimum Hours Required:		66

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.



OFFICE CAREERS — LEGAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent legal secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 159	Beginning Shorthand or	
OFC 103	Speedwriting	4
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 167	Legal Terminology and Transcription	3
OFC 231	Business Correspondence	3
# OFC 266	Advanced Shorthand	4
OFC 273	Advanced Typing or	2
† Elective		(3)
CS 175	Introduction to Computer Science	3
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 274	Legal Office Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		15-16
Minimum Hours Required:		67

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.



OFFICE CAREERS — PROFESSIONAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 159	Beginning Shorthand or	4
OFC 103	Speedwriting	
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
CS 175	Introduction to Computer Science	3
# OFC 266	Advanced Shorthand	4
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
OFC 273	Advanced Typing or	2
† Elective		(3)
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
† Electives		6-7
		15-17
Minimum Required Hours:		67

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — RECORDS MANAGEMENT OPTION

(Associate Degree)

This program is designed to train students who wish to enter the ever-growing field of Records Management. Four technical courses will prepare the students to enter a comprehensive records management program in an organization which exerts control over the creation, distribution, retention, utilization, storage, retrieval, protection, preservation, and final disposition of all types of records. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 150	Filing Practices	3
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		14-15
SEMESTER II		
OFC 152	Introduction to Records Management	3
OFC 162	Office Procedures	3
† OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
OFC 250	Records Control	3
OFC 273	Advanced Typing or	2
† Elective		
CS 175	Introduction to Computer Science	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		17
SEMESTER IV		
OFC 252	Micrographics	3
OFC 265	Word Processing Practices and Procedures	3
HUM 101	Introduction to Humanities	3
† Electives		6-7
		15-16
Minimum Required Hours:		64

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.



OFFICE CAREERS — GENERAL OFFICE

(Certificate)

The General Office Certificate Program is designed to provide the student with a basic working knowledge and skills in various office activities. A general knowledge of business concepts and procedures is provided.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Electives		7
		19
SEMESTER II		
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		7
		16
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

†Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Accounting Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
‡ ACC 132	Bookkeeping II or	3
† Elective		
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		8
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

‡ Required if ACC 131 was taken previously.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Office Clerical Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 162	Office Procedures	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
OFC 165	Introduction to Word Processing	3
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 166	Intermediate Shorthand***	4
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

†Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

PATTERN DESIGN

(Associate Degree)

The pattern designer converts the fashion sketch or original garment into an industrial paper pattern used in the mass production of clothing. Drafting is the skill of developing a flat pattern with measurements. Draping is the skill of developing a pattern by placing cloth over a dress form. Upon completion of the program the student enters a women's wear or children's wear manufacturing company as an assistant in the pattern department.

ADMISSION TO THE PROGRAM

1. Contact the Counseling Division to schedule a time to take the design Indicator Test. Priority of entry is by date of application.
2. Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
DES 128	Introduction to Mass Production and Apparel (1st 8 weeks)	2
DES 129	Industrial Garment Construction (1st 8 weeks)	1
DES 234	History of Costume	3
DES 110	Basic Color Theory and Application	3
PDD 151	Pattern Drafting I (2nd 8 Weeks)	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
		15
SEMESTER II		
DES 135	Textiles	3
DES 136	Fashion Sketching	3
DES 235	History of Costume	3
PDD 152	Pattern Drafting II (1st 8 Weeks)	3
PDD 153	Pattern Drafting III (2nd 8 Weeks)	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		18
SEMESTER III		
DES 229	Advanced Garment Construction	3
PDD 254	Pattern Drafting IV (1st 8 Weeks)	3
PDD 255	Pattern Drafting V (2nd 8 Weeks)	3
PSY 105	Introduction to Psychology or	3
HD 105	Basic Processes of Interpersonal Relationships	
HST 101	History of the United States or	3
HST 102	History of the United States	
		15
SEMESTER IV		
PDD 256	Pattern Drafting VI (1st 8 Weeks)	3
PDD 257	Pattern Drafting VII (2nd 8 Weeks)	3
DES 141	Grading or	1
PDD 812	Cooperative Work Experience or	2
PDD 813	Cooperative Work Experience or	3
PDD 814	Cooperative Work Experience	4
GVT 201	American Government	3
HUM 101	Introduction to Humanities	3
		13-16
Minimum Hours Required:		61-64

POLICE SCIENCE

(Associate Degree)

The curriculum is designed for those with law enforcement backgrounds as well as for recent high school graduates interested in preparing for an essential field of employment.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

		CREDIT HOURS
SEMESTER I		
POL 140	Introduction to Law Enforcement	3
POL 134	Criminal Evidence and Procedures	3
POL 137	Police Community Relations	3
ENG 101	Composition and Expository Reading or*	3
COM 131	Applied Composition and Speech	
HST 101	History of the United States	3
		<u>15</u>
SEMESTER II		
POL 141	Police Organization and Administration	3
POL 142	Legal Aspects of Law Enforcement	3
ENG 102	Composition and Literature or	3
COM 132	Applied Composition and Speech	
HST 102	History of the United States	3
† Elective		3
		<u>15</u>
SUMMER SESSION		
† Electives		6
SEMESTER III		
POL 240	Criminal Investigation	3
POL 241	Police Role in Crime and Delinquency	3
POL 245	Traffic Law	3
GVT 201	American Government	3
PSY 105	Introduction to Psychology	3
		<u>15</u>
SEMESTER IV		
SOC 101	Introduction to Sociology or	3
SOC 102	Social Problems	
† Elective		3
‡ Elective**		3
		<u>9</u>
Minimum Hours Required:		60

† ELECTIVES

Must be selected from the following:

POL 146	Patrol Administration	3
POL 233	Introduction to Criminalistics	3
POL 242	Juvenile Procedures	3
POL 243	Probation and Parole	3
POL 244	Traffic Planning and Administration	3
POL 245	Traffic Law	3
POL 246	Penology	3
POL 143	Practical Spanish for Public Service Personnel	3
POL 144	Practical Spanish for Public Service Personnel	3

‡ ELECTIVES

Must be selected from the following:

PSY 205	Psychology of Personality	3
HD 105	Basic Processes of Interpersonal Relationships	3
SOC 102	Social Problems	3

* Recommended for students transferring into a BS or BA degree plan.

** If you plan to transfer to a bachelor of science degree program in criminal justice, you should check the four-year college or university catalog to determine elective courses you should take.

RADIOGRAPHY TECHNOLOGY

(Associate Degree)

This program is designed to prepare radiographers with understanding and skills in the field of diagnostic radiography. The student is assigned to several Dallas area hospitals for clinical education. Upon successful completion of the twenty-four month program, the student is awarded an associate in applied arts and sciences degree. In order to be certified by the College as prepared to write the American Registry of Radiologic Technologists Exam, a student must, in addition to satisfying degree requirements, comply with minimum standards for testing prescribed by the accrediting agency.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission at El Centro College.
2. Take battery of tests.
3. High school courses in biology and math suggested.
4. Attend program orientation session.
5. Personnel interview with program coordinator.
6. Submit high school and college transcripts.

		CREDIT HOURS
SEMESTER I		
RAD 150	Introduction to Radiography Technology	3
RAD 152	Radiographic Procedures I	4
RAD 154	Radiographic Exposure and Physics I	3
RAD 156	Clinical Education I, Film Evaluation	2
PSY 105	Introduction to Psychology	3
BIO 120	Anatomy and Physiology	4
		19
SEMESTER II		
RAD 160	Radiographic Procedures II	4
RAD 162	Radiographic Exposure and Physics II	3
RAD 164	Clinical Education II, Film Evaluation	3
BIO 121	Anatomy and Physiology	4
		14
SUMMER SESSION I		
RAD 170	Radiographic Procedures III	1
RAD 172	Radiographic Exposure III	1
RAD 174	Radiographic Physics III	1
RAD 176	Clinical Education III, Film Evaluation	4
		7
SEMESTER III		
RAD 250	Radiographic Exposure IV	1
RAD 252	Radiographic Procedures IV	1
RAD 254	Special Procedures	1
RAD 256	Clinical Education IV, Film Evaluation	3
* MTH 139	Applied Mathematics or any 100 or above math	3
ENG 101	Composition and Expository Reading or	3
COM 131	Applied Composition and Speech	
SOC 207	Social Psychology	3
		15

SEMESTER IV

RAD 260	Imaging and Pathology	2
RAD 262	Radiation Biology and Radiation Protection	3
RAD 264	Clinical Education V, Film Evaluation	4
ENG 102	Composition and Literature or	3
COM 132	Applied Composition and Speech	
		12

SUMMER SESSION II

RAD 270	Departmental Administration	2
RAD 272	Seminar	3
RAD 274	Clinical Education VI, Film Evaluation	4
		9

Minimum Hours Required: 76

* Applied Mathematics for Health Occupations—El Centro College only—or any 100 or above math except Business Math.



RESPIRATORY THERAPY TECHNOLOGY

(Associate Degree)

The associate degree program seeks to qualify the individual upon graduation to perform at a high level of competence in the areas of specialized patient care, diagnostic laboratory, department supervision, and education.

The program is accredited by the American Medical Association Council on Medical Education through the Joint Review Committee for Respiratory Therapy Education. Upon completion of the program, the student is awarded an associate in applied arts and sciences degree. In order to be certified by the college as eligible to write the American Registry Exam, a student must, in addition to satisfying degree requirements, comply with the minimum standards for testing prescribed by the above mentioned committee.

ADMISSION TO THE PROGRAM

1. High school diploma or GED.
2. Completion of testing including basic math and reading level.
3. Completion of interviews with liaison counselor and program instructors.
4. Completion of "Requirements for Admission" to El Centro College.
5. Completion of math prerequisite for CHM 101 or 115.
6. Students are required to be covered by professional liability insurance.

Equivalency testing for advanced standing is available.

Written requests should be submitted well in advance of enrollment date.

		CREDIT HOURS
SEMESTER I		
CHM 101	General Chemistry or	4
CHM 115	General Chemistry	
BIO 120	Human Anatomy and Physiology or	4
BIO 221	Anatomy and Physiology I	
RES 137	Basic Respiratory Therapy Skills and Procedures I	4
RES 144	Pathology and Treatment Rationale I	2
ENG 101	Composition and Expository Reading	3
		17
SEMESTER II		
CHM 102	General Chemistry or	4
CHM 116	General Chemistry	
BIO 121	Human Anatomy and Physiology or	4
BIO 222	Anatomy and Physiology II	
RES 145	Basic Technology I	4
RES 147	Clinical Procedures II	2
RES 152	Pharmacology	2
		16
SUMMER SESSION I		
RES 150	Clinical Procedures III (6 Weeks)	2
RES 164	Basic Technology III (6 Weeks)	3
ENG 102	Composition and Literature (6 Weeks)	3
		8

SEMESTER III

BIO 216	General Microbiology	4
RES 243	Advanced Technology and Instrumentation I	3
RES 257	Advanced Physiology and Pathology	3
RES 260	Clinical Procedures IV	4
RES 270	Ventilator Patient Management	2
		16

SEMESTER IV

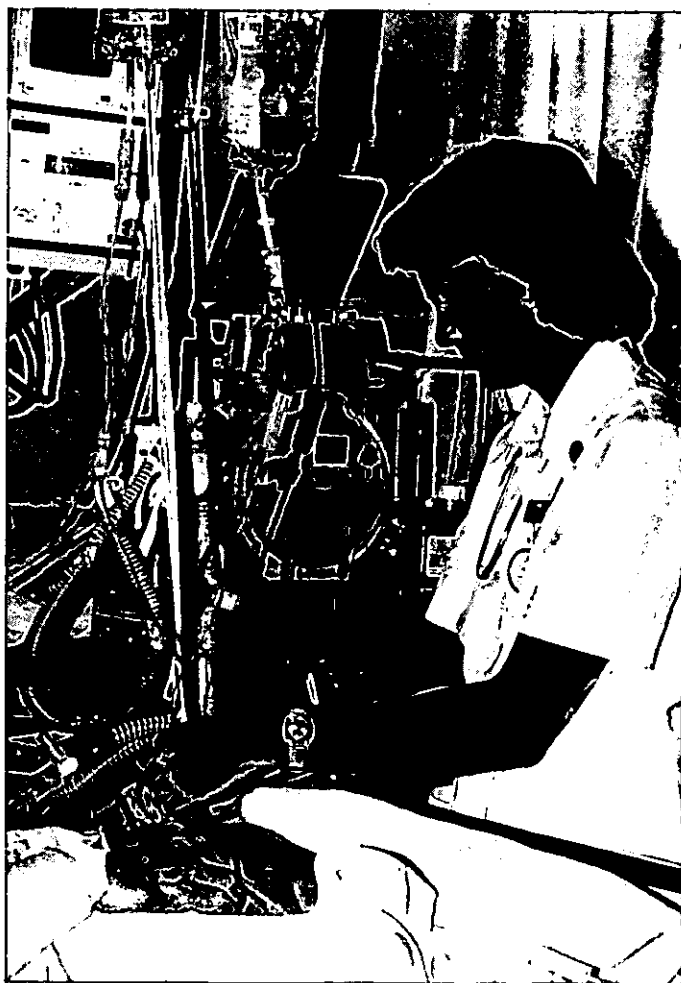
RES 246	Advanced Technology and Instrumentation II	3
RES 249	Seminar and Case Presentation	3
RES 256	Instructional and Management Methods	2
RES 261	Clinical Procedures V	4
RES 271	Pediatric Respiratory Therapy	2
		14

SUMMER SESSION II

RES 262	Clinical Procedures VI (6 Weeks)	2

Minimum Hours Required:

73



RESPIRATORY THERAPY TECHNICIAN

(Certificate)

The Respiratory Therapy Technician Program seeks to provide the training necessary to qualify individuals for entrance into the field of skilled in-patient care and technical and therapeutic procedures. For individuals already working in the field, the program serves to broaden and deepen technical knowledge and upgrade therapeutic skills.

The program has been designed to conform to the "Essentials for an Approved Education Program for the Respiratory Therapy Technician" approved by the American Medical Association Council on Medical Education and has been fully accredited by the Joint Review Committee for Respiratory Therapy Education. Upon completion of the program the student is awarded a certificate. In order to be certified by the College as eligible to write the National Technician Certifying Exam administered by the NBRT, a student must, in addition to satisfying certificates of completion requirements, comply with the minimum standards for testing as required by the accrediting agency.

ADMISSION TO THE PROGRAM

1. High School diploma or GED.
 2. Completion of testing including basic math and reading level.
 3. Completion of interviews with liaison counselor and program instructors.
 4. Completion of "Requirements for Admission" to El Centro College.
 5. Students are required to be covered by professional liability insurance.
- Equivalency testing for advanced standing is available.

Written requests should be submitted well in advance of enrollment date.

		CREDIT HOURS
SEMESTER I		
PSC 118	Physical Science	4
BIO 123	Applied Anatomy and Physiology or BIO 120 and BIO 121—Introduction to Human Anatomy and Physiology	4
RES 137	Basic Respiratory Therapy Skills and Practice I	4
RES 144	Pathology and Treatment Skills and Practice I	2
		14
SEMESTER II		
RES 138	Clinical Practice II	4
RES 141	Medications	2
RES 145	Basic Technology I	4
RES 149	Pathology and Treatment Rationale II	2
COM 131	Applied Composition and Speech	3
		15
SUMMER SESSION I		
RES 160	Clinical Practice III (6 Weeks)	3
RES 164	Basic Technology II (6 Weeks)	3
SUMMER SESSION II		
RES 162	Clinical Practices IV (6 Weeks)	4
Minimum Hours Required:		39

SCHOOL FOOD SERVICE

(Associate Degree)

The School Food Service Program trains men and women to assume responsible positions in the management of school food service facilities in the public or private sector. Courses in food management, nutrition, basic and quantity food preparation are the core of the curriculum.

To receive an Associate Degree in Applied Arts and Sciences a student needs to satisfactorily complete a minimum of 60 credit hours as outlined below. A "C" (2.0) average is required in all food service courses.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

	CREDIT HOURS
SEMESTER I	
FS 119 Food Service Equipment	3
FS 120 Basic Food Preparation	3
FS 124 Food Service Sanitation and Safety	3
‡ Required Support Course	3
† Additional Food Service Course	3
	15
SEMESTER II	
‡ Required Support Course*	3
† Additional Food Service Courses*	12
	15
SEMESTER III	
FS 804 Cooperative Work Experience**	4
† Additional Food Service Courses	10
	14
SEMESTER IV	
FS 814 Cooperative Work Experience**	4
† Additional Food Service Courses and/or	12
‡ Required Support Courses*	
	16
Minimum Hours Required:	60

continued

- * The program consists of 17 hours in specific courses and 43 hours distributed as follows: a minimum of 6 hours will be taken from the designated list of Required Support Courses and a minimum of 25 hours from the list of Additional Food Service Courses. The remaining 12 hours may be selected from courses in either of the above lists.

‡ REQUIRED SUPPORT COURSES

A minimum of 6 hours must be taken from the courses listed below:

COM 131 and COM 132	Applied Composition and Speech	6
ENG 101 and ENG 102	Applied Composition and Speech or Composition and Expository Reading Composition and Literature	
HST 101 and HST 102	History of the United States History of the United States or	6
GVT 201 and GVT 202	American Government American Government	
HD 105 PSY 105	Basic Processes of Interpersonal Relationships or Introduction to Psychology or	3
SOC 101 MTH 130	Introduction to Sociology Business Mathematics	3

† ADDITIONAL FOOD SERVICE COURSES

A minimum of 25 credit hours must be completed from the courses in this group:

FS 122	Advanced Food Preparation	3
FS 132	Food Service Purchasing, Handling, and Storage	3
FS 135	Nutrition and Menu Planning	3
FS 136	Supervisory Techniques in Food Service	3
FS 138	Food Service Cost Control	3
FS 140	Elementary Baking Training	3
FS 220	Quantity Food Preparation & Service	4
FS 222	Advanced Quantity Food Preparation & Service	4
FS 237	Organization and Management	3
FS 242	Community Nutrition	4
FS 244	Child Nutrition	4

- ** Before completing this program the student will be required to work a minimum of 640 hours in an approved work station in a school food service facility. A weekly seminar enables the student to discuss his or her work experience in a classroom setting. This requirement is fulfilled by enrolling in FS 804 and FS 814.

SCHOOL FOOD SERVICE**(Certificate)**

This 31 credit hour certificate program prepares the student to function as a school food service worker and advance to school cafeteria manager. All credits earned in this program may be applied toward the associate degree in School Food Service.

ADMISSION TO THE PROGRAM

Fulfill all requirements for admission at El Centro College.

CERTIFICATION

Upon completion of this program, the student will be awarded a certificate of completion by Texas School Food Service Association and a certificate of completion by El Centro College.

		CREDIT HOURS
SEMESTER I		
FS 119	Food Service Equipment	3
FS 120	Basic Food Preparation	3
FS 124	Food Service Sanitation and Safety	3
FS 135	Nutrition and Menu Planning	3
HD 105	Basic Processes of Interpersonal Relationships	3
		15
SEMESTER II		
FS 122	Advanced Food Preparation	3
FS 136	Supervisory Techniques for Food Service	3
FS 138	Food Service Cost Control	3
FS 237	Organization and Management	3
FS 242	Community Nutrition	4
		16
Minimum Hours Required		31

SURGICAL TECHNOLOGY

(Certificate)

The Surgical Technology Program trains a person to provide services in the operating room under the supervision and responsibility of the operating room supervisor. The technologist, as part of the operating room team, aids in providing for the safety, cleanliness, and efficiency necessary for good patient care in the operating room. The surgical technologist prepares the materials for use at the operating room table and assists in the use of these materials in a variety of operative procedures. Summer session is ten weeks in length. Students are required to be covered by professional liability insurance.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission at El Centro College.
2. Conference with liaison counselor for the Surgical Technology Program.

			CREDIT HOURS
SEMESTER I			
ENG 101	Composition and Expository Reading or		3
COM 131	Applied Composition and Speech		
BIO 123	Applied Anatomy and Physiology or		4
BIO 120	Introduction to Human Anatomy and Physiology		
	and		4
BIO 121	Introduction to Human Anatomy and Physiology		4
SGT 140	Medical Terminology		2
SGT 141	Operating Room Techniques		8
			17-21
SEMESTER II			
HD 105	Basic Processes of Interpersonal Relationships or		3
HD 106	Personal and Social Growth		
SGT 152	Operating Room Procedures		8
			11
SUMMER SESSION (10 Weeks)			
SGT 153	Clinical Practice		7
SGT 154	Seminar		2
			9
Minimum Hours Required:			37-41

SURGICAL TECHNOLOGY OPTION FOR GRADUATE REGISTERED NURSES

(Certificate)

This option teaches the registered nurse to provide safety, cleanliness and efficiency necessary for good patient care in the operating room. Basic principles of asepsis, preparation and care of surgical supplies and ethical-legal aspects are taught, as well as perioperative role responsibilities of the registered nurse.

ADMISSION TO THE PROGRAM

1. Fulfill all requirements for admission at El Centro College and the Surgical Technology Program..
2. Conference with liaison counselor for the Surgical Technology Program.
3. Current licensure by the Texas State Board of Nursing Examiners, or a graduate of an R.N. Program.

		CREDIT HOURS
SEMESTER I		
SGT 140	Medical Terminology	2
SGT 141	Operating Room Technique	8
		10
SEMESTER II		
HD 105	Basic Processes of Interpersonal Relationships or	3
SGT 160	Operating Room Procedures for Registered Nurses	8
		11
Minimum Hours Required:		21



VOCATIONAL NURSING

(Certificate)

This is a one-year program which meets the accreditation requirements of the State Board of Licensed Vocational Nursing Examiners. In addition to classroom and laboratory work at the college, clinical experience at various hospitals is part of the program. This course is offered only during the day

ADMISSION TO THE PROGRAM

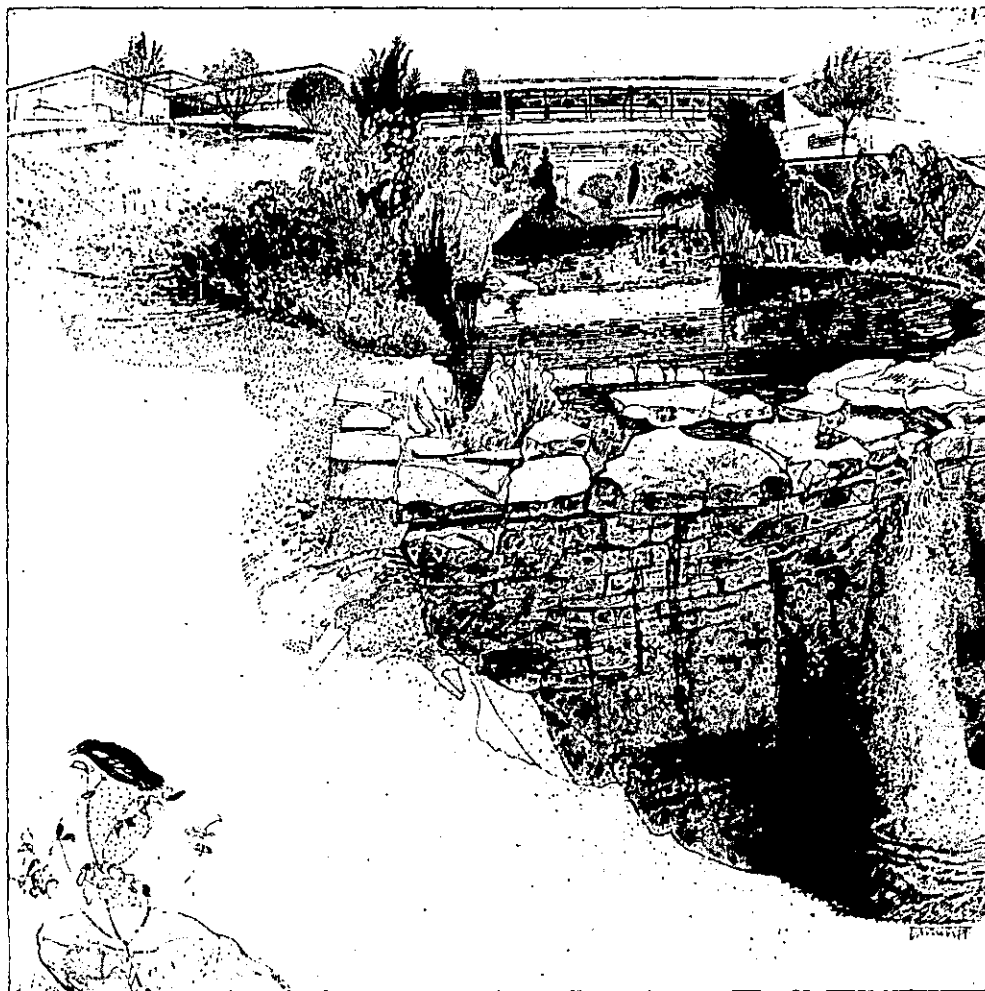
1. Fulfill all requirements for admission at El Centro College.
2. Complete an application sheet to the Vocational Nursing Program in addition to the application to El Centro.
3. Contact liaison counselor to the Vocational Nursing Program for additional information.

		CREDIT HOURS
SEMESTER I		
BIO 123	Applied Anatomy and Physiology	4
DM 064	Math for Nurses	1
HD 100	Study Skills	1
VN 144	Health Maintenance through the Life Cycle	3
VN 145	Nursing Process I	3
VN 152	Nursing Practice	6
		18
SEMESTER II OR III (Summer Only)		
VN 153	Maternal Child Health	8
VN 154	Maternal Child Health Clinical	7
		15
SEMESTER III OR II		
VN 155	Nursing Process II	10
VN 150	Clinical II	8
		19
Minimum Hours Required:		51



Mountain View College

Information, Administration, Faculty



MOUNTAIN VIEW COLLEGE

In southwest Dallas County, Mountain View College is the community learning center for thousands of people. The second of seven colleges in the Dallas County Community College District, Mountain View opened in the fall of 1970. It is located at 4849 West Illinois Avenue in the southwest Oak Cliff section of Dallas and serves residents of South Dallas, Oak Cliff, Duncanville, Cedar Hill, and parts of Grand Prairie.

The various programs at Mountain View are designed to meet a broad range of educational needs. Students may elect to complete their first two years of study leading toward a bachelor's degree, or they may prepare for a career in an occupational or technical area. Many students attend Mountain View to train for advancement in their present employment or to train for an entirely new career opportunity. Non-credit courses also are available for people of all ages to gain personal enrichment, cultural awareness, or to participate in productive leisure time activities.

The Mountain View student body is composed of people of all ages and all backgrounds. The college represents a cross section of the community which it serves. This rich opportunity to interact with many varied people is an important part of the educational process and is well established in the Mountain View tradition.

The Campus

The campus sits on the crest of a ridge that gives students an outstanding view of the downtown Dallas skyline to the north. Care has been taken to preserve the natural beauty of the 200 acre site. The long, flat roofed buildings stretch out gracefully along both sides of a rocky ravine and natural creek which has been landscaped into a very pleasant interior courtyard and garden. Footpaths and stone terraces provide a beautiful area to walk, study, or relax. An enclosed pedestrian bridge spans the ravine, giving easy access to all parts of the campus and providing a beautiful architectural focal point to the college.

Accreditation

Mountain View College is a member of

- The Southern Association of Colleges and Schools
- The American Association of Community and Junior Colleges
- The League for Innovation in the Community College.

Mountain View College is recognized and sanctioned by the Coordinating Board of the Texas College and University System and the Texas Education Agency and is an Affirmative Action Equal Opportunity Institution.





MOUNTAIN VIEW ADMINISTRATION

President	W. H. Jordan	333-8700
Vice President of Business Services	Ralph G. Hall	333-8705
Vice President of Instruction	Jim Horton	333-8710
Vice President of Student Services	Corinthian Fields	333-8696
Dean of Instructional Services	Richard E. Smith	333-8771
Associate Dean, Extended Day Programs	John Nelson	333-8610
Associate Dean, Learning Resources	Jim Corvey	333-8664
Associate Dean, Technical/Occupational Programs	Tom Goza	333-8755
Assistant Dean, Community Service	Don Perry	333-8612
Administrative Assistant to President	Sharron Colburn	333-8678
Director of Admissions/Registrar	Don Gentsch	333-8757
Director of Co-operative Education	Jim Kavalier	333-8757
Director of Counseling Services	William A. Wilson	333-8606
Director of Financial Aid	Wilma Robinson	333-8688
Director of Health/Handicapped Services	Donna Richards	333-8699
Director of Public Information	Kathleen Cook	333-8680
Project Manager	Carol Flannery	333-8757
Director, Student Development and Programs	Guy Gooding	333-8685

DIVISION CHAIRPERSONS

Business	Bill R. Sorrells	333-8616
Communications and Technology	Ron Hert	333-8624
Aviation/Fine Arts/Physical Education	Ann Cunningham	333-8632
Science and Mathematics Technology	Clifford Miller	333-8649
Social Science and Technology	William F. Mugleston	333-8656

MOUNTAIN VIEW FACULTY AND STAFF

Alfers, Kenneth G.	History
Creighton Univ., B.A., M.A.; George Washington Univ., M.Ph., Ph.D.	
Allen, Gemmy	Mid-Management
University of Texas, Arlington, B.B.A.; North Texas State Univ., M.B.A.	
Armand, Pilar	Spanish
Univ. of Havana, Cuba, B.A.; Texas Woman's Univ., M.A.	
Battles, Fred	Physical Education
Kilgore Jr. College, A.A.; Baylor Univ., B.S., M.S.; North Texas State Univ., Ed.D.	
Bean, Al	Government/Psychology
Baylor Univ., B.A.; Southern Methodist Univ., M.Ed.; North Texas State Univ., Ed.D.	
Benson, Paul F.	English
Pacific Lutheran Univ., B.A.; Colorado State Univ., M.A.; North Texas State Univ., Ph.D.	
Brown, David L.	Drafting
East Texas State Univ., B.S., M.Ed.	
Brown, Jean W.	Music
Texas Woman's Univ., B.S., M.A.	
Caldwell, Leleonia E.	Reading
Bishop College, B.S.; Southeastern State College, M.Ed.	
Coad, Bruce	English
Wittenburg Univ., B.A.; Univ. of North Carolina, M.A.; Duke Univ., Ph.D.	
Cook, Kathleen	Director, Public Information
University of Texas, Austin, B.J.	
Cook, E. Wayne	English
Hardin-Simmons Univ., B.A.; Texas Tech Univ., M.A., Ph.D.	
Cortez, Lionel M., Jr.	Counselor
Univ. of Texas, Austin, B.A.; Our Lady of the Lake College, M.Ed.; Nova Univ., Ed.D.	
Corvey, Sanford James	Assoc. Dean, Learning Resources
Florida Atlantic Univ., B.A., M.Ed.; State Univ. of New York, Geneseo, M.L.S.	
Cowan, John Arthur	Art
Kansas State Univ., B.S., M.A.	
Criswell, Allatia	Speech
North Texas State Univ., B.A., M.A.	
Cunningham, Ann R.	Chairperson, Aviation/Fine Arts/Physical Education
Baylor Univ., B.S., M.S.	
DeLong, J. Richard	Mathematics
Southern Methodist Univ., B.A.; North Texas State Univ., M.Ed.	
Dershner, Don	Data Processing
Colorado State Univ., B.S.M.E.	
Dexter, Rawlings P.	English
Colorado State Univ., B.A., M.A.	
Dodge, Tom	English
Univ. Texas, Arlington, B.A.; North Texas State Univ., M.A.	
Duvall, Johnny W.	Mathematics
East Texas State Univ., B.S.; Univ. of Illinois, M.A.	
Ehrhardt, Harreytte B.	Resource Consultant
Southern Methodist Univ., B.S., M.A.; Univ. of Houston, D.Ed.	
England, Daniel B.	Drafting
Univ. of Oregon, B.S.; Dallas Seminary, Th.M.; North Texas State Univ., M.F.A.	
Faulkner, Ann	Learning Skills
Univ. of Texas, Austin, B.A., M.A.	
Felty, Larry	Art
East Texas State Univ., B.S., M.S.	
Ferguson, Susan French	English
Univ. of Dallas, B.S.; North Texas State Univ., M.A., Ph.D.	

Fields, Corinthian	Vice President of Student Services
Univ. of Massachusetts, B.S., Ph.D.; Western New England College, M.B.A.	
Fletcher, Ann	Educational Paraprofessional
DePauw Univ., B.A.; Univ. of Houston, M.Ed.	
Forrest, Patricia	Art
North Texas State Univ., B.F.A., M.F.A.	
Fulton, Stan	Electronics
Univ. of Arkansas, B.S.E., M.Ed.; East Texas State Univ., Ed.D.	
Gentsch, Don	Registrar and Director of Admissions
East Texas State Univ., B.S., M.S.; Nova Univ., Ed.D.	
Gooding, Guy	Director, Student Development and Programs
Texas Tech Univ., B.A.; North Texas State Univ., M.Ed.	
Goss, Raye	Counselor
Prairie View A&M College, B.S.; East Texas State Univ., M.S.	
Goza, Tom	Associate Dean, Technical/Occupational Programs
Austin College, A.B.; East Texas State Univ., M.S., Ph.D.	
Gregory, David A.	Physical Education
Temple Junior College, A.A.; Southwest Texas State Univ., B.S.; North Texas State Univ., M.Ed.	
Grimes, Geoffrey Allan	English
Austin College, B.A.; Texas Tech Univ., M.A., Ph.D.	
Grissom, Anne	Speech
Baylor Univ., B.A, M.A.	
Haepf, John C., Jr.	Machine Shop
Studies: LaSalle Institute	
Hall, J.	Dance
Studies: Mountain View College; American Univ.; Univ. of Texas, Dallas	
Hall, Ralph G.	Vice President of Business Services
Southeastern State Univ., B.S.	
Hamilton, Ramona	Office Careers
Hardin-Simmons Univ., B.B.A.; North Texas State Univ., M.B.E.	
Hegar, Kathryn W.	Business
North Texas State Univ., B.B.A., M.B.E., Ph.D.	
Hert, Ron	Chairperson, Communications
Univ. of Nebraska, B.A.; Illinois State Univ., M.A.	
Hettle, Mark	Music
North Texas State Univ., B.M., M.Ed.	
Holland, Ronald C.	Physical Education
Northeastern State College, B.S.; East Texas State Univ., M.Ed.	
Horton, Jim	Vice President of Instruction
Univ. of Illinois, B.S., M.Ed.	
Jordan, W.H.	President
North Texas State Univ., B.S., M.E., Ed.D.	
Kavalier, Jim	Director, Cooperative Work Experience
Univ. of Oregon, B.S., M.S.	
Korman, Frank	Accounting
Texas Christian Univ., B.B.A.; Univ. of Texas, Austin, M.A., Ph.D., C.P.A.	
Legg, Larry	Biology
Univ. of Southern Mississippi, B.S.; Northwestern Louisiana State Univ., M.S.	
Lockley, J. Elaine	Mathematics
Wiley College, B.S.; Texas Southern Univ., M.S.; Stanford Univ., M.S., Ph.D.	
Lovelace, Curtis	Electronics
Mountain View College, Assoc. Applied Science	
McCain, Charles	Resource Consultant
East Texas State Univ., B.S., M.S., Ph.D.	
McLoda, William S.	Geology/Geography
Ohio State Univ., B.S.; Indiana Univ., M.A.T.	

Means, Richard L.	History
Henderson State Teachers College, B.A.; Univ. of Arkansas, M.A.	
Melkus, Roger A.	Counselor
St. Thomas Seminary College, B.A.; Creighton Univ., M.S.; North Texas State Univ., Ph.D.	
Miller, Clifford D.	Chairperson, Science/Math Technology
Wayne State Univ., B.S.; Washington Univ., M.A.; Univ. of Kentucky, Ph.D.; Studies: Max Planck Institut	
Mount, George	Psychology
Univ. of Texas, Arlington, B.A.; North Texas State Univ., M.S., Ph.D.	
Mugleston, William F.	Chairperson, Social Science and Technology
Johns Hopkins Univ., B.A.; Univ. of Virginia, M.A.; Univ. of Georgia, Ph.D.	
Nelson, John	Associate Dean, Extended Day Programs
Huston-Tillotson College, B.A.; Univ. of Denver, M.A.	
Ohlhausen, Orlan	Mathematics
Abilene Christian Univ., B.A., M.A.	
Olesen, Spencer	Reading
Stephen F. Austin State Univ., B.A.; East Texas State Univ., M.Ed.	
Oliver, Gwendolyn L.	Supervisor, Library Services
Texas Woman's Univ., B.A.; North Texas State Univ., M.L.S.	
Oxsheer, Billy W.	Sociology
Texas Christian Univ., B.A., M.A.	
Payne, John	Aviation
Univ. of Texas, Arlington, B.B.A.; East Texas State Univ., M.B.A.; F.A.A. Airline Transport Pilot; Single and Multi-Engine, Basic, Advanced and Instrument Ground Instructor	
Penn, Howard L.	Mathematics
Southeastern State College, B.S.; North Texas State Univ., M.S., Ph.D.	
Perry, Don	Assistant Dean, Community Service
Memphis State Univ., B.A., M.Ed.	
Pierce, L. Jack	Biology
Sam Houston State Univ., B.S., M.A.; Texas A&M Univ., Ph.D.	
Pike, Patsy	Office Careers
Baylor University, B.B.A.; East Texas State Univ., M.B.A.	
Pollock, Guy W.	Data Processing
Univ. of Houston, B.B.A.; East Texas State Univ., M.S.	
Pool, Larry	History/Government
Stephen F. Austin State Univ., B.S., M.A.	
Pritchett, John L.	Economics
Southern Methodist Univ., B.A.; North Texas State Univ., M.S.	
Richards, Donna	Director, Health/Handicapped Services
Texas Woman's Univ., B.S., M.S.	
Roberts, Mary	Accounting
Lousiana State Univ., B.S.; Southern Methodist Univ., M.B.A., C.P.A.	
Robinson, Wilma W.	Director, Financial Aid
Savannah State College, B.S.; East Texas State Univ., M.S.	
Rodgers, Samuel A.	Mathematics
North Texas State Univ., B.A., M.S.; Univ. of Kentucky, Ph.D.	
Roy, Dewayne	Welding
Studies: Oscar Rose Junior College; Eastfield College	
Salter, Daniel M.	Pilot Technology
San Jacinto College, A.S.; F.A.A. Commercial Pilot Certificate; F.A.A. Flight Instructor Ratings; F.A.A. Ground Instructor Ratings; F.C.C Radio Operator License; Dallas Baptist College, B.C.A.	
Salter, M. Jo	Counselor
Southwestern Univ., B.A.; East Texas State Univ., M.S.	
Sayers, Lew Carey	Developmental Writing
Dartmouth College, B.A.; Reed College, M.A.T.	
Schimmel, David	Music
Oklahoma Univ., B.S.; Florida State Univ., M.S.; North Texas State Univ., M.M.	

Schlehr, George	Horology
Oswego State Teachers College, B.S.; American Watchmakers Institute, C.M.W.	
Sherman, Bill	Counselor
East Texas State Univ., B.S., M.Ed.	
Singleton, Emma	Office Careers
Texas Southern Univ., B.S., M.B.Ed.	
Sink, Donald Michael	English
Ball State Univ., B.S., M.A.; Auburn Univ., Ed.D.	
Skinner, Ted R.	Librarian
East Texas State Univ., B.S., M.S. in L.S.	
Smith, Richard E.	Dean of Instructional Services
Harding Univ., B.A.; Univ. of Texas, Austin, M.A.	
Smith, Tommy E.	Physical Education
North Texas State Univ., B.S., M.Ed.; Nova Univ., Ed.D.	
Sorrels, Bill R.	Chairperson, Business Division
East Texas State Univ., B.S., M.Ed.	
Strain, Jimmie F.	Government/History
Univ. of Texas, Austin, B.S.; East Texas State Univ., M.A.; Southern Methodist Univ., M.L.A.	
Stupp, Mary	Philosophy/Psychology
El Centro College, A.A.; North Texas State Univ., B.A.; Southern Methodist Univ., M.L.A.	
Terry, Joanne	Counselor
Texas Lutheran College, B.S.; Texas Tech Univ., M.A.	
Thompson, Darrell H.	Mid-Management
Sam Houston State Univ., B.B.A., M.B.A.	
Tipple, Karl	Electronics
Southern Methodist Univ., B.S., M.S.	
Walsh, John	Machine Shop
Studies: Univ. of Texas, Arlington; Univ. of Texas, Austin, Extension, Voc. Teaching Cert.; Texas A&M Egr. Extension Voc., Teaching Cert.	
Washington, Billie	Counselor
Studies: Mountain View College; East Texas State Univ.	
White, Marjorie A.	Chemistry
Our Lady of the Lake College, B.A.; Univ. of Texas, Austin, M.A., Ph.D.	
Whitefield, Geneva	Computer Science
Univ. of Arkansas, B.S., B.A.; East Texas State Univ., M.B.A.	
Wickersham, Charles H.	Developmental Mathematics
North Texas State Univ., B.B.A.; East Texas State Univ., M.S.	
Williams, Mollie Ann	Counselor
Prairie View A&M College, B.S.; East Texas State Univ., M.S.; Nova Univ., Ed.D.	
Willis, John A.	Mid-Management
Univ. of Arkansas, B.S.; North Texas State Univ., M.B.A.	
Wilson, William A.	Director, Counseling
The City College of the City Univ. of New York, B.A.; Teachers College, Columbia Univ., M.A., Ed.D.	
Wilson, Rodney M.	Theatre
Northern Iowa Univ., B.A.; Kansas State Univ., M.A.	
Wolfe, David J.	Journalism
Southern Methodist Univ., B.A.; Univ. of California, Los Angeles, M.A.	



Mountain View College

Curriculum Patterns
For Technical/Occupational Programs



ACCOUNTING ASSOCIATE

(Associate Degree)

The Accounting Associate two-year program is designed to prepare a student for a career as a junior accountant in business, industry and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles.

The Associate in Applied Arts and Sciences Degree is awarded for successful completion of at least 63 credit hours as outlined below. Students desiring a less comprehensive program that emphasizes bookkeeping procedures and practices should consider the General Office Certificate with elective emphasis on accounting careers. The General Office Certificate is available in the Office Careers Program.

		CREDIT HOURS
SEMESTER I		
ACC 201	Principles of Accounting I	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or*	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
OFC 160	Office Machines	3
		<u>15</u>
SEMESTER II		
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or*	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
† OFC 172	Beginning Typing	3
		<u>15</u>
SEMESTER III		
ACC 203	Intermediate Accounting I	3
ACC 204	Managerial Accounting	3
ECO 201	Principles of Economics I	3
GVT 201	American Government	3
† Electives		3-6
		<u>15-18</u>
SEMESTER IV		
ACC 238	Cost Accounting or	3
ACC 239	Income Tax Accounting	
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
† Electives		3-6
		<u>15-18</u>
Minimum Hours Required:		63

† Electives — A minimum of 9 credit hours must be selected from the following:

ACC 205	Business Finance	3
ACC 207	Intermediate Accounting II	3
ACC 238	Cost Accounting	3
ACC 239	Income Tax Accounting	3
ACC 703-713	Cooperative Work Experience	3
803-813		
ACC 704-714	Cooperative Work Experience	4
804-814		
BUS 143	Personal Finance	3
BUS 237	Organizational Behavior	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science and Data Processing	4
MGT 206	Principles of Marketing	3
PSY 105	Introduction to Psychology or Human Relations	3
PSY 131		
SPE 105	Fundamentals of Public Speaking	3
Any CS or DP Programming course		

* ENG 101 and ENG 102 may be substituted for COM 131 and COM 132 provided that SPE 105 is also taken.

† Students who can demonstrate proficiency by previous training, experience, or placement tests may substitute a course from the electives listed for this program.



AVIATION MAINTENANCE TECHNOLOGY

(Associate Degree)

This program is designed to provide a technical course of study which prepares the student for a career in aircraft maintenance. Such maintenance includes service, repair, and overhaul of aircraft engines and aircraft accessory systems. Upon completion of the program, the student is eligible to take the Federal Aviation Administration examinations for the Airframe and Powerplant Maintenance Technician School.

Training is provided by Mountain View College in cooperation with Braniff Education Systems, Inc. Braniff holds Air Agency Certificate 202-58 issued by the Federal Aviation Administration, and certifies approval as an aviation maintenance technician school.

Mountain View College will issue a Certificate of Completion when the Required Core Courses and either the Powerplant Curriculum courses OR the Airframe Curriculum courses are completed. If the Required Core courses, Powerplant AND Airframe Curriculum courses are completed, the student is qualified to receive an Associate of Applied Arts and Sciences degree in Aviation Maintenance Technology.

		CREDIT HOURS
SEMESTER I		
APM 100	Aircraft Basic Science*	5
APM 101	Applied Aircraft Science*	5
APM 102	Basic Electricity*	5
		15
SEMESTER II		
APM 200	Airframe Structures*	5
APM 201	Sheet Metal Structures*	5
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
Any APM 200 level course except APM 205 and APM 225		5
		18
SEMESTER III		
PSY 131	Human Relations	3
Any three APM 200 Level course except APM 205 and APM 225		15
		18
SEMESTER IV		
APM 205	Inspection and Review*	5
APM 225	Powerplant Review and Inspection*	5
Any APM 200 level course		5
SS 131	American Civilization or	
HST 101	History of the United States	3
		18
Minimum Hours Required:		69

* Each APM course is taken independently and each course continues for only six weeks.

AVIATION TECHNOLOGY

Because of the varied and interrelated aviation career options available, Mountain View's Aviation Technology program is designed to allow students to take a group of core courses which includes selected aviation, English, Mathematics and human relations courses and then proceed with specialized courses in the specific career option they wish to enter.

The Associate Degree of Applied Arts and Sciences degree options are (1) Career Pilot including Flight Instructor Certificate, Multi-engine Rating, Flight Engineer and Air Transport Pilot Ground School and type-rating for small, multi engine, turbo jet powered airplane; (2) Air Cargo Transport; (3) Airline Marketing; (4) Fixed Base Operations/Airport Management; (5) Aircraft Dispatcher and (6) Air Traffic Control. A one year certificate program is available in Aircraft Dispatcher.

CAREER PILOT OPTION

(Associate Degree)

The Career Pilot Option provides students with flight training and ground school through the commercial certificate. All ground school instruction and flight training conform to Part 61 and 141 of the Federal Aviation Administration Regulations. Prior to admission to the program, registration and payment of fees, consultation with and approval by an Aviation Technology instructor is necessary. Simulator fees, flight fees and fees for pre-and post-flight briefing are in addition to the regular tuition charge.

Students completing this option may find employment opportunities as an airline pilot, corporate pilot, flight engineer, flight instructor and other general aviation positions. It is recommended that students in the Career Pilot option schedule flight training during the summer months in addition to the spring and fall semesters to aid in completing the program within a two year period.

		CREDIT HOURS
SEMESTER I		
AVT 110	Introduction to Aviation	3
AVT 121	Ground School Private	3
AVT 122	Aviation Law	3
AVT 135	Flight Basic*	2
AVT 210	FAA Regulations	3
AVT 226	Meteorology	3
		17
SEMESTER II		
AVT 123	Ground School Commercial	3
AVT 128	Aero Engines and Systems	3
AVT 137	Flight Private Pilot*	1
AVT 220	Aero Dynamics	3
ENG 101	Composition and Expository Reading	3
† Mathematics Elective		3
		16

continued

SEMESTER III

AVT 221	Advanced Navigation	3
AVT 224	Ground School Instrument	3
AVT 227	Flight Commercial I*	2
AVT 228	Flight Commercial II*	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		14

SEMESTER IV

AVT 212	Airport Management	3
AVT 229	Flight Commercial III*	3
AVT 230	Flight Commercial IV - Instrument*	3
AVT 250	Flight Instructor Ground School	2
SPE 105	Fundamentals of Public Speaking	3
		14

Minimum Hours Required: 61

† Mathematics elective must be selected from the following:

MTH 101	College Algebra	3
MTH 111	Mathematics for Business and Economics	3
MTH 130	Business Mathematics	3
MTH 195	Technical Mathematics	3

* Flight courses are flexible enrollment and may be taken in sequence regardless of semester.

ADDITIONAL CERTIFICATION AVAILABLE FOR CAREER PILOT OPTION

	CREDIT HOURS
Flight Instructor Certificate	
AVT 250 Flight Instructor Ground School	2
AVT 252 Instrument Flight Instructor Ground School	3
AVT 251 Flight Instructor - Airplane	2
AVT 253 Flight Instructor Airplane Instrument	1
Multi Engine Rating	
AVT 254 Flight Advanced I	1
Flight Engineer	
AVT 263 Flight Engineer Ground School	3
Air Transport Pilot	
AVT 264 Air Transport Pilot Ground School	3
Type-Rating (small, multi-engine, turbo-jet powered airplane)	
AVT 255 Type Rating Turbo Jet Ground School	3
AVT 256 Flight Advanced II - Jet Type Rating	2

AIR CARGO TRANSPORT OPTION

(Associate Degree)

This option is designed to provide students with an overview of transportation methods and technology associated with the aviation industry. Upon completion of the program, students may be eligible to be employed in positions such as air cargo sales, air freight transportation and cargo loading.

		CREDIT HOURS
SEMESTER I		
AVT 110	Introduction to Aviation	3
AVT 121	Ground School Private	3
AVT 122	Aviation Law	3
AVT 210	FAA Regulations	3
BUS 105	Introduction to Business	3
		15
SEMESTER II		
AVT 226	Meteorology	3
AVT 249	Air Transportation, Traffic and Cargo	3
ACC 201	Principles of Accounting I	3
ENG 101	Composition and Expository Reading	3
† Math Elective		3
		15
SEMESTER III		
AVT 212	Airport Management	3
AVT 223	Airline Management	3
MGT 136	Principles of Management	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
SPE 105	Fundamentals of Public Speaking	3
		15
SEMESTER IV		
AVT 225	Aviation Marketing	3
AVT 703	Cooperative Work Experience or	
BUS 234	Business Law	3
ACC 202	Principles of Accounting II	3
CS 175	Introduction to Computer Science	3
ECO 201	Principles of Economics I	3
		15
Minimum Hours Required:		60

AIRLINE MARKETING OPTION

(Associate Degree)

This Airline Marketing option stresses the significance and functions of marketing from the airline viewpoint. Students completing the program may opt to enter a variety of marketing related positions in the areas of customer service, sales and promotion, crew scheduling or entry-level management.

		CREDIT HOURS
SEMESTER I		
AVT 110	Introduction to Aviation	3
AVT 121	Ground School Private	3
AVT 122	Aviation Law	3
AVT 210	FAA Regulations	3
BUS 105	Introduction to Business	3
		15
SEMESTER II		
AVT 249	Air Transportation, Traffic and Cargo	3
ACC 201	Principles of Accounting I	3
CS 175	Introduction to Computer Science	3
ENG 101	Composition and Expository Reading	3
† Mathematics Elective		3
		15
SEMESTER III		
AVT 212	Airport Management	3
AVT 223	Airline Management	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
SPE 105	Fundamentals of Public Speaking	3
		15
SEMESTER IV		
AVT 225	Aviation Marketing	3
AVT 703	Cooperative Work Experience	3
ACC 202	Principles of Accounting II	3
ECO 202	Principles of Economics I	3
‡ Technical Elective - Management		3
		15
Minimum Hours Required:		60
† Math Elective must be selected from the following:		
MTH 101	College Algebra	3
MTH 130	Business Mathematics	3
MTH 195	Technical Mathematics	3
‡ Technical Elective — Management must be selected from the following:		
MGT 206	Principles of Marketing	3
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3

FIXED BASE OPERATIONS/AIRPORT MANAGEMENT OPTION

(Associate Degree)

This option provides students with a general administrative overview combining aviation and business courses stressing terminology, management techniques and functions as they apply to the aviation industry. Students completing this program may qualify for support or training positions in airport management, as staff members to operation superintendents or aviation authority boards. Positions as fixed base operators for aircraft dealers may include equipment sales and service and aircraft sales.

		CREDIT HOURS
SEMESTER I		
AVT 110	Introduction to Aviation	3
AVT 121	Ground School Private	3
AVT 122	Aviation Law	3
AVT 210	FAA Regulations	3
BUS 105	Introduction to Business	3
		15
SEMESTER II		
AVT 226	Meteorology	3
AVT 249	Air Transportation, Traffic and Cargo	3
CS 175	Introduction to Computer Science	3
ENG 101	Composition and Expository Reading	3
† Mathematics	Elective	3
		15
SEMESTER III		
AVT 223	Airline Management	3
ACC 201	Principles of Accounting I	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
SPE 105	Fundamentals of Public Speaking	3
		15
SEMESTER IV		
AVT 212	Airport Management	3
AVT 703	Cooperative Work Experience or	3
MGT 153	Small Business Management	
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
		15
Minimum Hours Required:		60
† Math Elective must be selected from the following:		
MTH 101	College Algebra	3
MTH 195	Technical Mathematics	3
MTH 130	Business Mathematics	3

AIRCRAFT DISPATCHER OPTION

(Associate Degree)

The job performed by an aircraft dispatcher is an integral part of the overall flight operations for airlines. An individual in this position works in conjunction with an airline pilot and is responsible for regulation compliance, weather and loading procedures prior to take-off. In the Aircraft Dispatcher program students may earn a certificate after approximately one year or choose to complete the Associate Degree in Applied Arts and Sciences.

Entry into either program will be in accordance with Federal Aviation Administration Regulations and with instructor approval. Upon completion of the courses in the desired program, students may be recommended to apply to take the F.A.A. written examination for Aircraft Dispatcher.

		CREDIT HOURS
SEMESTER I		
AVT 110	Introduction to Aviation	3
AVT 121	Ground School Private	3
AVT 122	Aviation Law	3
AVT 210	FAA Regulations, Airspace & Air Traffic Control	3
AVT 226	Meteorology	3
		15
SEMESTER II		
AVT 123	Ground School Commercial	3
AVT 128	Aero Engine and Systems	3
AVT 221	Advanced Navigation	3
CS 175	Introduction to Computer Science	3
ENG 101	Composition and Expository Reading	3
		15
SEMESTER III		
AVT 224	Ground School Instrument	3
AVT 261	Aircraft Dispatcher	3
MTH 195	Technical Math	3
PSY 131	Human Relations	3
SPE 105	Fundamentals of Public Speaking	3
		15
SEMESTER IV		
AVT 262	Practical Dispatching	3
AV 129	Introduction to Aircraft Electrical Systems	3
BUS 105	Introduction to Business	3
MGT 136	Principles of Management	3
MTH 196	Technical Math	3
		15
Minimum Hours Required:		60

AIRCRAFT DISPATCHER

(Certificate)

		CREDIT HOURS
SEMESTER I		
AVT 110	Introduction to Aviation	3
AVT 121	Ground School Private	3
AVT 122	Aviation Law	3
AVT 210	FAA Regulations, Airspace & Air Traffic Control	3
AVT 226	Meteorology	3
AVT 261	Aircraft Dispatcher	3
		18
SEMESTER II		
AVT 123	Ground School Commercial	3
AVT 128	Aero Engine and Systems	3
AVT 221	Advanced Navigation	3
AVT 224	Ground School Instrument	3
AVT 262	Practical Dispatching	3
		15
Minimum Hours Required:		33



AIR TRAFFIC CONTROL OPTION

(Associate Degree)

Mountain View offers a specialized degree program in Air Traffic Control in conjunction with the Southwest Region ARTC. The Program provides students with the background and general experience in aviation which may enable them to enter an air traffic control career with the FAA. Career opportunities in Air Traffic Control include positions such as control tower operator, approach control, air route traffic control and flight service station specialist.

Students interested in admission to the Air Traffic Control degree program must have completed 15 credit hours (Aviation Technology courses recommended) prior to enrollment into the specialized Air Traffic Control courses and must meet FAA eligibility requirements.

		CREDIT HOURS
SEMESTER I		
AVT 121	Ground School Private	3
AVT 135	Flight Basic*	2
AVT 137	Flight Private Pilot*	1
AVT 210	FAA Regulations, Airspace & Air Traffic Control	3
AVT 221	Advanced Navigation	3
AVT 226	Meteorology	3
		15
SEMESTER II		
AVT 270	Orientation to ATC	5
AVT 272	Aircraft Types/ATC Communications	2
AVT 274	ATC Computer Operation	3
AVT 704	Cooperative work Experience	4
		14
SEMESTER III		
AVT 224	Ground School Instrument	3
ENG 101	Composition & Expository Reading	3
MTH 195	Technical Math	3
PSY 131	Human Relations	3
SPE 105	Fundamentals of Public Speaking	3
		15
SEMESTER IV		
AVT 212	Airport Management or	3
MGT 136	Principles of Management	
AVT 223	Airline Management or	3
MGT 242	Personnel Administration or	
PSY 131	Human Relations	
AVT 804	Cooperative Work Experience	4
ENG 102	Composition and Literature	3
		13
SEMESTER V		
AVT 814	Cooperative Work Experience	4
Minimum Hours Required:		61

* Flight courses are flexible enrollment and may be taken in sequence regardless of semester.

DATA PROCESSING PROGRAMMER

(Associate Degree)

This curriculum is intended for the preparation of entry-level or trainee computer programmers who will work in an applications setting to support the general, administrative, and organizational information processing function of industry, commerce, business and government service. It is designed as a two-year career program to prepare students for jobs. Graduates should be able to work in conjunction with a systems analyst in the programming environment usually found in a medium to large job shop. It is intended to provide a sufficient foundation so that graduates with experience and continued learning may advance in career paths appropriate to their own particular interests and abilities.

	CREDIT HOURS
SEMESTER I	
CS 175 Introduction to Computer Science	3
BUS 105 Introduction to Business or	3
MGT 136 Principles of Management	
DP 137 Data Processing Mathematics or any business math*	3
COM 131 Applied Composition and Speech or	3
ENG 101 Composition and Expository Reading	
ACC 201 Principles of Accounting I**	3
	<u>15</u>
SEMESTER II	
DP 133 Beginning Programming (COBOL)	4
DP 138 Systems Analysis and Data Processing Logic	3
ECO 201 Principles of Economics I or	3
ECO 202 Principles of Economics II	
ACC 202 Principles of Accounting II	3
COM 132 Applied Composition and Speech or	3
ENG 102 Composition and Literature	
	<u>16</u>
SEMESTER III	
DP 136 Intermediate Programming (COBOL)	4
DP 142 RPG Programming or	3
DP 244 Basic Programming	
DP 233 Operating Systems and Communications	4
ACC 203 Intermediate Accounting or	3
ACC 238 Cost Accounting	
† Elective	3-4
	<u>17-18</u>
SEMESTER IV	
DP 231 Advanced Programming (ALC)	4
DP 232 Applied Systems	4
DP 236 Advanced COBOL Techniques or other 200 level DP or CS course	3-4
Any approved DP or CS course	3-4
	<u>14-16</u>
Minimum Hours Required:	62

continued

† Electives — Must be selected from the following:

Any DP or CS course (including DP 700-800 Cooperative Work Experience)

DP 129	Data Entry Concepts	4
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
MTH 202	Introductory Statistics	3
ENG 210	Technical Writing	3
BUS 105	Introduction to Business	3
ECO 201	Principles of Economics I	3

* MTH 111, MTH 112, MTH 130 or an equivalent business math course

**ACC 131 — Bookkeeping I, and ACC 132 — Bookkeeping II may be substituted for
ACC 201 — Principles of Accounting

NOTE: Students may obtain credit toward a degree or certificate for only one of each of the pairs of courses listed below:

- DP 133 or CS 184
- DP 231 or CS 186
- DP 244 or CS 182
- CS 175 or CS 174



DRAFTING AND DESIGN TECHNOLOGY

(Associate Degree)

This program prepares the student for employment in a wide range of industries as a drafter or engineering aide. Information in related fields is provided to enable the student to work effectively with the engineer and professional staff. Enrollment in Drafting Cooperative Work Experience Courses (Co-op) provides on-the-job experience while in the program

	CREDIT HOURS
SEMESTER I	
DFT 183 Basic Drafting	4
DFT 135 Reproduction Processes	2
COM 131 Applied Composition and Speech or	3
ENG 101 Composition and Expository Reading	
MTH 195 Technical Mathematics or	3
MTH 101 College Algebra	
‡ Technical Elective	3
	15
SEMESTER II	
DFT 160 Manufacturing Fundamentals	2
Drafting Course*	3-4
Drafting Course* or Co-op**	3
COM 132 Applied Composition and Speech or	3
ENG 102 Composition and Literature	
MTH 196 Technical Mathematics or	3
MTH 102 Plane Trigonometry	
	14-15
SEMESTER III	
Drafting Course*	3-4
EGR 106 Descriptive Geometry	3
‡ Technical Elective or Co-op**	3
GVT 201 American Government or	3
HST 101 History of the United States	
HD 105 Basic Processes of Interpersonal Relationships or	3
PSY 131 Human Relations	
	15-16
SEMESTER IV	
Drafting Course*	3
Drafting Course* or Co-op**	3
‡ Technical Elective	3
PHY 131 Applied Physics	4
GVT 202 American Government or	3
HST 102 History of the United States	
	16
Minimum Hours Required:	60

continued

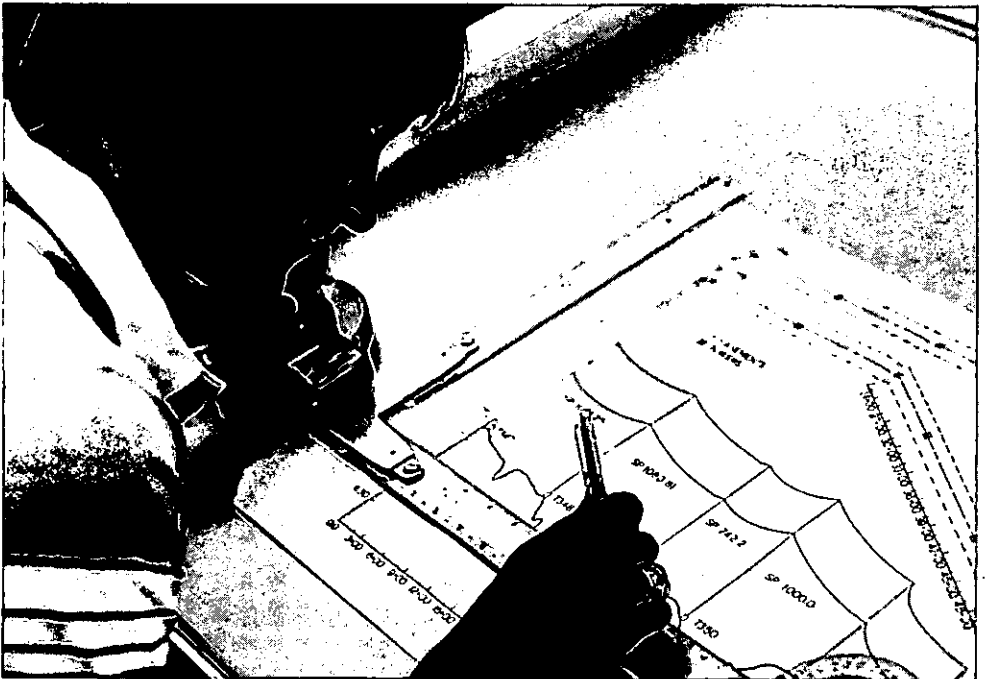
* Drafting Courses to be selected from the following:

DFT 136	Geological and Land Drafting	3
DFT 184	Intermediate Drafting	3
DFT 185	Architectural Drafting	4
DFT 230	Structural Drafting	3
DFT 231	Electronic Drafting	3
DFT 232	Technical Illustration	3
DFT 234	Advanced Technical Illustration	4
DFT 235	Building Equipment (Mechanical and Electrical)	3
DFT 236	Piping and Pressure Vessel Design	3
DFT 245	Computer Aided Design	3
DFT 250	Sheet Metal Design	3
DFT 251	Industrial Design	3

** Drafting Co-op Courses to be selected from the following:

DFT 703	Cooperative Work Experience	3
DFT 713	Cooperative Work Experience	3
DFT 803	Cooperative Work Experience	3
DFT 813	Cooperative Work Experience	3
DFT 704	Cooperative Work Experience	4
DFT 714	Cooperative Work Experience	4
DFT 804	Cooperative Work Experience	4
DFT 814	Cooperative Work Experience	4

† Technical Electives may be selected from Drafting, Applied Science or Engineering Technologies as approved by the Drafting Department



ELECTRONICS TECHNOLOGY

(Associate Degree)

This two year program will prepare students for work as electronics technicians by familiarizing them with most electronic testing equipment, training them in technical communications and providing them with electronic theory and skills.

	CREDIT HOURS
SEMESTER I	
ET 190 DC Circuits and Electrical Measurements or	
ET 135 DC-AC Theory and Circuit Analysis	4-6
COM 131 Applied Composition and Speech or	
ENG 101 Composition and Expository Reading	3
HST 101 History of the United States or	
GVT 201 American Government	3
DFT 182 Technical Drafting or	
DFT 183 Basic Drafting or	
DFT 231 Electronic Drafting	2
Any Technical or College Level Mathematics	3
	15-17
SEMESTER II	
ET 191 AC Circuits (Unless ET 135 Completed)	(4)
ET 193 Active Devices	4
ET 194 Instrumentation	3
COM 132 Applied Composition and Speech or	
ENG 102 Composition & Literature	3
Any Technical or College Level Mathematics	3
	13-17
SEMESTER III	
ET 231 Special Circuits with Communications	
Applications	4
ET 232 Analysis of Electronics Logic and Switching	
Circuits	4
ET 238 Linear Integrated Circuits or	
ET 803 Cooperative Work Experience	3-4
ET 240 Electronic Theory and Application of Digital	
Computers	4
Applied Physics or College Level Physics	4
	19-20
SEMESTER IV	
ET 234 Electronic Circuits and Systems	3
ET 237 Modular Memories and Microprocessors	4
ET 239 Microwave Technology	3
HST 102 History of the United States or	
GVT 202 American Government	3
† Elective	3
	16
Minimum Hours Required:	63-66
† Electives must be selected from the following	
HD 104 Educational or Career Planning	3
HD 105 Basic Processes of Interpersonal Relationships	3
PSY 105 Introduction to Psychology	3
PSY 131 Human Relations	3

ELECTRONICS TECHNOLOGY — AVIONICS OPTION

(Associate Degree)

The Associate Degree program in Avionics is an option to the Electronics Technology Program. This option provides the student with an electronics background and specialized skills in avionics. In this program a level of knowledge and practical skills adequate to gain entry-level employment in the installation and maintenance of aircraft electronics systems (avionics) is gained by students.

		CREDIT HOURS
SEMESTER I		
ET 135	DC-AC Theory and Circuit Analysis or	6
ET 190	DC Circuits and Electrical Measurements	(4)
AV 129	Introduction to Aircraft Electrical Systems	3
COM 131	Applied Composition and Speech or	
ENG 101	Composition and Expository Reading	3
Any Technical or College Level Mathematics		3
		13-15
SEMESTER II		
ET 191	AC Circuits (Unless ET 135 Completed)	(4)
ET 193	Active Devices	4
AV 235	Operational Testing of Aircraft Electronic Systems	4
COM 132	Applied Composition and Speech or	
ENG 102	Composition & Literature	3
Any Technical or College Level Mathematics		3
Applied Physics or College Level Physics		4
		18-22
SEMESTER III		
ET 231	Special Circuits with Communications Applications	4
ET 232	Analysis of Electronic Logic and Switching Circuits	4
ET 238	Linear Integrated Circuits or	
ET 803	Cooperative Work Experience	3-4
ET 240	Electronic Theory and Application of Digital Computers	4
† Elective		3
		19
SEMESTER IV		
ET 237	Modular Memories and Microprocessors	4
ET 239	Microwave Technology	3
AV 132	Aircraft Electrical and Electronics Systems Installation	4
MGT 153	Small Business Management or	
ET 813	Cooperative Work Experience	3
		14
Minimum Hours Required:		66-68

HOROLOGY

(Certificate)

These intensive programs have the objectives of developing the student's manual dexterity, judgment, and skill in the repair and adjustment techniques required to service all types of modern timekeeping mechanisms: watches, clocks, timers, chronographs, self-winding, calendar, electric and electronic movements. Employment opportunities for skilled horologists may be found in jewelry stores, trade shops, or in one's own business. All Horology courses are on a Flexible Entry mode of registration on a space available basis. Students may enroll at the general registration for the fall and spring semester or they may enroll the first Monday in October and November in the fall semester and on the first Monday in February and March during the spring semester.

		CREDIT HOURS
<i>CLOCK REPAIR</i>		
SEMESTER I		
HOR 139	Antique Clock Theory and Repair	8
COM 131	Applied Composition and Speech	3
		11
SEMESTER II		
HOR 140	Modern Clock Theory and Repair	8
MGT 153	Small Business Management	3
		11
Minimum Hours Required:		22
 <i>WATCH REPAIR</i>		
SEMESTER I		
HOR 141	Watch Cleaning and Assembly	8
HOR 142	Watch Part Replacement	8
COM 131	Applied Composition and Speech	3
		19
SEMESTER II		
HOR 143	Advanced Watchmaking I	8
HOR 144	Advanced Watchmaking II	8
MGT 153	Small Business Management	3
		19
Minimum Hours Required:		38

MACHINE PARTS INSPECTION

(Associate Degree)

This program is designed to prepare the trainee in the techniques of quality control pertaining to Machine Parts production processes and inspection procedures based on sound metrological concepts. Because of the uniqueness in laboratory facilities required for this program, it is designed for in-plant training. Only support courses and courses requiring no laboratory will be taught on campus.

		CREDIT HOURS
SEMESTER I		
MPI 122	Industrial Quality Control & Procedures	3
COM 131	Applied Composition and Speech	3
MTH 195	Technical Mathematics	3
BPR 177	Blueprint Reading	2
		11
SEMESTER II		
MPI 124	Basic Inspection Fundamentals	5
BPR 178	Blueprint Reading	2
MTH 196	Technical Mathematics	3
QCT 122	Dimensional Measurement	3
		13
SEMESTER III		
MPI 135	Intermediate Inspection Concepts	5
MPI 138	Geometric Tolerancing & True Positioning	3
EGR 186	Manufacturing Processes	2
PSY 131	Human Relations	3
		13
SEMESTER IV		
MPI 220	Introduction to Materials and Processes	3
MPI 227	Non-Destructive Testing	3
MPI 803	Cooperative Work Experience	3
PHY 131	Applied Physics	4
		13
SEMESTER V		
MPI 223	Advanced Inspection Concepts	5
MPI 230	Introduction to Statistical Quality Control Techniques	3
MPI 237	Gage Control Standardization & Precision Measurement	3
MPI 813	Cooperative Work Experience	3
		14
Minimum Hours Required:		64

MACHINE SHOP

(Associate Degree)

The Machine Shop program will prepare the student for employment as an entry-level machinist in industry. It will also prepare him for entry into an apprentice or trainee program for machinist, tool and die-maker, etc. Successful students will find access to supportive type jobs in the metal working field such as planner, programmer, etc.

Enrollment in Machine Shop courses is open on the first Monday of October and November in the fall semester and the first Monday of February and March in the spring semester. In each case, such enrollment is subject to completion of specified prerequisite competencies. The program is designed to be self-paced by the student but students can generally plan to spend 18 months of study to complete the entire program.

		CREDIT HOURS
SEMESTER I		
MS 133	Basic Lathe	5
MS 134	Basic Milling Machine	5
BPR 177	Blueprint Reading	2
MTH 195	Technical Mathematics	3
		15
SEMESTER II		
MS 135	Intermediate Lathe	5
MS 136	Intermediate Milling Machine	5
BPR 178	Blueprint Reading	2
MTH 196	Technical Mathematics	3
QCT 122	Dimensional Measurement	3
		18
SEMESTER III		
MS 233	Advanced Lathe	5
MS 234	Advanced Milling Machine	5
COM 131	Applied Composition and Speech	3
EGR 186	Manufacturing Processes or	
MS 702	Cooperative Work Experience	2
PHY 131	Applied Physics	4
		19
SEMESTER IV		
MS 235	Applied Lathe	5
MS 236	Applied Milling Machine	5
PHY 132	Applied Physics or	
MS 704	Cooperative Work Experience	4
PSY 131	Human Relations	3
		17
Minimum Hours Required:		69

MANAGEMENT CAREERS — ADMINISTRATIVE MANAGEMENT OPTION

(Associate Degree)

The Administrative Management option offers a continuation of the traditional management and business studies. This option is designed for students seeking a detailed examination of management practices, techniques, and theories.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
ACC 201	Principles of Accounting I**	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
† Elective		3
		15
SEMESTER IV		
MGT 242	Personnel Administration	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
	Social Science elective or Humanities elective	3
† Elective		3
		18
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — MID-MANAGEMENT OPTION

(Associate Degree)

The Mid-Management option is a cooperative plan with members of the business community whereby the student attends college classes in management and related courses and concurrently works at a regular, paid, part-time or full-time job in a sponsoring business firm. To enter the Mid-Management option, students must make formal application and be interviewed by a member of the Mid-Management faculty before final acceptance will be granted.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 150	Management Training	4
MGT 154	Management Seminar: Role of Supervision	2
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
		15
SEMESTER II		
MGT 151	Management Training	4
MGT 155	Management Seminar: Personnel Management	2
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
HUM 101	Introduction to the Humanities	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	3
		18
SEMESTER III		
MGT 250	Management Training	4
MGT 254	Management Seminar: Organizational Development	2
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 251	Management Training	4
MGT 255	Management Seminar: Business Strategy, the Decision Process and Problem Solving	2
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required:		63

continued

† Elective — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.



MANAGEMENT CAREERS — SMALL BUSINESS MANAGEMENT OPTION

(Associate Degree Program)

The Small Business Management option is designed to assist owners and managers of small businesses in developing the skills and techniques necessary for operation. This option is also designed for students who plan to become owners or operators of small businesses.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 153	Small Business Management	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
†Elective		3
		15
SEMESTER II		
MGT 157	Small Business Bookkeeping and Accounting Practices	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	3
		15
SEMESTER III		
MGT 206	Principles of Marketing	3
MGT 211	Small Business Operations	3
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 210	Small Business Capitalization, Acquisition and Finance	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
†Elective		3
		15
Minimum Hours Required		60

† Electives — May be selected from the following:

MGT 212	Special Problems in Business	1
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

OFFICE CAREERS — ADMINISTRATIVE ASSISTANT OPTION

(Associate Degree)

The primary objective of the Administrative Assistant Option to the Office Careers Program is to prepare students for positions as assistants to administrators within public and private firms and agencies. Emphasis in this program is on the development of organizational and management skills in addition to basic office skills.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
BUS 105	Introduction to Business	3
† Elective		3
		17-18
SEMESTER II		
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
‡ OFC 273	Advanced Typing or	2
† Elective		
OFC 231	Business Communications	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting	
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
† Electives		6
		17
SEMESTER IV		
OFC 256	Office Management or	3
BUS 237	Organizational Behavior	
HUM 101	Introduction to Humanities	3
† Electives		9
		15
Minimum Hours Required:		66

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

OFFICE CAREERS — LEGAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent legal secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 159	Beginning Shorthand or	
OFC 103	Speedwriting	4
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		<u>15-16</u>
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		<u>17-18</u>
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 167	Legal Terminology and Transcription	3
OFC 231	Business Correspondence	3
# OFC 266	Advanced Shorthand	4
OFC 273	Advanced Typing or	2
† Elective		(3)
CS 175	Introduction to Computer Science	3
		<u>18-19</u>
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 274	Legal Office Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		<u>15-16</u>
Minimum Hours Required:		67

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — PROFESSIONAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 159	Beginning Shorthand or	4
OFC 103	Speedwriting	
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		<u>15-16</u>
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		<u>17-18</u>
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
CS 175	Introduction to Computer Science	3
# OFC 266	Advanced Shorthand	4
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
OFC 273	Advanced Typing or	2
† Elective		(3)
		<u>18-19</u>
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
† Electives		6-7
		<u>15-17</u>
Minimum Required Hours:		67

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.



OFFICE CAREERS — GENERAL OFFICE

(Certificate)

The General Office Certificate Program is designed to provide the student with a basic working knowledge and skills in various office activities. A general knowledge of business concepts and procedures is provided.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Electives		7
		19
SEMESTER II		
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		7
		16
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Accounting Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing**	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
‡ ACC 132	Bookkeeping II or	3
† Elective		
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		8
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

‡ Required if ACC 131 was taken previously.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Office Clerical Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 162	Office Procedures	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
OFC 165	Introduction to Word Processing	3
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 166	Intermediate Shorthand***	4
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	3
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

†Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

POSTAL SERVICE ADMINISTRATION

(Associate Degree)

The Postal Service Administration curriculum is designed as a two-year program that leads to an Associate Degree in Applied Arts and Sciences. The program aids the student in developing postal skills and provides the student with an insight into multi-level functions employed throughout the postal service system. Emphasis is directed to the areas of methodology, technology, management, and leadership concepts reflected in modern day technology as applied to public service related agencies.

		CREDIT HOURS
SEMESTER I		
PSA 110	Introduction to Postal Service	3
PSA 120	Mail Processing	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
PSY 105	Introduction to Psychology	3
		15
SEMESTER II		
PSA 122	Customer Services	3
PSA 135	Postal Economics and Finance	3
COM 132	Applied Composition and Speech	3
CS 175	Introduction to Computer Science	3
PSY 131	Human Relations	3
		15
SEMESTER III		
PSA 210	Labor Relations	3
PSA 212	Employee Services	3
MGT 171	Introduction to Supervision	3
PSY 202	Applied Psychology	3
SOC 101	Introduction to Sociology	3
† Elective		3
		18
SEMESTER IV		
PSA 214	Postal Problems Analysis	3
BUS 237	Organizational Behavior	3
MGT 242	Personnel Administration	3
GVT 201	American Government	3
† Elective		3
		15
Minimum Hours Required:		63
† Electives must be selected from the following:		
HD 104	Educational or Career Planning	3
HD 105	Basic Processes of Interpersonal Relationships	3
PSY 105	Introduction to Psychology	3
PSY 131	Human Relations	3

WELDING TECHNOLOGY

(Associate Degree)

The Welding Technology program is designed to prepare the student in the basic processes of oxyacetylene and arc welding plus many specialized welding applications as options to fit the specific needs of the student. In addition, instruction is offered in related support areas such as metallurgy, tooling, drafting, pattern layout and characteristics of materials. Thus, the program offers preparation for both entry level jobs as well as welding inspectors.

The student will be required to purchase a basic set of tools which will be used in class and later on the job. Tool lists will be given out by the instructor during the first week of classes.

Enrollment in welding courses is open on the first Monday of October and November in the fall semester and the first Monday of February and March in the spring semester. In each case such enrollment is subject to completion of specified prerequisite competencies. The program is designed to be self-paced by the student but in general the student should plan to spend 18 months in study to complete the program.

		CREDIT HOURS
SEMESTER I		
WE 111	Oxyfuel I	2
WE 112	Oxyfuel II	2
WE 113	Shielded Metal Arc Welding I	2
WE 114	Shielded Metal Arc Welding II	2
DFT 182	Technician Drafting	2
MTH 195	Technical Mathematics	3
COM 131	Applied Composition and Speech	3
		16
SEMESTER II		
WE 115	Shielded Metal Arc Welding II	4
WE 117	General Metal Layout	3
WE 118	Welding Inspection and Quality Control	4
PSY 131	Human Relations	3
WE 703	Cooperative Work Experience or	3
† Elective		3
		17

SEMESTER III

WE 211	Gas Tungsten Arc Welding I	2
WE 212	Gas Tungsten Arc Welding II	2
WE 214	Gas Metal Arc Welding I	2
WE 215	Gas Metal Arc Welding II	2
WE 217	Basic Welding Metallurgy	3
PHY 131	Applied Physics	4
		15

SEMESTER IV

WE 116	Shielded Metal Arc Welding IV	4
WE 213	Gas Tungsten Arc Welding III	4
WE 216	Gas Metal Arc Welding III	4
WE 219	Welding Design	3
† Elective		2
		17

Minimum Hours Required: 65

† Electives must be selected from the following:

ACC 131	Bookkeeping I
ACC 132	Bookkeeping II
GVT 201	American Government
MTH 111	Mathematics for Business and Economics
WE 218	Applied Welding Metallurgy
WE 220	Special Welding Application I

WELDING TECHNOLOGY

(Certificate)

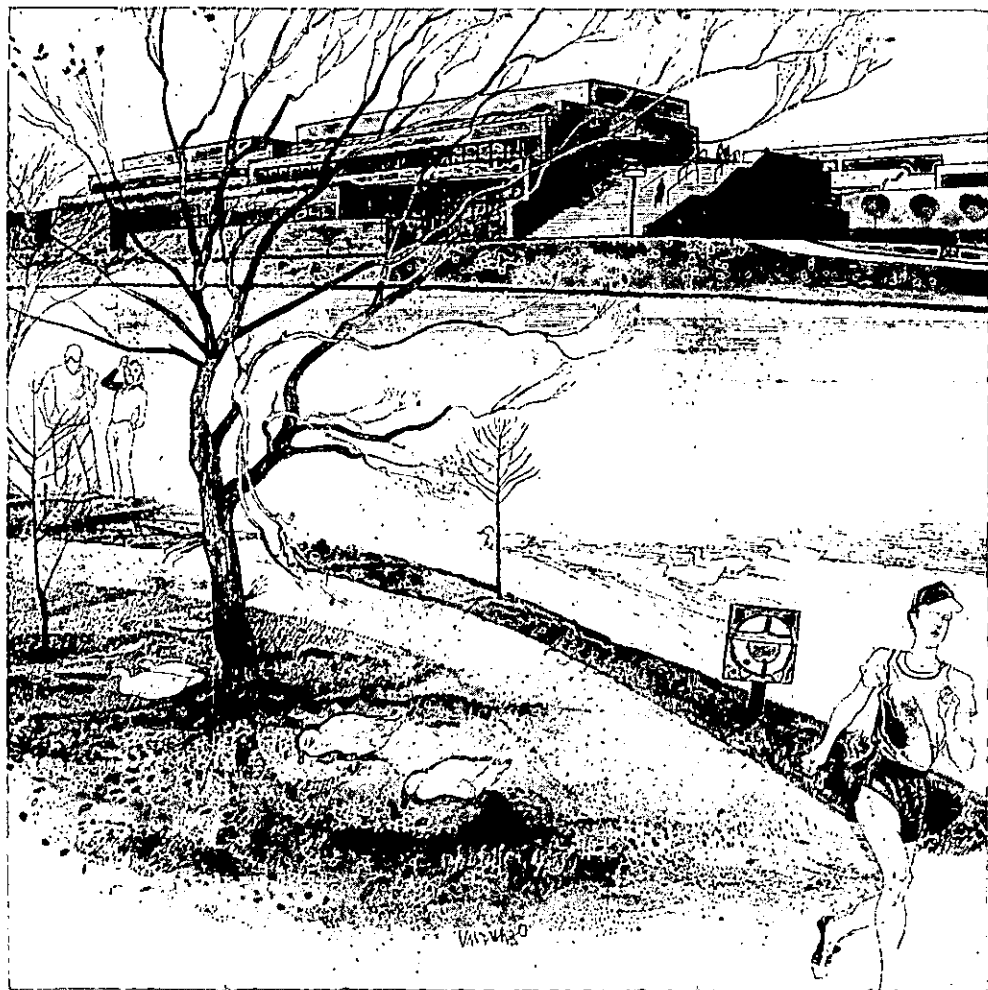
		CREDIT HOURS
SEMESTER I		
WE 111	Oxyfuel I	2
WE 112	Oxyfuel II	2
WE 113	Shielded Metal Arc Welding I	2
WE 114	Shielded Metal Arc Welding II	2
WE 211	Gas Tungsten Arc Welding I	2
WE 212	Gas Tungsten Arc Welding II	2
WE 214	Gas Metal Arc Welding I	2
WE 215	Gas Metal Arc Welding II	2
		16
SEMESTER II		
WE 115	Shielded Metal Arc Welding III	4
WE 116	Shielded Metal Arc Welding IV	4
WE 117	General Metal Layout	3
WE 213	Gas Tungsten Arc Welding III*	4
WE 216	Gas Metal Arc Welding III*	4
		19
Minimum Hours Required:		35

* WE 704 Cooperative Work Experience may be substituted for WE 213 or WE 216.



North Lake College

Information, Administration, Faculty



NORTH LAKE COLLEGE

North Lake College makes educational and cultural opportunities available to all area citizens with its accessible location and active involvement within the community. This commitment to serve the community has resulted in a fine balance of academic courses, technical programs and continuing education offerings.

Outstanding facilities provide a stimulating and pleasant environment for students, and faculty and staff work hard to implement the best-known concepts in teaching and learning. This combination makes North Lake an exciting center for personal growth for each of its nearly 10,000 students.

The college is proud of its \$21 million campus, but recognizes that learning can also take place outside of the traditional classroom. For that reason, North Lake has extended many of its course offerings into businesses, community and public centers, and a variety of other places where learning is important. North Lake also provides the auxiliary benefits of a complete counseling center, job placement service, flexible entry registration, self-paced study and other services which help students learn more efficiently.

The Campus

Opened in the fall of 1977, North Lake occupies 276 wooded acres in the Las Colinas area of Irving, at 5001 MacArthur Boulevard. This architecturally remarkable college is surrounded by gently rolling hills accentuated by a beautiful nine-acre lake. The energy efficient buildings are designed in a series of terraces which follow the natural elevations of the building site.

North Lake's excellent facilities include a 550-seat performance hall, a 2,000 seat gymnasium and an arena theatre, complemented by exceptionally well equipped laboratories, studios and learning centers.

Accreditation

North Lake College is a fully recognized member of:

- The Southern Association of Colleges and Schools
- The American Association of Community and Junior Colleges
- The Texas Public Community/Junior College Association
- The Texas Association of Colleges and Universities
- The League for Innovation in the Community College

North Lake College is recognized and sanctioned by the Coordinating Board of the Texas College and University System and the Texas Education Agency, and is an Affirmative Action Equal Opportunity Institution.





NORTH LAKE COLLEGE ADMINISTRATION

President	Donald L. Newport	659-5229
Vice President of Instruction	Glen I. Bounds	659-5240
Vice President of Student Services	Walter H. Bowie	659-5242
Vice President of Business Services	Mike Howard	659-5235
Asso. Dean, Technical/Occupational Programs	Clifton Weaver	659-5237
Asso. Dean of Continuing Education	Robert Bolin	659-5204
Asst. Director, Community Service	Nancy Kinsey	659-5203
Asso. Dean, Learning Resource Center	Jim Picquet	659-5340
Asst. Dean, Evening Programs	Joel Vela	659-5206
Director of Admissions and Registration	Stephen Twenge	659-5220
Director, Center for Independent Study	Bette Wise	659-5275
Director of Cooperative Education	Shirley Farrow	659-5370
Director of Financial Aid	Paul Chapman	659-5226
Director, Police Academy	David Klundt	659-5355
Director of Public Information	Susan Aycock	659-5230
Director of Student Development	Sharon Beauchamp	659-5307
Coordinator of Special Needs Program	Mary Ciminelli	659-5237

DIVISION CHAIRPERSONS

Business and Management	Gary Bacon	659-5290
Communications and Humanities	Gary Swaim	659-5270
Mathematics and Technology	Grady Grizzle	659-5320
Science and Technology	Bob Agnew	659-5250
Social Science and Physical Education	Martha Hughes	659-5350

OTHER TELEPHONE NUMBERS

Admissions and Registration	659-5220
Business Office	659-5244
Community Service Programs	659-5200
Data Processing Office	659-5232
Evening Administration	659-5205
Grand Prairie Center	641-2467
Health Center	659-5208
Library	659-5347
Physical Plant	659-5310
Placement Office	659-5370
Public Information	659-5230
Safety and Security	659-5300
Wallace Bookstore	258-8250

NORTH LAKE COLLEGE FACULTY AND STAFF

Agnew, Robert L.	Chairperson, Science/Technology
North Texas State Univ., B.A., M.A., Ph.D.	
Anderson, Dianne	Vocational Nursing
Baylor Univ., B.S.N.	
Ates, Clarence	Counselor
Oakwood College, B.S.; Oklahoma State Univ., M.S.	
Aycock, Susan	Director, Public Information
Univ. of Missouri, B.J.; Univ. of Strasbourg, France, Study	
Bacon, Gary	Chairperson, Business/Management
U.S. Military Academy, B.S.; Southern Methodist Univ., M.B.A.; Univ. of Arizona Naval War College, Study	
Baen, John	Real Estate
Texas A&M Univ., B.S., M.S., Study	

- Baty, Ida Counselor
Stephen F. Austin State Univ., B.S., M.S.; Univ. of Northern Colorado, Ed.D.
- Beauchamp, Sharon Director, Student Development
Brigham Young Univ., B.A.; North Texas State Univ., Study
- Bishop, Joe R. Electricity
North Texas State Univ., B.A.; East Texas State Univ., Study
- Blankenship, Patsy Office Careers
North Texas State Univ., B.B.A., M.B.E.
- Blevins, Larry G. Electricity
Cooke County College, A.A.; Wayland Baptist College, B.S.O.E.
- Bolin, Bill Solar Energy Technology
East Texas State Univ., B.S., M.Ed.
- Bolin, Robert R. Associate Dean, Continuing Education
Univ. of Wisconsin at Madison, B.B.A., M.S., Study
- Bounds, Glen I. Vice President, Instruction
Northwestern State Univ. of Louisiana, B.S.; East Texas State Univ., M.S., Ed.D.
- Bowie, Walter H. Vice President, Student Services
Central State Univ., Ohio, B.S.; Marshall Univ. of West Virginia, M.S.; Ohio State Univ., Study
- Bravo, Luis Accounting
Univ. of Arizona, B.A.; Univ. of Texas, B.B.A.; Univ. of Houston at Clear Lake City, M.S.; Univ. of Houston, M.S.; Texas, C.P.A.
- Briggs, Cathy French/Spanish
Oklahoma State Univ., B.S.; Univ. of Oklahoma, M.A., Ph.D.
- Briggs, Olin Journalism
Presbyterian College, B.A.; Univ. of South Carolina, M.A.; Univ. of Alabama, Ph.D.; Univ. of Michigan, Texas Christian Univ., Univ. of Dallas, Southwestern Univ., Study
- Brink, Lynn Government
Southwestern Univ., B.A.; North Texas State Univ., M.A., Study
- Butler, Alice Theatre
North Texas State Univ., B.S.; Stephen F. Austin State Univ., M.A.
- Chamberlain, Enrique A. Head Librarian
North Texas State Univ., B.A.; East Texas State Univ., M.L.S., Study
- Chapman, Paul Director, Financial Aid
Trinity Univ., B.A.; Southern Methodist Univ., M.Th.
- Cherry, Grady English
Stephen F. Austin State Univ., B.A., M.A.; Texas A&M Univ., Ph.D.
- Ciminelli, Mary Coordinator/Counselor, Special Needs Program
State Univ. of New York at Buffalo, B.S.; North Texas State Univ., M.S.
- Conklin, Lillian M. English
Univ. of Texas at El Paso, B.A.; North Texas State Univ., M.A.; Texas Christian Univ., Study
- Crowley, Lee B. Instructional Development Consultant
Lamar Univ., B.S.; Texas A&M Univ., M.Ed., Ph.D.
- Davis, Annetta N. Accounting
Southern Methodist Univ., B.B.A., M.B.A.; Univ. of Texas at Arlington, Study
- Davis, Jeanne Psychology
University of Texas, B.A., M.A.; North Texas State Univ., Study
- Farrow, Shirley Director, Cooperative Education
North Texas State Univ., B.A.; Stephen F. Austin Univ., M.Ed.
- Faultner, Bob Diesel Mechanics
Eastfield College, East Texas State Univ., Prairie View A&M, Diesel Technology
- Fleming, Richard Computer Science/Data Processing/Mid-Management
Memphis State Univ., B.S.; Univ. of Dallas, M.S., M.B.A.
- Gerbetz, Elizabeth Librarian
East Texas State Univ., B.A., M.A., M.L.S.
- Gilchrist, Marilyn M. Mathematics
Texas Tech Univ., B.A., M.S.; Southern Methodist University, Study

Giles, Charles P.	Counselor
Univ. of Arkansas, B.S.B.A., M.Ed., Ed.D.	
Grizzle, Grady	Chairperson, Math/Technology
North Texas State Univ., B.A., M.A., Ph.D.	
Howard, Mike E.	Vice President, Business Services
Lamar State Univ., B.B.A.; Univ. of Dallas, Study	
Hughes, Martha	Chairperson, Social Science/Physical Education
Texas Tech Univ., B.A., M.A.	
Humphrey, Jerry	Optical Technology
Stephen F. Austin Univ., B.S., M.Ed.	
Hunter, Paul	English
Univ. of Texas, B.A.; Univ. of Florida, M.A.	
Ironside, Robert	Distribution Technology
U.S. Military Academy, B.S.; Univ. of Arizona, M.B.A.; Univ. of Texas at Arlington, B.A., Study; North Texas State Univ., Study	
Jones, Nancy	English
East Texas State Univ., B.A., M.A.; North Texas State Univ., Ph.D.	
Jones, Sue	Psychology
Nebraska Wesleyan Univ., B.A.; Southern Methodist Univ., M.A.	
Kelemen, Paul	Counselor
Univ. of Texas, B.A.; Univ. of Houston at Clear Lake City, M.A.; North Texas State Univ., Study	
King, Floyd	Chemistry
Colorado College, B.S., M.A.T.	
Kinsey, Nancy	Assistant Director, Community Service
Univ. of Texas at Arlington, B.A., M.A.	
Kirchhoff, Edwin E.	Economics
Univ. of Kansas, B.A., M.A.	
Kludt, David	Director, North Lake College Police Academy
Univ. of Texas at Permian Basin, B.A.	
Knowles, Jim	Physics
Texas Christian Univ., B.S., Ph.D.	
Kubicek, Leonard	Geology/Environmental Science
Lamar Univ., B.S.; Southern Illinois Univ., M.S.; Univ. of Northern Colorado, Ed.D.	
Lindsey, Paul	Air Conditioning/Refrigeration
Eastfield College, A.A.A.S.; U.S. Air Force Training Program, AC/R	
Long, Linda	Speech
El Centro College, A.A.; Southern Methodist Univ., B.F.A.; North Texas State Univ., M.S.; East Texas State Univ., Ed.D.	
Madewell, D'Ann	English
Kansas State College of Pittsburgh, B.A.; North Texas State Univ., M.A., Ph.D.	
Magee, Paul	Sociology
Harding College, B.A., M.A.; Washington Univ., M.A., Ph.D.	
McClung, Rachel	Art
Univ. of Dallas, B.A., M.A.	
Miller, Harvey	Physical Education
Sam Houston Univ., B.S., M.Ed; Texas A&M Univ., Study	
Morman, Shelba Jean	Mathematics
Southern Arkansas Univ., B.S.; Louisiana Univ., M.A.; Univ. of Houston, Ed.D.	
Newport, Donald L.	President
Henry Ford Community College, A.A.; Univ. of Michigan, B.A., M.A., Ph.D.	
Olson, Margot	Instructional Development Consultant
Carnegie-Mellon Univ., B.S.; Florida State Univ., M.S., Ph.D.	
Osentowski, Francis	Music
Kearney State College, B.M.Ed.; North Texas State Univ., M.M.Ed., D.M.A.	
Parr, Lona	Physical Education
Univ. of Texas, B.S.; Southern Methodist Univ., M.S.	

Perdue, Beth	A.D. Nursing
West Texas State Univ., B.S.N., R.N.	
Picchioni, Anthony	History
Univ. of Texas at Arlington, B.A., M.A.; North Texas State Univ., M.Ed., Ph.D.	
Pickett, Marilyn	Vocational Nursing
St. Luke's Hospital School of Nursing, R.N.	
Picquet, Jim	Associate Dean, Learning Resources
Texas A&I Univ., B.S.; East Texas State Univ., M.S.	
Proctor, William H.	Real Estate
Univ. of Texas, B.A.; Princeton Theological Seminary, M.T.	
Ray, Marty	Art
East Texas State Univ., B.A.; Southern Methodist Univ., M.F.A.	
Reding, Diana	A.D. Nursing
Hartwick College, R.N.; East Texas State Univ., M.S.	
Reppond, Kent M.	Biology
Midwestern Univ., B.S.; East Texas State Univ., M.S.	
Robbins, Dalton O.	Diesel Mechanics
U.S.A.F. Schools; National Institute for Automotive Excellence; International Correspondence Schools; Dana Parts, Doctor of Motors for Diesel Mechanics	
Rike, Charlotte	History
Univ. of Arkansas, B.A., M.A.; Univ. of Wyoming, Study	
Sconce, Evelyn	Mid-Management
George Mason College of Univ. of Virginia, B.A.; Univ. of Missouri, M.A.; East Texas State Univ., Study	
Seeley, Robert	Music
North Texas State Univ., B.A., M.M.Ed.; Southwestern Baptist Theological Seminary, D.M.A.	
Sims, Ruth	Biology
Texas Woman's Univ., B.A.; Univ. of Texas Southwestern Medical School, M.A., Ph.D.	
Smith, Laura	Vocational Nursing
Oak Park Hospital School of Nursing, R.N.; East Texas State Univ., B.S., M.S.	
Swaim, Gary D.	Chairperson, Communications/Humanities
Univ. of California at Riverside, B.A.; University of Redlands/Claremont Graduate School, Ph.D.	
Thompson, Shirley	Physical Education
American River College, A.A.; Texas Woman's Univ., B.S., M.A.	
Thorpe, Diane	Counselor
North Texas State Univ., B.S., M.Ed.	
Todes, Jay	Mid-Management
Univ. of Texas, B.A., M.A.; Univ. of Houston, Ed.D.	
Twenge, Stephen P.	Director, Admissions/Registration
St. Cloud State Univ., B.S., M.A.	
Vela, Joel E.	Assistant Dean, Evening Programs
Incarinate Word College, B.A.; Angelo State Univ., M.A.; Univ. of Wyoming, Ed.D.	
Weaver, Cliff	Associate Dean, Technical/Occupational Programs
Southern State Univ., B.S.; North Texas State Univ., M.Ed.; East Texas State Univ., Study	
White, James	Mid-Management
Texas A&M Univ., B.B.A.; North Texas State Univ., M.B.A.; Southwestern Baptist Theological Seminary, M.R.E.	
Wilson, Kay	Real Estate
Texas Woman's Univ., B.S., Study	
Wilson, Roger	Carpentry
Texas State Technical Institute, A.A., B.A.	
Wise, Bette	Director, Center for Independent Study
Univ. of Wisconsin, B.S., M.S.Ed.	
Young, Lois	Vocational Nursing
Baptist Hospital School, R.N.	
Younger, Charles	Solar Energy Technology
West Texas State Univ., B.S.; Univ. of Rochester, Univ. of Houston, Study	



North Lake College

Curriculum Patterns
For Technical/Occupational Programs



ACCOUNTING ASSOCIATE

(Associate Degree)

The Accounting Associate two-year program is designed to prepare a student for a career as a junior accountant in business, industry and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles.

The Associate in Applied Arts and Sciences Degree is awarded for successful completion of at least 63 credit hours as outlined below. Students desiring a less comprehensive program that emphasizes bookkeeping procedures and practices should consider the General Office Certificate with elective emphasis on accounting careers. The General Office Certificate is available in the Office Careers Program.

		CREDIT HOURS
SEMESTER I		
ACC 201	Principles of Accounting I	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or*	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
OFC 160	Office Machines	3
		<u>15</u>
SEMESTER II		
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or*	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
† OFC 172	Beginning Typing	3
		<u>15</u>
SEMESTER III		
ACC 203	Intermediate Accounting I	3
ACC 204	Managerial Accounting	3
ECO 201	Principles of Economics I	3
GVT 201	American Government	3
† Electives		3-6
		<u>15-18</u>
SEMESTER IV		
ACC 238	Cost Accounting or	3
ACC 239	Income Tax Accounting	
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
† Electives		3-6
		<u>15-18</u>
Minimum Hours Required:		63

† Electives — A minimum of 9 credit hours must be selected from the following:

ACC 205	Business Finance	3
ACC 207	Intermediate Accounting II	3
ACC 238	Cost Accounting	3
ACC 239	Income Tax Accounting	3
ACC 703-713 803-813	Cooperative Work Experience	3
ACC 704-714 804-814	Cooperative Work Experience	4
BUS 143	Personal Finance	3
BUS 237	Organizational Behavior	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science and Data Processing	4
MGT 206	Principles of Marketing	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
SPE 105	Fundamentals of Public Speaking	3
Any CS or DP Programming course		

* ENG 101 and ENG 102 may be substituted for COM 131 and COM 132 provided that SPE 105 is also taken.

‡ Students who can demonstrate proficiency by previous training, experience, or placement tests may substitute a course from the electives listed for this program.



AIR CONDITIONING AND REFRIGERATION

This program is designed to prepare the student for entry level employment in the Air Conditioning and Refrigeration industry. Two options are available in this program: Residential Air Conditioning, and Commercial Refrigeration and Air Conditioning. The student will develop the skills and knowledge necessary to install, repair and maintain equipment related to these options.

Some Air Conditioning courses are completely individualized. This allows the students to progress at their own pace in order to fully comprehend theory and develop the necessary skills. Individualized, self-paced instruction also allows the students to take a portion of a course (module) without taking the complete course, if some specific knowledge or skill is desired.

Students may elect to receive a certificate or may apply the certificate courses required in this program toward an Associate in Applied Arts and Sciences Degree.

CERTIFICATE PROGRAM

A Certificate may be obtained in one or both of the options in the Air Conditioning Program. In order to qualify for a Certificate, the student must successfully complete the courses listed for the specific option. The courses may be taken in any order desired after consultation with the instructor.

RESIDENTIAL AIR CONDITIONING

(Certificate)

The student will develop skills in diagnosing, checking, servicing, installing and repairing both electrical and mechanical components of residential cooling and heating systems; the student will also make load calculations, select equipment and design residential air distribution systems.

		CREDIT HOURS
SEMESTER I		
AC 150	Basic Principles of Electricity	3
AC 160	Basic Principles of Refrigeration	3
MTH 195	Technical Mathematics	3
PHY 131	Applied Physics	4
		13
SEMESTER II		
AC 155	Advanced Electrical Circuits	3
AC 165	Vapor Compression Systems	3
AC 170	Pipefitting Procedures	3
AC 175	Residential Load Calculations	3
		12
SEMESTER III		
AC 180	Residential Cooling Systems	3
AC 185	Residential Heating Systems	3
AC 240	Air Distributing Systems	3
AC 245	Residential Systems Service	3
AC 703	Cooperative Work Experience or	3
AC 704	Cooperative Work Experience or	(4)
† Elective		(3)
		15/16
Minimum Hours Required:		40

COMMERCIAL REFRIGERATION AND INDUSTRIAL AIR CONDITIONING

(Certificate)

The student will develop skills in diagnosing, servicing, checking, installing and repairing both electrical and mechanical components of Commercial Refrigeration and Industrial Air Conditioning Systems.

		CREDIT HOURS
SEMESTER I		
AC 150	Basic Principles of Electricity	3
AC 160	Basic Principles of Refrigeration	3
MTH 195	Technical Mathematics	3
PHY 131	Applied Physics	4
		13
SEMESTER II		
AC 155	Advanced Electrical Circuits	3
AC 165	Vapor Compression Systems	3
AC 170	Pipefitting Procedures	3
AC 190	Commercial Refrigeration Systems	3
AC195	Commercial Refrigeration Systems Service	3
		15
SEMESTER III		
AC 260	Special Commercial Refrigeration Applications	3
AC 270	Industrial Air Conditioning Systems	3
AC 275	Industrial Air Conditioning Systems Service	3
AC 280	Hydronic Systems	3
ACR 703	Cooperative Work Experience or	3
AC 704	Cooperative Work Experience or	(4)
† Elective		(3)
		15/16
Minimum Hours Required:		43

ASSOCIATE DEGREE PROGRAM

Students wishing to earn an Associate in Applied Arts and Sciences Degree with a major in Residential Air Conditioning or Commercial Refrigeration and Air Conditioning must complete all of the following courses:

RESIDENTIAL AIR CONDITIONING

(Associate Degree)

		CREDIT HOURS
SEMESTER I		
AC 150	Basic Principles of Electricity	3
AC 160	Basic Principles of Refrigeration	3
MTH 195	Technical Mathematics	3
PHY 131	Applied Physics	4
		13
SEMESTER II		
AC 155	Advanced Electrical Circuits	3
AC 165	Vapor Compression Systems	3
AC 170	Pipefitting Procedures	3
AC 175	Residential Load Calculations	3
SS 131	American Civilization	3
		15
SEMESTER III		
AC 180	Residential Cooling Systems	3
AC 185	Residential Heating Systems	3
AC 240	Air Distribution Systems — Residential	3
BPR 177	Blueprint Reading	2
COM 131	Applied Composition & Speech	3
MAR 240	Professional Service Skills or	3
PSY 131	Human Relations	
		17
SEMESTER IV		
AC 245	Residential Systems Service	3
AC 250	Air Conditioning Equipment Selection	3
AC 255	Air Distribution Systems Design	3
AC 703	Cooperative Work Experience or	3
AC 704	Cooperative Work Experience	(4)
† Elective		3
		15/16
Minimum Hours Required:		60

†ELECTIVES — Must select from the following:

Three hours of electives are required for the Residential AC Certificate, Residential AC Associate in Applied Arts and Sciences Degree and the Commercial Refrigeration and Industrial AC Certificate.

AC 270	Industrial Air Conditioning Systems	3
AC 803	Cooperative Work Experience	3
AC 804	Cooperative Work Experience	4
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition & Speech	3
MAR 240	Professional Service Skills	3
MGT 136	Principles of Management	3
PSY 131	Human Relations	3

COMMERCIAL REFRIGERATION AND INDUSTRIAL AIR CONDITIONING (Associate Degree)

		CREDIT HOURS
SEMESTER I		
AC 150	Basic Principles of Electricity	3
AC 160	Basic Principles of Refrigeration	3
BPR 177	Blueprint Reading	2
MTH 195	Technical Mathematics	3
PHY 131	Applied Physics	4
		15
SEMESTER II		
AC 155	Advanced Electrical Circuits	3
AC 165	Vapor Compression Systems	3
AC 170	Pipefitting Procedures	3
AC 190	Commercial Refrigeration Systems	3
SS 131	American Civilization	3
		15
SEMESTER III		
AC 195	Commercial Refrigeration Systems Service	3
AC 260	Special Commercial Refrigeration Applications	3
AC 265	Advanced Commercial Refrigeration Systems	3
AC 270	Industrial Air Conditioning Systems	3
COM 131	Applied Composition & Speech	3
		15
SEMESTER IV		
AC 275	Industrial Air Conditioning Systems Service	3
AC 280	Hydronic Systems	3
AC 285	Advanced Industrial Air Conditioning Systems	3
AC 290	Industrial Air Conditioning Control Systems	3
AC 703	Cooperative Work Experience or	3
AC 704	Cooperative Work Experience	(4)
MAR 240	Professional Service Skills or	3
PSY 131	Human Relations	3
		18/19
Minimum Hours Required:		63

BUILDING TRADES — RESIDENTIAL AND COMMERCIAL CARPENTRY

This program is designed to prepare the student for entry level employment as a carpenter in the Building Construction field. Specific training is provided in the use and care of hand tools and power equipment, scheduling, layout and construction of residential and light commercial type buildings, cabinet making, blueprint reading and cost estimating. Two options are available in this program: Residential Carpentry and Commercial Carpentry.

Some Carpentry courses are individualized. This allows the students to progress at their own pace in order to fully comprehend theory and develop the necessary skills. The individualized self-paced instruction also allows the student to take a portion of a course (module) without taking the complete course. Credit for prior training or experience may be granted.

Students may elect to receive a certificate or may apply the certificate courses required in this program toward an Associate in Applied Arts and Sciences Degree.

A Certificate may be obtained in one or both of the options in Carpentry. In order to qualify for a Certificate, the student must successfully complete the following courses. Courses may be taken in any order after consultation with the instructor.

RESIDENTIAL CARPENTRY

(Certificate)

The Residential Carpentry Certificate is designed to prepare the student for entry level employment as a carpenter in all phases of residential construction.

		CREDIT HOURS
SEMESTER I		
CAR 101	Woodworking Tools and Materials	3
CAR 102	Site Preparation	3
CAR 103	Construction Safety	1
BPR 177	Blueprint Reading	2
MTH 195	Technical Mathematics	3
		12
SEMESTER II		
CAR 104	Residential Framing	3
CAR 105	Roof Framing I	3
CAR 106	Exterior Trim and Finish	3
CAR 107	Construction Cost Estimating	3
		12
SEMESTER III		
CAR 201	Cabinet Building I	3
CAR 205	Roof Framing II	3
CAR 208	Interior Finish I	3
		9
SEMESTER IV		
CAR 202	Cabinet Building II	3
CAR 203	Stair Building	3
CAR 703	Cooperative Work Experience or	3
CAR 704	Cooperative Work Experience	(4)
		9/10
Minimum Hours Required:		42

RESIDENTIAL CARPENTRY

(Associate Degree)

Students wishing to earn an Associate in Applied Arts and Sciences Degree with a major in Residential Carpentry must complete the following courses:

		CREDIT HOURS
SEMESTER I		
CAR 101	Woodworking Tools and Materials	3
CAR 102	Site Preparation	3
CAR 103	Construction Safety	1
BPR 177	Blueprint Reading	2
COM 131	Applied Composition and Speech	3
MTH 195	Technical Mathematics	3
		15
SEMESTER II		
CAR 104	Residential Framing	3
CAR 105	Roof Framing I	3
CAR 106	Exterior Trim and Finish	3
CAR 107	Construction Cost Estimating	3
SS 131	American Civilization	3
		15
SEMESTER III		
CAR 201	Cabinet Building I	3
CAR 205	Roof Framing II	3
CAR 208	Interior Finish I	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech	3
		15
SEMESTER IV		
CAR 202	Cabinet Building II	3
CAR 203	Stair Building	3
CAR 703	Cooperative Work Experience or	3
CAR 704	Cooperative Work Experience	(4)
ACC 131	Bookkeeping I	3
PSY 131	Human Relations	3
		15/16
Minimum Hours Required:		60

COMMERCIAL CARPENTRY

(Certificate)

The Commercial Carpentry Certificate is designed to prepare the student for entry level employment as a carpenter in the construction industry related to commercial buildings.

		CREDIT HOURS
SEMESTER I		
CAR 101	Woodworking Tools and Materials	3
CAR 102	Site Preparation	3
CAR 103	Construction Safety	1
BPR 177	Blueprint Reading	2
MTH 195	Technical Mathematics	3
		<u>12</u>
SEMESTER II		
CAR 107	Construction Cost Estimating	3
CAR 108	Modern Construction Practices	3
CAR 109	Concrete Slabs in Commercial Building	3
CAR 208	Interior Finish I	3
		<u>12</u>
SEMESTER III		
CAR 204	Commercial Wall Forms	3
CAR 206	Vertical Piers and Columns	3
CAR 209	Interior Finish II-Commercial	3
		<u>9</u>
SEMESTER IV		
CAR 203	Stair Building	3
CAR 210	Horizontal Beam Form and Fire Encasement Forms	3
CAR 211	Properties of Concrete	1
CAR 703	Cooperative Work Experience or	3
CAR 704	Cooperative Work Experience	(4)
		<u>10/11</u>
Minimum Hours Required:		43



COMMERCIAL CARPENTRY

(Associate Degree)

Students wishing to earn an Associate in Applied Arts and Sciences Degree with a major in Commercial Carpentry must complete the following courses:

		CREDIT HOURS
SEMESTER I		
CAR 101	Woodworking Tools and Materials	3
CAR 102	Site Preparation	3
CAR 103	Construction Safety	1
BPR 177	Blueprint Reading	2
COM 131	Applied Composition and Speech	3
MTH 195	Technical Mathematics	3
		15
SEMESTER II		
CAR 107	Construction Cost Estimating	3
CAR 108	Modern Construction Practices	3
CAR 109	Concrete Slabs in Commercial Building	3
CAR 208	Interior Finish I	3
SS 131	American Civilization	3
		15
SEMESTER III		
CAR 204	Commercial Wall Forms	3
CAR 206	Vertical Piers and Columns	3
CAR 209	Interior Finish II-Commercial	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech	3
		15
SEMESTER IV		
CAR 203	Stair Building	3
CAR 210	Horizontal Beam Form and Fire Encasement Forms	3
CAR 211	Properties of Concrete	1
CAR 703	Cooperative Work Experience or	3
CAR 704	Cooperative Work Experience	(4)
ACC 131	Bookkeeping I	3
PSY 131	Human Relations	3
		16/17
Minimum Hours Required:		61

BUILDING TRADES — ELECTRICAL

This program is designed to prepare the student for entry or advancement in the Electrical field. Major areas of the career field are represented allowing the student to seek employment within a broad job market.

Some Electrical courses are completely individualized. This allows the students to progress at their own pace in order to fully comprehend theory and develop the necessary skills. The individualized self-paced instruction also allows the student to take a portion of a course (module) without taking the complete course if some specific knowledge or skill is desired. Credit for prior experience or training may be given by placement testing arranged through the instructor. Students may elect to receive a certificate or may apply the certificate courses in this program toward an Associate in Applied Arts and Sciences Degree.

ELECTRICAL

(Certificate)

Completion of all the courses listed below qualifies a student for a Certificate in Electricity. The courses may be taken in any order after consultation with the instructor.

		CREDIT HOURS
SEMESTER I		
ELE 100	Electrical Orientation	1
ELE 101	DC Circuits and Measurements	1
ELE 111	Residential Codes	1
ELE 112	General Wiring Practices	4
ELE 113	Appliance Circuits	3
BPR 177	Blueprint Reading	2
MTH 195	Technical Mathematics	3
		15
SEMESTER II		
ELE 114	Low Voltage Circuits	1
ELE 121	Commercial Codes	1
ELE 122	Commercial Wiring	4
ELE 123	Power Circuits	3
ELE 202	Basic AC Circuits	2
ELE 231	Motor Codes	1
ELE 232	DC and Single Phase Machines	1
ELE 233	Three-Phase Motors	1
		14
SEMESTER III		
ELE 203	Three-Phase Circuits	1
ELE 241	Control Circuit Diagrams	1
ELE 242	Magnetic Starting and Overload Protection	1
ELE 243	Jogging, Reversing, and Sequencing	1
ELE 244	Solid State Controls	1
ELE 251	Transformer Types and Testing	1
ELE 252	Distribution Transformers	2
ELE 261	Residential Planning	2
ELE 262	Commercial Planning	2
		12
Minimum Hours Required:		41

ELECTRICAL

(Associate Degree)

Students wishing to earn an Associate in Applied Arts and Sciences Degree with a major in Electricity must complete all of the courses below.

		CREDIT HOURS
SEMESTER I		
ELE 100	Electrical Orientation	1
ELE 101	DC Circuits and Measurements	1
ELE 111	Residential Codes	1
ELE 202	Basic AC Circuits	2
ELE 203	Three-Phase Circuits	1
ELE 251	Transformer Types and Testing	1
ELE 252	Distribution Transformers	2
BPR 177	Blueprint Reading	2
MTH 195	Technical Mathematics	3
		14
SEMESTER II		
ELE 112	General Wiring Practices	4
ELE 113	Appliance Circuits	3
ELE 114	Low Voltage Circuits	1
ELE 121	Commercial Codes	1
COM 131	Applied Composition and Speech	3
SS 131	American Civilization	3
		15
SEMESTER III		
ELE 122	Commercial Wiring	4
ELE 123	Power Circuits	3
ELE 231	Motor Codes	1
ELE 232	DC and Single Phase Machines	1
ELE 703	Cooperative Work Experience or	3
ELE 704	Cooperative Work Experience	(4)
† Elective		3
		15/16

continued

SEMESTER IV

ELE 233	Three-Phase Motors	1
ELE 241	Control Circuit Diagrams	1
ELE 242	Magnetic Starting and Overload Protection	1
ELE 243	Jogging, Reversing, and Sequencing	1
ELE 244	Solid State Controls	1
ELE 261	Residential Planning	2
ELE 262	Commercial Planning	2
† Electives		9
		18

Minimum Hours Required:

62

† Electives — Must select from the following:

ELE 803	Cooperative Work Experience or	3
ELE 804	Cooperative Work Experience	(4)
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech	3
MGT 136	Principles of Management	3
MGT 153	Small Business Management	3
PHY 131	Applied Physics	4
PSY 131	Human Relations	3

DATA PROCESSING PROGRAMMER

(Associate Degree)

This curriculum is intended for the preparation of entry-level or trainee computer programmers who will work in an applications setting to support the general, administrative, and organizational information processing function of industry, commerce, business and government service. It is designed as a two-year career program to prepare students for jobs. Graduates should be able to work in conjunction with a systems analyst in the programming environment usually found in a medium to large job shop. It is intended to provide a sufficient foundation so that graduates with experience and continued learning may advance in career paths appropriate to their own particular interests and abilities.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
BUS 105	Introduction to Business or	3
MGT 136	Principles of Management	
DP 137	Data Processing Mathematics or any business math*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 201	Principles of Accounting I**	3
		<u>15</u>
SEMESTER II		
DP 133	Beginning Programming (COBOL)	4
DP 138	Systems Analysis and Data Processing Logic	3
ECO 201	Principles of Economics I or	3
ECO 202	Principles of Economics II	
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		<u>16</u>
SEMESTER III		
DP 136	Intermediate Programming (COBOL)	4
DP 142	RPG Programming or	3
DP 244	Basic Programming	
DP 233	Operating Systems and Communications	4
ACC 203	Intermediate Accounting or	3
ACC 238	Cost Accounting	
† Elective		3-4
		<u>17-18</u>
SEMESTER IV		
DP 231	Advanced Programming (ALC)	4
DP 232	Applied Systems	4
DP 236	Advanced COBOL Techniques or other 200 level DP or CS course	3-4
Any approved DP or CS course		3-4
		<u>14-16</u>

Minimum Hours Required:

62

continued

† Electives — Must be selected from the following:

Any DP or CS course (including DP 700-800 Cooperative Work Experience)

DP 129	Data Entry Concepts	4
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
MTH 202	Introductory Statistics	3
ENG 210	Technical Writing	3
BUS 105	Introduction to Business	3
ECO 201	Principles of Economics I	3

* MTH 111, MTH 112, MTH 130 or an equivalent business math course

**ACC 131 — Bookkeeping I, and ACC 132 — Bookkeeping II may be substituted for
ACC 201 — Principles of Accounting

NOTE: Students may obtain credit toward a degree or certificate for only one of each of the pairs of courses listed below:

- DP 133 or CS 184
- DP 231 or CS 186
- DP 244 or CS 182
- CS 175 or CS 174

DIESEL MECHANICS

This program is designed to prepare the student for entry level employment in the Diesel Mechanics industry. The student will develop the skills and knowledge necessary for the maintenance, repair and rebuilding of various diesel engines and diesel powered equipment.

Some Diesel Mechanics courses are completely individualized. This allows the students to progress at their own pace in order to fully comprehend theory and develop the necessary skills. The individualized, self-paced instruction also allows the student to take a portion of a course (module) without taking the complete course if some specific knowledge or skill is desired. Credit for prior experience or training may be given by placement testing arranged through the instructor. Students may elect to receive a certificate or may apply the certificate courses required in this program toward an Associate in Applied Arts and Sciences Degree.

DIESEL MECHANICS

(Certificate)

Completion of the following courses qualifies a student for a Certificate in Diesel Mechanics. The courses may be taken in any order desired after consultation with the instructor.

		CREDIT HOURS
SEMESTER I		
DME 101	Caterpillar Diesel Engine*	4
DME 102	Cummins Diesel Engine*	4
DME 103	Detroit Diesel Engine*	4
DME 127	Shop Practices	2
MTH 195	Technical Mathematics	3
		13
SEMESTER II		
DME 121	Standard Transmissions	3
DME 122	Heavy Duty Clutches and Torque Convertors	2
DME 123	Air Brake Systems	2
DME 124	Differentials and Drive Lines	2
		9

continued

SEMESTER III

DME 141	Caterpillar Engine Tune-Up and Fuel Systems	2
DME 142	Cummins Engine Tune-Up and Fuel Systems	2
DME 143	Detroit Diesel Engine Tune-Up and Fuel Systems	2
DME 144	Diesel Engine Air Induction, Cooling and Lubrication Systems	1
DME 145	Electrical Theory and Basic Automotive Circuitry	1
DME 146	Starting, Charging, Lighting, and Accessory Circuitry	1
DME 703	Cooperative Work Experience	3
		12

SEMESTER IV

DME 101	Caterpillar Diesel Engine or	4
DME 102	Cummins Diesel Engine or	(4)
DME 103	Detroit Diesel Engine	(4)
DME 125	Automatic Transmissions	2
DME 126	Heavy Duty Truck Air Conditioning	2
DME 137	Fundamentals of Oxygen/Acetylene and Arc Welding	3
		11

Minimum Hours Required:

45

*Select two courses from DME 101, DME 102, DME 103

DIESEL MECHANICS

(Associate Degree)

Courses required for an Associate in Applied Arts and Sciences Degree with a major in Diesel Mechanics are listed below. The courses may be taken in any order providing the prerequisites have been met.

		CREDIT HOURS
SEMESTER I		
DME 101	Caterpillar Diesel Engine*	4
DME 102	Cummins Diesel Engine*	4
DME 103	Detroit Diesel Engine*	4
DME 127	Shop Practices	2
BPR 177	Blueprint Reading or	2
BUS 105	Introduction to Business or	(3)
ACC 131	Bookkeeping I or	(3)
COM 132	Applied Composition and Speech	(3)
MTH 195	Technical Mathematics	3
		15/16
SEMESTER II		
DME 121	Standard Transmissions	3
DME 122	Heavy Duty Clutches and Torque Convertors	2
DME 123	Air Brake Systems	2
DME 124	Differentials and Drive Lines	2
COM 131	Applied Composition and Speech	3
† Elective		3
		15
SEMESTER III		
DME 141	Caterpillar Engine Tune-Up and Fuel Systems	2
DME 142	Cummins Engine Tune-Up and Fuel Systems	2
DME 143	Detroit Diesel Engine Tune-Up and Fuel Systems	2
DME 144	Diesel Engine Air Induction, Cooling, and Lubrication Systems	1
DME 145	Electrical Theory and Basic Automotive Circuitry	1
DME 146	Starting, Charging, Lighting, and Accessory Circuitry	1
DME 703	Cooperative Work Experience	3
PHY 131	Applied Physics	4
		16

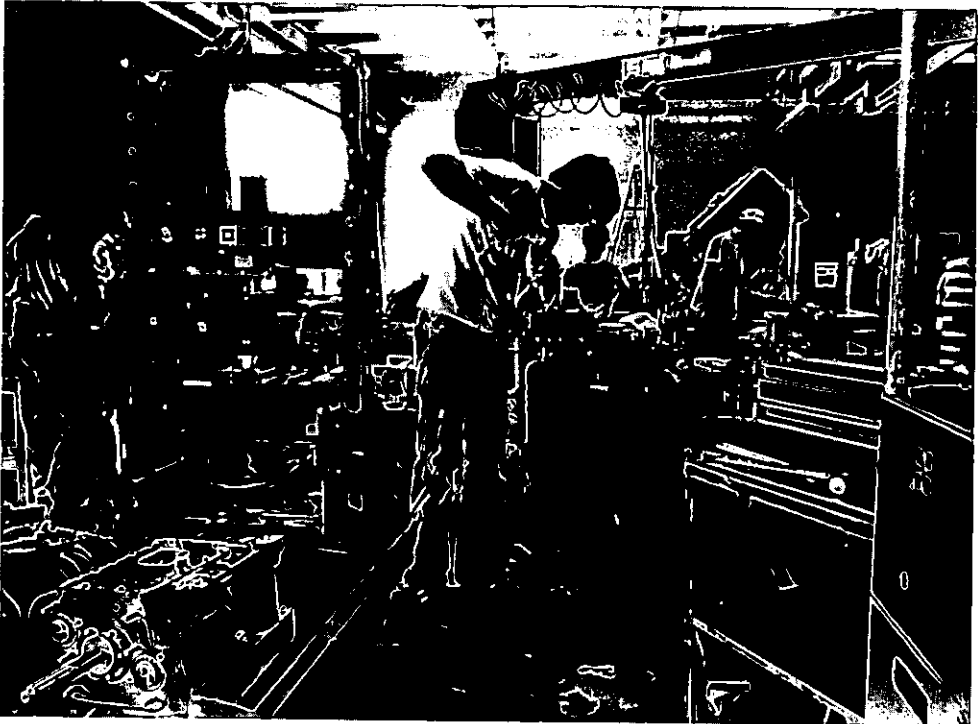
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SEMESTER IV		
DME 101	Caterpillar Diesel Engine or	4
DME 102	Cummins Diesel Engine or	(4)
DME 103	Detroit Diesel Engine	(4)
DME 125	Automatic Transmissions	2
DME 126	Heavy Truck Air Conditioning	2
DME 137	Fundamentals of Oxygen/Acetylene and Arc Welding	3
SS 131	American Civilization	3
† Elective		3
		17
Minimum Hours Required:		63

*Select two courses from DME 101, DME 102, DME 103

† Electives — Must be selected from the following:

DME 704	Cooperative Work Experience	4
ACC 131	Bookkeeping I	3
BPR 177	Blueprint Reading	2
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech	3
MGT 136	Principles of Management	3
MGT 153	Small Business Management	3
PSY 131	Human Relations	3



DISTRIBUTION TECHNOLOGY

(Associate Degree)

The Distribution Technology program is designed to prepare students for entry or advancement in the career field of wholesale distribution. This program focuses on the basic business techniques and understanding of the principles and techniques relating to distribution, warehousing, pricing, merchandising, operations, and management.

Successful completion of this program leads to the Associate in Applied Arts and Sciences Degree.

	CREDIT HOURS
SEMESTER I	
DT 130 Introduction to Distribution	3
BUS 105 Introduction to Business	3
COM 131 Applied Composition and Speech or	3
ENG 101 Composition and Expository Reading	
MTH 136 Principles of Management	3
MTH 130 Business Mathematics or	3
MTH 111 Mathematics for Business and Economics I	
	15
SEMESTER II	
ACC 201 Principles of Accounting I	3
BUS 234 Business Law	3
COM 132 Applied Composition and Speech or	3
ENG 102 Composition and Literature	
CS 175 Introduction to Computer Science	3
MGT 206 Principles of Marketing	3
	15
SEMESTER III	
DT 133 Transportation Management	3
DT 134 Wholesale Marketing	3
ECO 201 Principles of Economics I	3
MGT 230 Salesmanship	3
† Elective	3
	15
SEMESTER IV	
DT 231 Purchasing, Pricing, and Inventory	3
Management	
DT 232 Warehouse Operations	3
BUS 237 Organizational Behavior	3
† Elective	6
	15
Minimum Hours Required:	60
† Technical Electives — Must be selected from the following:	
DT 803, 813, 804, 814 Cooperative Work Experience	3/4
ACC 202 Principles of Accounting II	3
ECO 202 Principles of Economics II	3
GPY 102 Economic Geography	3
MGT 212 Special Problems in Business	1
MGT 233 Advertising and Sales Promotion	3
SPE 105 Fundamentals of Public Speaking	3

MANAGEMENT CAREERS — ADMINISTRATIVE MANAGEMENT OPTION

(Associate Degree)

The Administrative Management option offers a continuation of the traditional management and business studies. This option is designed for students seeking a detailed examination of management practices, techniques, and theories.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech *	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
ACC 201	Principles of Accounting I **	3
COM 132	Applied Composition and Speech *	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
† Elective		3
		15
SEMESTER IV		
MGT 242	Personnel Administration	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
	Social Science elective or Humanities elective	3
† Elective		3
		18
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — MID-MANAGEMENT OPTION

(Associate Degree)

The Mid-Management option is a cooperative plan with members of the business community whereby the student attends college classes in management and related courses and concurrently works at a regular, paid, part-time or full-time job in a sponsoring business firm. To enter the Mid-Management option, students must make formal application and be interviewed by a member of the Mid-Management faculty before final acceptance will be granted.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 150	Management Training	4
MGT 154	Management Seminar: Role of Supervision	2
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
		15
SEMESTER II		
MGT 151	Management Training	4
MGT 155	Management Seminar: Personnel Management	2
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
HUM 101	Introduction to the Humanities	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	3
		18
SEMESTER III		
MGT 250	Management Training	4
MGT 254	Management Seminar: Organizational Development	2
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 251	Management Training	4
MGT 255	Management Seminar: Business Strategy, the Decision Process and Problem Solving	2
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required:		63

continued

† Elective — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — PURCHASING MANAGEMENT OPTION

(Associate Degree)

This option is designed to develop the fundamental skills and knowledge which enable individuals to assume technical and decision making positions within the purchasing function of profit and non-profit organizations.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 160	Principles of Purchasing	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER II		
MGT 220	Materials Management	3
ACC 201	Principles of Accounting I**	3
COM 132	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER III		
MGT 206	Principles of Marketing	3
MGT 280	Industrial Management	3
CS 175	Introduction to Computer Science	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 224	Quality Assurance	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required		60

† Electives — May be selected from the following:

MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
ACC 202	Principles of Accounting II	3
BUS 237	Organizational Behavior	3
MTH 202	Introductory Statistics	3
OFC 231	Business Communications	3
TRT 287	Physical Distribution Management I	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — SMALL BUSINESS MANAGEMENT OPTION

(Associate Degree Program)

The Small Business Management option is designed to assist owners and managers of small businesses in developing the skills and techniques necessary for operation. This option is also designed for students who plan to become owners or operators of small businesses.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 153	Small Business Management	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
†Elective		3
		15
SEMESTER II		
MGT 157	Small Business Bookkeeping and Accounting Practices	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
MGT 206	Principles of Marketing	3
MGT 211	Small Business Operations	3
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 210	Small Business Capitalization, Acquisition and Finance	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
†Elective		3
		15
Minimum Hours Required		60

† Electives — May be selected from the following:

MGT 212	Special Problems in Business	1
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

**Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

OFFICE CAREERS — ADMINISTRATIVE ASSISTANT OPTION

(Associate Degree)

The primary objective of the Administrative Assistant Option to the Office Careers Program is to prepare students for positions as assistants to administrators within public and private firms and agencies. Emphasis in this program is on the development of organizational and management skills in addition to basic office skills.

	CREDIT HOURS
SEMESTER I	
OFC 160 Office Machines*	3
‡ OFC 172 Beginning Typing** or	3
OFC 174 Intermediate Typing	(2)
‡ COM 131 Applied Composition and Speech	3
MTH 130 Business Mathematics	3
BUS 105 Introduction to Business	3
† Elective	3
	17-18
SEMESTER II	
‡ OFC 174 Intermediate Typing or	2
OFC 273 Advanced Typing	
OFC 162 Office Procedures	3
OFC 165 Introduction to Word Processing	3
CS 175 Introduction to Computer Science	3
MGT 136 Principles of Management	3
‡ COM 132 Applied Composition and Speech	3
	17
SEMESTER III	
‡ OFC 273 Advanced Typing or	2
† Elective	
OFC 231 Business Communications	3
ACC 131 Bookkeeping I or	3
ACC 201 Principles of Accounting	
PSY 131 Human Relations or	3
PSY 105 Introduction to Psychology	
† Electives	6
	17
SEMESTER IV	
OFC 256 Office Management or	3
BUS 237 Organizational Behavior	
HUM 101 Introduction to Humanities	3
† Electives	9
	15
Minimum Hours Required:	66

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	.
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

OFFICE CAREERS — LEGAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent legal secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 159	Beginning Shorthand or	
OFC 103	Speedwriting	4
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 167	Legal Terminology and Transcription	3
OFC 231	Business Correspondence	3
# OFC 266	Advanced Shorthand	4
OFC 273	Advanced Typing or	2
‡ Elective		(3)
CS 175	Introduction to Computer Science	3
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 274	Legal Office Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		15-16
Minimum Hours Required:		65

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — PROFESSIONAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 159	Beginning Shorthand or	4
OFC 103	Speedwriting	
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		<u>15-16</u>
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		<u>17-18</u>
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
CS 175	Introduction to Computer Science	3
# OFC 266	Advanced Shorthand	4
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
OFC 273	Advanced Typing or	2
† Elective		(3)
		<u>18-19</u>
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
† Electives		6-7
		<u>15-17</u>
Minimum Required Hours:		65

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate)

The General Office Certificate Program is designed to provide the student with a basic working knowledge and skills in various office activities. A general knowledge of business concepts and procedures is provided.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Electives		7
		19
SEMESTER II		
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		7
		16
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Accounting Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
‡ ACC 132	Bookkeeping II or	3
† Elective		
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		8
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

†Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

‡ Required if ACC 131 was taken previously.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Office Clerical Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 162	Office Procedures	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
OFC 165	Introduction to Word Processing	3
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 166	Intermediate Shorthand***	4
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OPTICAL TECHNOLOGY

The Optical Technology program is designed to prepare students for entry level employment in the optical manufacturing or optical dispensing field.

Graduates should be able to operate machines, read optical specifications, perform quality control checks, and be able to communicate with customers. Students may specialize in either optical manufacturing or optical dispensing.

Students may elect to receive a certificate or may apply the certificate courses required in this program towards an Associate in Applied Arts and Sciences Degree.

OPTICAL TECHNOLOGY

(Certificate)

		CREDIT HOURS
SEMESTER I		
OPT 101	Ophthalmic Materials	3
OPT 102	Ophthalmic Grinding and Polishing	3
OPT 103	Optical Lens Design and Measurements	3
OPT 104	Optical Lens and Frame Selection	3
MTH 195	Technical Mathematics	3
		15
SEMESTER II		
OPT 205	Anatomy and Physiology of the Eye	3
OPT 206	Introduction to Contact Lenses	3
OPT 207	Bifocals and Trifocals Lenses	3
PHY 131	Applied Physics	4
		13
SUMMER SEMESTERS I & II (12 Weeks)		
OPT 703	Cooperative Work Experience	3
SEMESTER III		
OPT 208	Ophthalmic Laboratory Equipment	3
OPT 209	Ophthalmic Dispensing Ethics	3
OPT 211	Optic Principles	3
OPT 803, 813	Cooperative Work Experience	3
		12
Minimum Hours Required:		43

OPTICAL TECHNOLOGY

(Associate Degree)

		CREDIT HOURS
SEMESTER I		
OPT 101	Ophthalmic Materials	3
OPT 102	Ophthalmic Grinding and Polishing	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
MTH 195	Technical Mathematics	3
PSY 131	Human Relations	3
		<u>15</u>
SEMESTER II		
OPT 103	Optical Lens Design and Measurements	3
OPT 104	Optical Lens and Frame Selection	3
BUS 105	Introduction to Business	3
GVT 201	American Government or	3
HST 101	History of the United States	
PHY 131	Applied Physics	4
		<u>16</u>
SUMMER SEMESTERS I & II (12 Weeks)		
OPT 703	Cooperative Work Experience	3
SEMESTER III		
OPT 205	Anatomy and Physiology of the Eye	3
OPT 206	Introduction to Contact Lenses	3
OPT 207	Bifocals and Trifocals Lenses	3
OPT 208	Ophthalmic Laboratory Equipment	3
OPT 803	Cooperative Work Experience	3
		<u>15</u>
SEMESTER IV		
Lab Majors		
OPT 209	Ophthalmic Dispensing Ethics	3
OPT 211	Optic Principles	3
OPT 813	Cooperative Work Experience	3
Elective		3
		<u>12</u>
SEMESTER IV		
Dispensing Majors		
OPT 210	Ophthalmic Fitting	3
OPT 212	Measurements	3
OPT 213	Dispensing Occupational Eyewear	3
OPT 813	Cooperative Work Experience	3
		<u>12</u>
Minimum Hours Required:		61

PRECISION OPTICS TECHNOLOGY

(Associate Degree)

The Precision Optics Technology program is designed to prepare students for employment in the Precision Optics manufacturing field.

		CREDIT HOURS
SEMESTER I		
POP 101	Introduction to Precision Optics Technology	3
POP 104	Industrial Shop Safety	3
BPR 177	Blueprint Reading	2
COM 131	Applied Composition & Speech	3
MTH 195	Technical Mathematics	3
		14
SEMESTER II		
POP 102	Precision Optics Machining I	3
POP 103	Precision Optics Machining II	3
POP 107	Precision Optics Handling and Cleaning	2
MTH 196	Technical Mathematics	3
PHY 131	Applied Physics	4
		15
SEMESTER III		
POP 105	Precision Optics Machining III	3
POP 106	Thin Film Optical Coatings	4
POP 201	Basic Precision Optics Theory	3
HST 102	History of the United States	3
Elective		3
		16
SEMESTER IV		
POP 203	Precision Optics Quality Control	3
POP 204	Precision Optics Assembly	3
POP 205	Advanced Precision Optics Processes	3
POP 703	Cooperative Work Experience	3
PSY 131	Human Relations	3
		15
Minimum Hours Required:		60

REAL ESTATE

(Associate Degree)

The program in Real Estate is designed to develop the fundamental skills, attitudes and experiences which enable the student to function in decision-making positions in the real estate profession. Successful completion of the program leads to the Associate in Applied Arts and Sciences Degree.

		CREDIT HOURS
SEMESTER I		
RE 130	Real Estate Principles	3
RE 131	Real Estate Finance	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition & Speech or	3
ENG 101	Composition & Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
		15
SEMESTER II		
RE 133	Real Estate Marketing	3
RE 135	Real Estate Appraisal	3
RE 136	Real Estate Law	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
† Elective		3
		15
SEMESTER III		
RE 230	Real Estate Office Management	3
RE 250	Real Estate Internship I*	4
RE 254	Real Estate Seminar I*	2
ECO 201	Principles of Economics I	3
† Elective		3
		15
SEMESTER IV		
ACC 201	Principles of Accounting I	3
GVT 201	American Government	3
† Elective		9
		15
Minimum Hours Required:		60

† Elective — Must be selected from the following:
Any Psychology, Sociology, or Human Development Course.

‡ Technical Electives — Must be selected from the following:

RE 233	Commercial Investment Real Estate	3
RE 235	Property Management	3
RE 240	Special Problems in Real Estate	1
RE 251	Real Estate Internship II*	4
RE 255	Real Estate Seminar II*	2
ACC 202	Principles of Accounting II	3
ECO 202	Principles of Economics II	3
SPE 105	Fundamentals of Public Speaking	3

* Preliminary interview by Real Estate Coordinator required. RE 250 and RE 254 must be taken concurrently. RE 251 and RE 255 must be taken concurrently.

SOLAR ENERGY TECHNOLOGY

(Associate Degree)

The Solar Energy Technology program prepares students for entry-level employment in the solar energy industry. Graduates of the program should be proficient in installation of new and retrofitted hot water and space heating systems, and repair and maintenance of these systems. Both air and hydronic systems will be covered.

Program graduates may choose an alternate career as a sales representative, a research assistant, or some other solar energy related position.

Enrollment in the program requires no previous experience or course work in air conditioning and refrigeration. However, previous experience in this field may enable the student to test-out or substitute courses with instructor approval.

		CREDIT HOURS
SEMESTER I		
ST 106	Introduction to Solar Energy	3
ST 107	Materials and Materials Handling	3
ST 108	Fluid Transport Systems	3
AC 150	Basic Principles of Electricity	3
MTH 195	Technical Mathematics	3
		15
SEMESTER II		
ST 101	Energy Science I	4
ST 105	Collectors and Energy Storage	4
AC 155	Advanced Electrical Circuits	3
DFT 182	Technical Drafting	2
MTH 196	Technical Mathematics	3
		16
SEMESTER III		
ST 104	Energy Science II	4
ST 201	Sizing Design and Retrofit	4
AC 185	Residential Heating Systems	3
COM 131	Applied Composition and Speech	3
MTH 107	Fundamentals of Computing	3
		17
SEMESTER IV		
ST 205	Operational Diagnosis	4
ST 206	Economics, Codes, Legalities, and Consumerism	3
AC 180	Residential Cooling Systems	3
MGT 153	Small Business Management or	3
‡ Elective		
PSY 131	Human Relations or	3
‡ Elective		
		16
Minimum Hours Required:		64

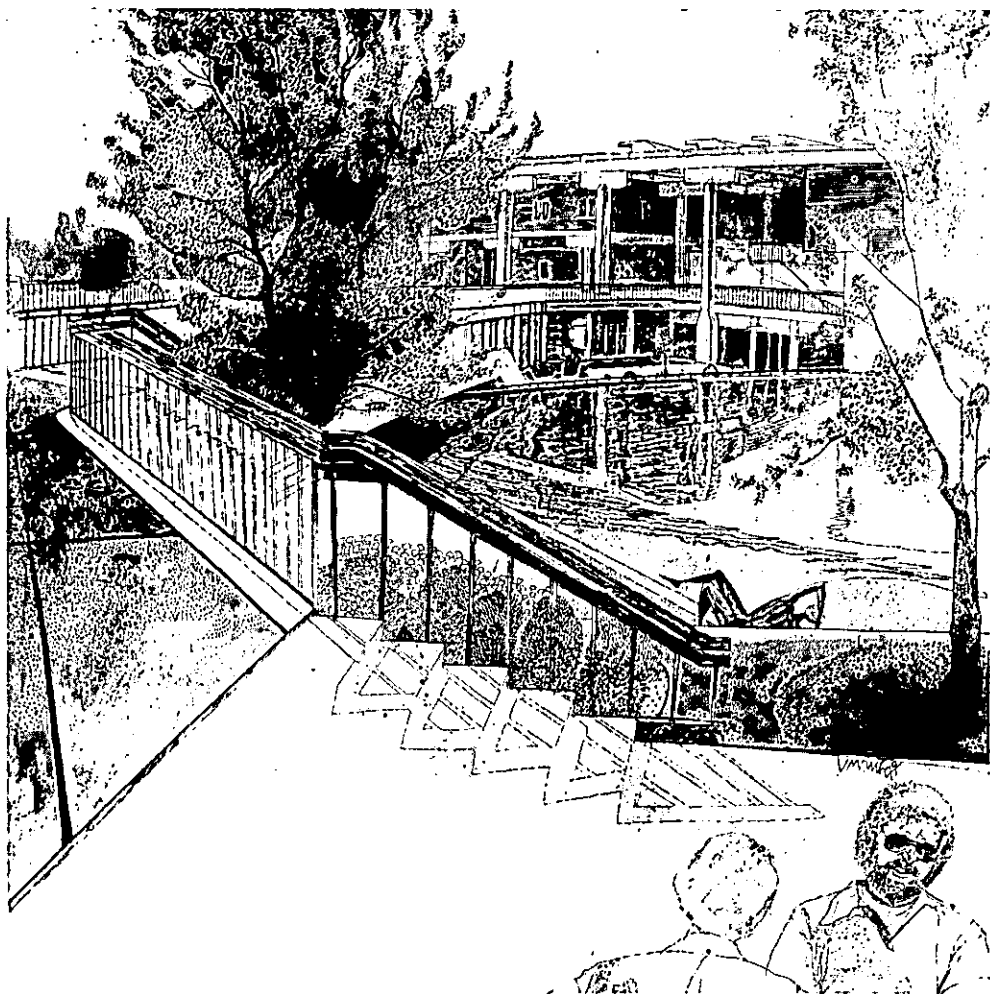
‡ Technical Electives — Must select from the following (with instructor approval):

ST 110	Non-Residential and Photovoltaic Applications	3
ST 208	Energy Conservation and Passive Design Concepts	3
ST 803, 813, 804, 814	Cooperative Work Experience	3/4



Richland College

Information, Administration, Faculty



RICHLAND COLLEGE

Richland was the fourth of the seven colleges of the Dallas County Community College District. It enrolled its first students in 1972 and subsequently grew to become the college with the largest enrollment in the District.

A challenging educational experience awaits students at Richland College where a dedicated faculty, innovative programs, functional campus design, and the beauty of nature combine to create an exciting learning environment.

Richland offers a comprehensive curriculum including academic transfer programs, technical/occupational programs, and non-credit community service courses. In addition, the college offers:

- Center for Choice, helping students make career decisions.
- Assessment Center, providing testing services.
- Center for Independent Study, offering help in developing reading, writing, and study skills.
- Human Resources Development Center, offering various types of training, counseling, and courses.
- Continuing Education Center, offering a variety of services and non-credit courses.
- Cultural Enrichment Center, sponsoring cultural events and activities.

- Everywoman Center, focusing on the needs of women.
- Center for Older Texans
- Center for Children and Youth.
- Staff Development Resource Center, providing training opportunities for business and industry.

The Campus

Richland is located on 259 acres at 12800 Abrams Road just north of LBJ Freeway. The campus plan enhances the natural beauty of the site. A spring fed creek forms two picturesque man-made lakes. Campus facilities extend along both sides of the lakes, linked by pedestrian bridges. Richland has a performance hall, a greenhouse, an athletic complex, including an outdoor swimming pool and a Cosmic Theatre and Planetarium featuring programs for the community.

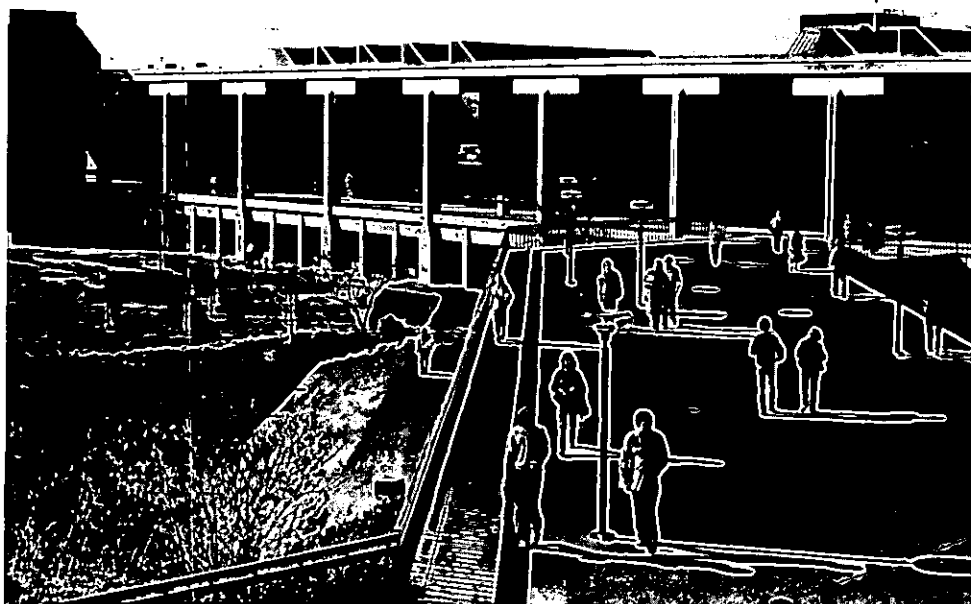
Accreditation

Richland College is a member of:

- The Southern Association of Colleges and Schools
- The American Association of Junior Colleges
- The League for Innovation in the Community College

Richland College is recognized and sanctioned by the Coordinating Board of the Texas College and University System and the Texas Education Agency and is an Affirmative Action Equal Opportunity Institution.





RICHLAND COLLEGE ADMINISTRATION

President	Stephen K. Mittelstet	238-6200
Vice President of Instruction	Jesse Jones	238-6193
Vice President of Student Services	Jean Sharon Griffith	238-6202
Vice President of Business Services	Lee Bacon	238-6205
Dean, Instructional Services, Technology, Learning Resources	Harold Albertson	238-6193
Dean, Instructional Services, Community Service, Extended Day	Tom McLaughlin	238-6193
Associate Dean of Instruction Learning Resources Center ..	Larry Kitchens	238-6150
Assistant Dean of Community Service	Susan Muha	238-6144
Special Assistant to President	Luke Barber	238-6208
Director of Admissions/Registrar	Dana Goodrich	238-6100
Director of Counseling	John Harwood	238-6106
Director of Financial Aid	Huan T. Luong	238-6188
Director of Human Resources Development Center	Lesa Taylor	238-6020
Director of Public Information	Valenda Archer	238-6194
Director of Student Development	Katharine Bryan	238-6130
Director of Physical Plant	Wes Hayes	238-6170
Director of Security	John MacMicken	238-6175
Coordinator of Handicapped Student Services	Larry Bonner	238-6180

DIVISION CHAIRPERSONS

Business	David Chamberlin	238-6210
Communications	Mary Osentowski	238-6220
Developmental Studies	Katherine Gonnet	238-6230
Humanities	George Massingale	238-6250
Math/Science	Georgia Sims	238-6248
P.E./Dance/Nursing	Bill White (Lead Instructor)	238-6260
Social Science	Steve Ellis	238-6290
Technology	Jackie Claunch	238-6191

RICHLAND FACULTY AND STAFF

Acrea, Patricia	Secretarial Science
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Brownlee, Don D.	Engineering/Engineering Technology
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Hughes, Robert J.	Business
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Irwin, Peter L.	Mid-Management/Computer Science
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Jeffrey, Gloria	Counselor
Fisk Univ., B.A.; North Texas State Univ., M.Ed.	
Jeser, Sharlee A.	Student Services Librarian
Southwest Texas State Univ., B.A.; Univ. of Texas, Austin, M.L.S.	
Jessen, Kara	Counselor
North Texas State Univ., B.S.; East Texas State Univ., M.S.	
John, Gary G.	Counselor
Austin College, B.A., M.A.; East Texas State Univ., Ed.D.	
Johnson, Carole	Director, Library Services
West Texas State Univ., B.S.; North Texas State Univ., M.L.S.	

Johnson, Dan R.	Accounting
Univ. of Texas, Austin, B.B.A.; Texas Christian Univ., M.B.A.; Texas C.P.A.	
Jones, Jesse	Vice President of Instruction
North Texas State Univ., B.A., M.A., Ph.D.	
Kelly, Jane	Accounting
East Texas State Univ., B.B.A., M.B.A.; Texas, C.P.A.	
Kelso, Mark	English
Stephen F. Austin State Univ., B.A., M.A.	
Kerr, James E.	English
Univ. of Iowa, B.A., M.A., M.F.A.	
Kitchens, Larry E.	Associate Dean of Instruction, Learning Resources Center
Texas Wesleyan College, B.S.; Texas Christian Univ., M.Ed.	
Krone, Billylu	Counselor
Texas Wesleyan College, B.S.; Texas Christian Univ., B.A., M.A., Nova Univ. Ed.D.	
Lambert, James W.	Media Consultant, Audio/Video
Northwestern State College, B.S.; Indiana Univ., M.S.	
Leff, Gladys R.	History
New York Univ., B.A., M.A.; North Texas State Univ., Ph.D.	
Little, Peggy	German
Indiana Univ., A.B., M.A.T.	
Lokke, Donald H.	Geology
Wheaton College, B.S.; Texas Tech Univ., M.S.	
Lott, Kenneth	Mathematics
Univ. of Texas, Austin, B.A.; North Texas State Univ., M.S.	
Lowe, Albert J.	Director, Instructional Development Service
Orange County Community College, A.A.; State Univ. of New York, New Paltz, B.S.; Indiana Univ., M.S., Ed.D.	
Lowery, Kent	Construction Management
East Texas State Univ., B.S.	
Luke, Paul J.	Physics/Physical Science
North Texas State Univ., B.S., M.S.	
Luong, Huan T.	Director of Financial Aid
Univ. of Texas, Dallas, B.S.	
Luter, Edward C.	English
Univ. of Dallas, B.A.; Univ. of Miami, M.A.	
Massingale, George W.	Chairperson, Div. of Humanities
Northeast Louisiana Univ., B.A., M.M.E.; North Texas State Univ., Ph.D.	
Matlock, Jerry L.	Developmental Mathematics
Univ. of Texas, Austin, B.A.; East Texas State Univ., M.S.	
Matter, William W.	English
Texas Tech Univ., B.A., M.A., Ph.D.	
McAda, Judith	English/Journalism
North Texas State Univ., B.A., M.A.	
McElveen, Jerry D.	English
Southeastern Louisiana Univ., B.A.; Louisiana State Univ., M.A.	
McKinney, John E.	Mid-Management
Southern Methodist Univ., B.B.A., M.B.A.	
McLaughlin, Thomas A.	Dean of Instructional Services
Coalinga College, A.A.; Wisconsin State Univ., B.S.; Southern Illinois Univ., M.S.	
McPeck, Maurice	Director, Media Services
East Texas State Univ., B.S., M.Ed.	
Meador, James E.	Director of Cooperative Education
Texas A & I Univ., B.S.; Southwest Texas State Univ., M.Ed.	
Mecom, John O.	Biology
Louisiana Tech, B.S.; Northwestern Univ., M.S.; Univ of Colorado, Ph.D.	
Miles, John Mike	Aquatics
Southern Illinois Univ., B.S.; New Mexico State Univ., M.A.	

Millsap, Franklin	Horticulture
Muskogee Junior College, A.A.; Oklahoma State Univ., B.S., M.S.	
Milton, Annette S.	Learning Skills
East Texas State Univ., B.A., M.S.L.S.	
Mitchell, Don	French
Roanoke College, B.A.; Tulane Univ., M.A.T.	
Mittelstet, Stephen K.	President
McMurry College, B.A., Univ. of Texas, Austin, Ph.D.	
Molina, Gilda	American Government
Southern Methodist Univ., B.A., M.P.A.	
Moreland, William H.	Developmental Reading
North Texas State Univ., B.S.; Univ. of Guam, M.A.	
Morris, Conde	Horticulture
Texas Christian Univ., B.A.; Ohio State Univ., M.S.	
Mosley, Joe	Developmental Writing
Texas Tech Univ., B.A.; Univ. of Arkansas, M.A.	
Motley, Tom D.	Art
Univ. of Texas, Arlington, B.F.A.; Univ. of Dallas, M.A., M.F.A.	
Muha, Susan	Assistant Dean of Community Service
Univ. of Georgia, B.S.; Univ. of Central Arkansas, M.S.	
Muyskens, Lois Anne	Humanities/Art
Dakota Wesleyan Univ., B.A.; North Texas Univ., M.Ed.	
Neal, William B.	Physical Education
Hiram College, B.A.; Southern Illinois Univ., M.S.	
Nelson, Susan J.	Mathematics
Austin College, B.A.; Southern Methodist Univ., M.S.	
Newbury, Fred	Economics
Howard Payne Univ., B.A.; North Texas State Univ., M.Ed., Ed.D.	
Northcut, Mary N.	English
Univ. of Texas, Arlington, B.A.; Southern Methodist Univ., M.A.; Texas Christian Univ., Ph.D.	
Nunley, John Parker	Anthropology
Univ. of Texas, Austin, B.A., M.A.; Southern Methodist Univ., M.A., Ph.D.	
O'Connor, Linda	Biology
Univ. of Texas, Austin, B.A., Southern Methodist Univ., M.A.	
Osentowski, Mary	Chairperson, Div. of Communications
Kearney State College, B.A.; North Texas State Univ., M.S.	
Parker, Carolyn	Counselor
Southern Methodist Univ., B.A.; Univ. of Florida, M.Ed.	
Penner, Gary R.	Mathematics
Nebraska State Teacher's College, B.S.; Univ. of Illinois, M.A.	
Pepper, La Vada	Sociology
Texas Woman's Univ., B.S.M.A.	
Perkins, Dan G.	Psychology
Canton Community College, A.A.; Bradley Univ. B.S., M.A.; North Texas State Univ., Ph.D.	
Permenter, Kenneth L.	Associate Dean of Instruction, Extended Day
Hardin Simmons Univ., B.A. Texas Tech Univ., M.A.	
Peteet, Joanne	Mathematics
Univ. of Texas, Arlington, B.A., M.A.; Univ. of Texas, Austin, Ph.D.	
Peterson, Jane E.	Developmental Writing
Bethel College, B.A.; Univ. of Arkansas, M.A., Ph.D.	
Pilcher, Rose Marie	Business
Tyler Junior College, A.S.; North Texas State Univ., B.B.A., M.B.E.	
Plocek, Pat	General Business
North Texas State Univ., B.B.A., M.B.A.; Southern Methodist Univ., M.L.A.	
Polk, Larry L.	Counselor
East Texas State Univ., B.A., M.S.	

Price, Jack Randall	Psychology
North Texas State Univ., B.S., M.S.	
Rager, Ernest F.	Humanities
North Texas State Univ., B.M.; Univ. of Illinois, M.S.	
Ricks, Gay S.	Counselor
East Texas State Univ., B.S., M.S.	
Rittenhouse, Jerri D.	Government
Northwestern State College, B.A.; Oklahoma State Univ., M.S.	
Ritter, John T.	Physics
Univ. of Tulsa, B.S.; Illinois Institute of Technology, Ph.D.	
Seal, Ginger	Counselor
Univ. of Texas, Austin, B.A.; North Texas State Univ., M.Ed.	
Sheffield, Charles	Theatre Design
Univ. of Texas, Austin, B.F.A., M.F.A.	
Shilling, Gerald	Business
Central State Univ., B.B.A.; Univ. of Dallas, M.B.A.	
Shorow, David	Economics/Computer Science
Casper College, A.B.S.; Texas Christian Univ.; B.B.A., M.B.A.	
Sims, Georgia	Chairperson, Div. of Math/Science
Texas Christian Univ., B.A., M.S.; Florida State Univ., Ph.D.	
Sims, Lyndarae D.	Spanish
Florida State Univ., B.A., M.A.; Univ. of Texas, Austin, Ph.D.	
Spence, Patricia R.	English/Speech/Film
Queens College, C.U.N.Y., B.A.; Univ. of Wisconsin, M.A.	
Stacy, Marilyn	Counselor
Richland College, A.A.; North Texas State Univ., B.S.; Texas Woman's Univ., M.A.	
Stanco, Joe	Instructional Development
Univ. of Dallas, B.A.; Univ. of Texas, Austin, M.A.	
Stanson, John D.	Physical Education
State Univ. of New York, Buffalo, B.S.; Texas Tech Univ., M.S.	
Stone, Cynthia	Off Campus Coordinator
Virginia Commonwealth Univ., B.S., M.S.	
Stone, Louis R.	Physical Education
Abilene Christian Univ., B.S.E., M.E.	
Stout, Dean	Real Estate/Accounting
Southwestern State Univ., B.S.; Oklahoma State Univ., M.S. Texas A.M. Univ., S.D.A.R.S.	
Stover, James W.	Art
Baylor Univ., B.F.A.; Columbia Univ., M.A.	
Stupp, William E.	English
Pennsylvania State Univ., B.A., M.A.	
Sullivan, Elaine	Counselor
Loyola Univ., B.S.; M.S.	
Swedlund, Trudi J.	English
Univ. of Houston, B.A.; Southern Methodist Univ., M.A.; North Texas State Univ., M.Ed.	
Taulbee, Thomas L.	Psychology/Sociology
Illinois State Univ., B.S.; East Texas State Univ., M.S., Ed.D.	
Taylor, Lesa	Director of Human Resource Development
Univ. of Texas, Arlington, M.A.	
Teagardin, Steffani S.	Physical Education
Richland College, A.A.; North Texas State Univ., B.S.; East Texas Univ., M.S.	
Thompson, Donald E.	Counselor
State Univ. of New York, Buffalo, B.A.; North Texas State Univ., M.Ed., Ph.D.	
Tinnin, Joe	Psychology
Southern Methodist Univ., B.A.; Texas Christian Univ., M.A.	
Towles, Lorraine	Automated Systems Librarian
Brigham Young Univ., B.A., M.L.S.	

Trickel, John A.	American History
Univ. of Tulsa, B.A., M.A.; North Texas State Univ., Ed.D.	
Turney, Sandra P.	Theatre
Univ. of Texas, Arlington, B.A.; North Texas State Univ., M.A.	
Verett, Gary D.	History/Psychology
Abilene Christian College, B.S., M.Ed.; North Texas State Univ., Ph.D.	
Walker, Glen D.	Engineering Technology
Univ. of Oklahoma, B.S.; Univ. of Texas at Dallas, M.A.T.	
Wallace, Jerry D.	Music
Texas Christian Univ., B.M., M.M.	
Walter, JoAnn L.	Physical Education
Montclair State Univ., B.A.; San Jose State Univ., M.A.	
Warwick, Noreen M.	Political Science
El Centro College, A.A.; Southern Methodist Univ., B.A., M.A.	
Watson, Billy W.	Speech
Jones Univ., B.A., M.A.	
White, Bill A.	Lead Instructor, Physical Education
Texas Wesleyan College, B.S.; North Texas State Univ., M.Ed.	
Whitfield, Ray	Engineering Technology
Texas A&M Univ., B.S.	
Wilkinson, Tom	Circulation Services Librarian
Southern Methodist Univ., B.A., M.L.A.; Univ. of Texas, Austin, M.A., M.L.S.	
Williams, John O.	Astronomy
Centenary College, B.A.; Univ. of Texas, Austin, M.A.	
Wingo, Peggy Dent	Data Processing
Oklahoma Univ., B.S., Southern Methodist Univ., M.A.S.	
Wood, Hugh G.	Western Civics/U.S. History
Western State College, B.A.; Univ. of Colorado, M.A., Ph.D.	
Yates, Kathryn	Government
Midwestern State Univ., B.A., M.A.	
Zamorano, E. Hector	Counselor
Texas Christian Univ., B.A., M.A.	





Richland College

Curriculum Patterns
For Technical/Occupational Programs



ACCOUNTING ASSOCIATE

(Associate Degree)

The Accounting Associate two-year program is designed to prepare a student for a career as a junior accountant in business, industry and government. Emphasis will be placed on internal accounting procedures and generally accepted accounting principles.

The Associate in Applied Arts and Sciences Degree is awarded for successful completion of at least 63 credit hours as outlined below. Students desiring a less comprehensive program that emphasizes bookkeeping procedures and practices should consider the General Office Certificate with elective emphasis on accounting careers. The General Office Certificate is available in the Office Careers Program.

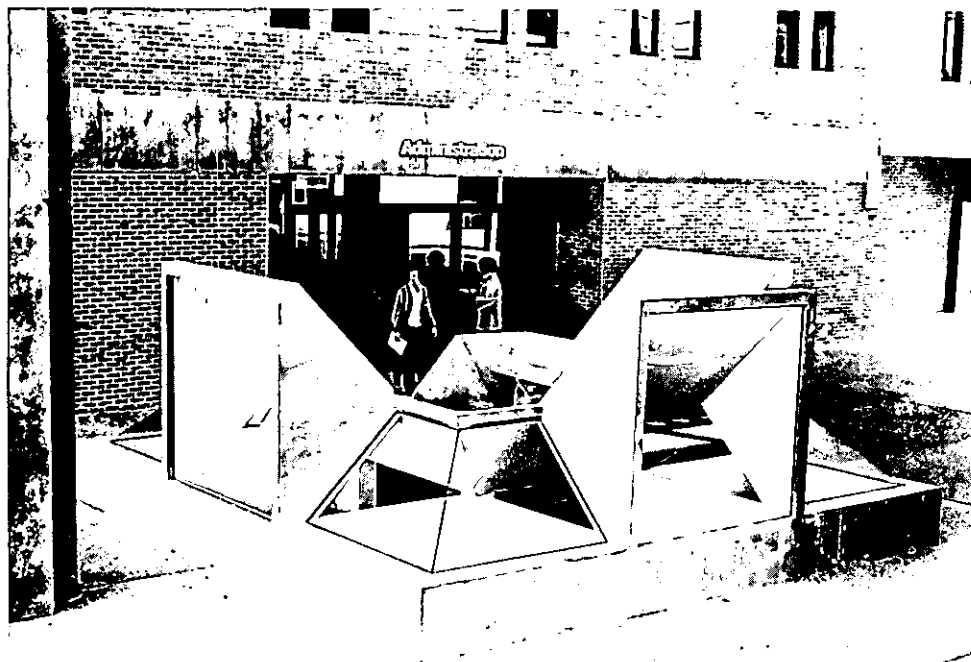
		CREDIT HOURS
SEMESTER I		
ACC 201	Principles of Accounting I	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech or*	3
ENG 101	Composition and Expository Reading	
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
OFC 160	Office Machines	3
		<u>15</u>
SEMESTER II		
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or*	3
ENG 102	Composition and Literature	
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
† OFC 172	Beginning Typing	3
		<u>15</u>
SEMESTER III		
ACC 203	Intermediate Accounting I	3
ACC 204	Managerial Accounting	3
ECO 201	Principles of Economics I	3
GVT 201	American Government	3
† Electives		3-6
		<u>15-18</u>
SEMESTER IV		
ACC 238	Cost Accounting or	3
ACC 239	Income Tax Accounting	
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
† Electives		3-6
		<u>15-18</u>
Minimum Hours Required:		63

† Electives — A minimum of 9 credit hours must be selected from the following:

ACC 205	Business Finance	3
ACC 207	Intermediate Accounting II	3
ACC 238	Cost Accounting	3
ACC 239	Income Tax Accounting	3
ACC 703-713	Cooperative Work Experience	3
803-813		
ACC 704-714	Cooperative Work Experience	4
804-814		
BUS 143	Personal Finance	3
BUS 237	Organizational Behavior	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science and Data Processing	4
MGT 206	Principles of Marketing	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
SPE 105	Fundamentals of Public Speaking	3
Any CS or DP Programming course		

* ENG 101 and ENG 102 may be substituted for COM 131 and COM 132 provided that SPE 105 is also taken.

‡ Students who can demonstrate proficiency by previous training, experience, or placement tests may substitute a course from the electives listed for this program.



BANKING AND FINANCE — BANKING OPTION

(Associate Degree)

The Banking and Finance program is designed to prepare students to enter the finance industry. Students completing the Banking Option will be prepared to assume positions in commercial banks, and other financial organizations.

		CREDIT HOURS
SEMESTER I		
BF 103	Introduction to Banking***	3
MGT 136	Principles of Management	3
COM 131	Applied Composition and Speech	3
ECO 201	Principles of Economics I	3
† Elective		3
		15
SEMESTER II		
BF 104	Money and Banking*	3
BF 105	Comparative Financial Institutions	3
ACC 201	Principles of Accounting I	3
ECO 202	Principles of Economics II	3
GVT 201	American Government	3
† Elective		3
		18
SEMESTER III		
BUS 237	Organizational Behavior	3
CS 175	Introduction to Computer Science	3
ACC 202	Principles of Accounting II	3
‡ Technical Elective		9
		18
SEMESTER IV		
BF 204	Federal Regulations of Banking* or	3
BF 205	Analyzing Financial Statements* or	
BF 206	Negotiable Instruments and the Payments Mechanism*	
BF 203	Public Relations & Marketing of Financial Services	3
OFC 231	Business Communications	3
† Elective		3
‡ Technical Elective		3
		15
Minimum Hours Required:		66

† Technical Electives — Must be selected from the following:

BF 110	The Federal Reserve System	3
BF 111	Trust Functions and Services	3
BF 112	Installment Credit	3
BF 113	Credit Card Banking	3
BF 114	Teller Training*	3
BF 115	Credit and Collection Principles	3
BF 116	Construction Lending	1
BF 117	Letters of Credit	2
BF 118	Installment Loan Interviews	1
BF 119	New Accounts	1
BF 120	Selling Bank Services	1
BF 121	Loss Prevention	1
BF 122	Safe Deposit	1
BF 123	Loan and Discount	1
BF 124	Stocks and Bonds	1
RE 131	Real Estate Finance	3

† Electives — Must be selected from the following:

INS 209	Principles of Insurance	3
BUS 105	Introduction to Insurance	3
MTH 130	Business Mathematics	3
BUS 143	Personal Finance	3
OFC 159	Beginning Shorthand	4
OFC 160	Office Machines	3
OFC 162	Office Procedures	3
OFC 166	Intermediate Shorthand	4
OFC 172	Beginning Typing	3
OFC 174	Intermediate Typing	2
BUS 234	Business Law	3
BF 713	Cooperative Work Experience**	3
BF 803	Cooperative Work Experience**	3
BF 813	Cooperative Work Experience**	3

*Course may be offered through American Institute of Banking (AIB)

**Enrollment only with consent of instructor.

***Students may substitute "Principles of Bank Operations" (taken through the American Institute of Banking)

BANKING AND FINANCE - CREDIT AND FINANCIAL MANAGEMENT OPTION

(Associate Degree)

The Banking and Finance program is designed to prepare students to enter the finance industry. Students completing the Credit and Finance Management Option will be prepared to assume positions in a wide variety of business and financial organizations.

		CREDIT HOURS
SEMESTER I		
BF 101	Credit Management	3
COM 131	Applied Composition and Speech	3
MGT 136	Principles of Management	3
ECO 201	Principles of Economics I	3
‡ Technical Elective		3
		15
SEMESTER II		
BF 115	Credit and Collection Principles	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
CS 175	Introduction to Computer Science	3
BF 105	Comparative Financial Institutions	3
		15
SEMESTER III		
BF 201	Advanced Credit Analysis	3
BUS 237	Organizational Behavior	3
ACC 201	Principles of Accounting I	3
GOV 201	American Government	3
‡ Technical Elective		3
		15
Semester IV		
BF 202	Credit Law	3
BF 203	Public Relations & Marketing of Financial Services	3
OFC 231	Business Communications	3
ACC 202	Principles of Accounting II	3
‡ Technical Elective		3
		15
Minimum Hours Required:		60

‡ Technical Electives — Must be selected from the following:

BF 205	Analyzing Financial Statements*	3
BF 104	Money and Banking*	3
INS 209	Principles of Insurance*	3
MTH 130	Business Mathematics	3
BUS 143	Personal Finance*	3
OFC 159	Beginning Shorthand	4
OFC 160	Office Machines	3
OFC 162	Office Procedures	3
OFC 166	Intermediate Shorthand	4
OFC 172	Beginning Typing	3
OFC 174	Intermediate Typing	2
ACC 238	Cost Accounting*	3
BF 713	Cooperative Work Experience**	3
BF 803	Cooperative Work Experience**	3
BF 813	Cooperative Work Experience**	3

To qualify as a candidate for National Institute of Credit Fellow Award, students must complete required courses indicated in the 4 semesters plus one course from the Elective component of the curriculum designated by

**Enrollment only with consent of instructor.



BANKING AND FINANCE - CREDIT UNION OPTION

(Associate Degree)

The Banking and Finance Program is designed to prepare students to enter the finance industry. Students completing the Credit Union Option will be prepared to assume positions in credit unions and other financial organizations.

	CREDIT HOURS
SEMESTER I	
BF 100 Introduction to the Credit Union Business	3
COM 131 Applied Composition and Speech	3
BF 105 Comparative Financial Institutions	3
ECO 201 Principles of Economics I	3
‡ Technical Elective	3
	15
SEMESTER II	
BF 115 Credit and Collection Principles	3
BUS 234 Business Law	3
CS 175 Introduction to Computer Science	3
MGT 136 Principles of Management	3
‡ Technical Elective	3
	15
SEMESTER III	
BF 200 Credit Union Management and Administration	3
BUS 237 Organizational Behavior	3
ACC 201 Principles of Accounting I	3
GVT 201 American Government	3
‡ Technical Elective	3
	15
SEMESTER IV	
BF 208 Financial Counseling	3
BF 203 Public Relations and Marketing of Financial Services	3
OFC 231 Business Communications	3
ACC 202 Principles of Accounting II	3
‡ Technical Electives	3
	15
Minimum Hours Required:	60

‡ Technical Electives — Must be selected from the following:

BF 110	The Federal Reserve System	3
BF 113	Credit Card Banking	3
BF 114	Teller Training	3
BF 205	Analyzing Financial Statements	3
BF 206	Negotiable Instruments and the Payments Mech.	3
OFC 159	Beginning Shorthand or	4
OFC 166	Intermediate Shorthand	(4)
OFC 172	Beginning Typing or	3
OFC 174	Intermediate Typing	(2)
OFC 160	Office Machines	3
OFC 162	Office Procedures	3
INS 209	Principles of Insurance	3
RE 130	Real Estate Principles	3
RE 131	Real Estate Finance	3

BANKING AND FINANCE - SAVINGS AND LOAN OPTION

(Associate Degree)

The Banking and Finance program is designed to prepare students to enter the finance industry. Students completing the Savings and Loan Option will be prepared to assume positions in Savings and Loan Associations and other financial organizations.

	CREDIT HOURS
SEMESTER I	
BF 106 Introduction to the Savings Association Business	2
MGT 171 Introduction to Supervision	3
COM 131 Applied Composition and Speech	3
CS 175 Introduction to Computer Science	3
‡ Technical Elective	3
	14
SEMESTER II	
BF 107 Savings Association Operations	2
MGT 136 Principles of Management	3
ECO 201 Principles of Economics I	3
OFC 231 Business Communications	3
BF 105 Comparative Financial Institutions	3
‡ Technical Elective	3
	17
SEMESTER III	
BF 207 Savings Account Administration	2
ACC 201 Principles of Accounting I	3
ECO 202 Principles of Economics II	3
BUS 237 Organizational Behavior	3
‡ Technical Elective	3
	14
SEMESTER IV	
ACC 202 Principles of Accounting II	3
BF 203 Public Relations & Marketing of Financial Services	3
GVT 201 American Government	3
RE 130 Real Estate Principles	3
‡ Technical Elective	3
	15
Minimum Hours Required:	60

‡ Technical Electives - Must be selected from the following:

BF 125	Saving Association Lending	3
BF 205	Analyzing Financial Statements	3
BF 115	Credit and Collection Principles	3
BF 114	Teller Training*	3
INS 209	Principles of Insurance	3
BUS 143	Personal Finance	3
OFC 162	Office Procedures	3
BUS 234	Business Law	3
MTH 130	Business Mathematics	3
RE 131	Real Estate Finance	3
RE 135	Real Estate Appraisal	3
BF 713	Cooperative Work Experience*	3
BF 803	Cooperative Work Experience*	3
BF 813	Cooperative Work Experience*	3

* Enrollment only with the consent of instructor.

CONSTRUCTION MANAGEMENT AND TECHNOLOGY

(Associate Degree)

This program prepares the student for employment as a technician in a wide range of construction industry applications. Course content is designed to provide meaningful experiences in the construction industry at the management and site coordination level.

		CREDIT HOURS
SEMESTER I		
CMT 121	Construction Materials, Methods and Equipment I	3
CMT 132	Construction Industry	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
CMT 236	Building Codes for Safety	4
HD 107	Leadership or	3
HD 105	Human Development or	
PSY 105	Introduction to Psychology	
		16
SEMESTER II		
MTH 195	Technical Mathematics	3
CMT 124	Electrical and Mechanical Equipment for Buildings	4
CMT 122	Construction Materials, Methods and Equipment II	3
CMT 123	Construction Graphics	4
† Elective		3-4
		17-18
SEMESTER III		
CMT 231	Contracts and Specifications	3
CMT 136	Surveying and Measurements	4
CMT 138	Construction Management I	4
EGR 289	Mechanics of Structures	3
		14
SEMESTER IV		
CMT 230	Quality Control and Cost Control	4
CMT 234	Estimating	4
CMT 237	Soils, Foundations, and Reinforced Concrete	4
CMT 238	Construction Management II	4
		16
Minimum Hours Required:		63
† Elective - Must be selected from the following:		
ACC 131	Bookkeeping I	3
BUS 234	Business Law	3
COM 132	Applied Composition & Speech	3
PHY 131	Applied Physics	4

DATA PROCESSING PROGRAMMER

(Associate Degree)

This curriculum is intended for the preparation of entry-level or trainee computer programmers who will work in an applications setting to support the general, administrative, and organizational information processing function of industry, commerce, business and government service. It is designed as a two-year career program to prepare students for jobs. Graduates should be able to work in conjunction with a systems analyst in the programming environment usually found in a medium to large job shop. It is intended to provide a sufficient foundation so that graduates with experience, and continued learning may advance in career paths appropriate to their own particular interests and abilities.

		CREDIT HOURS
SEMESTER I		
CS 175	Introduction to Computer Science	3
BUS 105	Introduction to Business or	3
MGT 136	Principles of Management	
DP 137	Data Processing Mathematics or any business math*	3
COM 131	Applied Composition and Speech or	3
ENG 101	Composition and Expository Reading	
ACC 201	Principles of Accounting I**	3
		<u>15</u>
SEMESTER II		
DP 133	Beginning Programming (COBOL)	4
DP 138	Systems Analysis and Data Processing Logic	3
ECO 201	Principles of Economics I or	3
ECO 202	Principles of Economics II	
ACC 202	Principles of Accounting II	3
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
		<u>16</u>
SEMESTER III		
DP 136	Intermediate Programming (COBOL)	4
DP 142	RPG Programming or	3
DP 244	Basic Programming	
DP 233	Operating Systems and Communications	4
ACC 203	Intermediate Accounting or	3
ACC 238	Cost Accounting	
† Elective		3-4
		<u>17-18</u>
SEMESTER IV		
DP 231	Advanced Programming (ALC)	4
DP 232	Applied Systems	4
DP 236	Advanced COBOL Techniques or other 200 level DP or CS course	3-4
Any approved DP or CS course		3-4
		<u>14-16</u>
Minimum Hours Required:		62

† Electives — Must be selected from the following:

Any DP or CS course (including DP 700-800 Cooperative Work Experience)

DP 129	Data Entry Concepts	4
MGT 136	Principles of Management	3
MGT 206	Principles of Marketing	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
MTH 202	Introductory Statistics	3
ENG 210	Technical Writing	3
BUS 105	Introduction to Business	3
ECO 201	Principles of Economics I	3

* MTH 111, MTH 112, MTH 130 or an equivalent business math course

**ACC 131 — Bookkeeping I, and ACC 132 — Bookkeeping II may be substituted for
ACC 201 — Principles of Accounting

NOTE: Students may obtain credit toward a degree or certificate for only one of each of the pairs of courses listed below:

- DP 133 or CS 184
- DP 231 or CS 186
- DP 244 or CS 182
- CS 175 or CS 174



EDUCATIONAL PARAPROFESSIONAL

(Associate Degree)

This program is designed to prepare educational paraprofessionals in a wide range of competencies needed for effective roles in public and non-public schools. A student can take courses required for the one-year Educational Assistant Certificate and continue in the program to receive the two-year Educational Associate Degree or may work directly toward the Associate Degree.

Educational Paraprofessionals are employed under job titles such as teacher aide, assistant teacher, library assistant, P.E. aide, study hall teacher, tutor, tutoring coordinator, youth worker, special education aides, etc. Individuals working with handicapped children have found this program to be especially beneficial.

	CREDIT HOURS
SEMESTER I	
EP 131 Introduction to Educational Processes I	3
EP-135 Arts and Crafts	3
‡ Technical Electives	9
	<u>15</u>
SEMESTER II	
EP 129 Communication Skills for Educational Paraprofessionals	3
EP 134 Introduction to Media	3
EP 133 Introduction to Educational Processes II	3
‡ Technical Electives	6
	<u>15</u>
SEMESTER III	
EP 249 The Exceptional Child	3
EP 804 Cooperative Work Experience	4
‡ Technical Electives	8-9
	<u>15-16</u>
SEMESTER IV	
EP 814 Cooperative Work Experience	4
‡ Technical Electives	11-12
	<u>15-16</u>
Minimum Hours Required:	60

continued

‡ Technical Electives — Must be selected from the following:

Communications (twelve hours to be chosen from the following):	12
Developmental Studies Reading and/or Writing	
COM 131 Applied Composition and Speech	3
COM 132 Applied Composition and Speech	3
ENG 101 Composition and Expository Reading	3
ENG 102 Composition and Literature	3
ENG (200 level) - any two courses at the sophomore level	

Additional courses must be selected from the following:

EP 245 Diversified Studies	1
EP 246 Diversified Studies	2
EP 247 Diversified Studies	3
HD 104 Educational and Career Planning	3
HD 105 Basic Processes of Interpersonal Relations	3
HD 107 Developing Leadership Behavior	3
DM 090 Pre Algebra Mathematics	3
MTH 117 Fundamental Concepts of Mathematics for Elementary Teachers or Mathematics elective	3
LS 101 Introduction to Library Research	3
OFC 172 Beginning Typing	3
OFC 174 Intermediate Typing	2
PEH 101 Fundamentals of Health	3
PEH 144 Introduction to Physical Education	3
PEH 257 Advanced First Aid and Emergency Care	3
PSY 105 Introduction to Psychology	3
PSY 201 Developmental Psychology	3
SOC 101 Introduction to Sociology	3
SOC 102 Social Problems	3
SOC 203 Marriage and Family	3
SOC 204 American Minorities	3
SPE 105 Fundamentals of Public Speaking	3
TPD 141 Beginning Sign Language	4
TPD 143 Intermediate Sign Language	4

Art or Music as appropriate and approved by EP instructor. Other courses occupationally appropriate and approved by the EP instructor.

EDUCATIONAL ASSISTANT

(Certificate)

	CREDIT HOURS
SEMESTER I	
EP 131 Introduction to Educational Processes I	3
EP 135 Arts and Crafts	3
‡ Technical Electives	9
	15
SEMESTER II	
EP 129 Communication Skills for Educational Paraprofessionals	3
EP 134 Introduction to Media	3
EP 249 The Exceptional Child	3
‡ Technical Electives	6
	15
Minimum Hours Required	30

‡ Technical Electives - Must be selected from the following:

Developmental Studies Reading and/or Writing	
COM 131 Applied Composition and Speech	3
COM 132 Applied Composition and Speech	3
ENG 101 Composition and Expository Reading	3
ENG 102 Composition and Literature	3
ENG (200 level)	
EP 133 Introduction to Educational Processes II	3
EP 245 Diversified Studies	1
EP 246 Diversified Studies	2
EP 247 Diversified Studies	3
EP 804 Cooperative Work Experience	4
EP 814 Cooperative Work Experience	4
HD 104 Educational and Career Planning	3
HD 105 Basic Processes of Interpersonal Relations	3
HD 107 Developing Leadership Behavior	3
DM 090 Pre Algebra Mathematics	3
MTH 117 Fundamental Concepts of Mathematics For Elementary Teachers or Mathematics Elective	3
LS 101 Introduction to Library Research	3
OFC 172 Beginning Typing	3
OFC 174 Intermediate Typing	2
PEH 101 Fundamentals of Health	3
PEH 144 Introduction to Physical Education	3
PEH 257 Advanced First Aid and Emergency Care	3
PSY 105 Introduction to Psychology	3
PSY 201 Developmental Psychology	3
SOC 101 Introduction to Sociology	3
SOC 102 Social Problems	3
SOC 203 Marriage and Family	3
SOC 204 American Minorities	3
SPE 105 Fundamentals of Public Speaking	3
TPD 141 Beginning Sign Language	4
TPD 143 Intermediate Sign Language	4

Art or music as appropriate and approved by EP instructor. Other courses occupationally appropriate and approved by the EP instructor.

ENGINEERING TECHNOLOGY

(Associate Degree)

The engineering technology program provides the student with a broad educational background in several technical areas. During the first year a basic "core curriculum" is followed by all students. In the second year the student will specialize in one of the following areas: electric power, electro-mechanical, fluid power, or quality control. Also during the second year, the student may choose to participate in a cooperative educational program where college credit may be earned for related work experience.

		CREDIT HOURS
SEMESTER I		
ET 190	DC Circuits and Electrical Measurements	4
QCT 121	Introduction to Quality Control	2
EGT 141	Basic Hydraulics and Fluid Mechanics	4
MTH 195	Technical Math	3
EGR 186	Manufacturing Processes	2
DFT 182	Technician Drafting or	2
DFT 183	Basic Drafting	(4)
		<u>17-19</u>
SEMESTER II		
ET 191	AC Circuits	4
EGT 142	Instrumentation & Testing	3
MTH 196	Technical Mathematics	3
ET 193	Active Devices	4
EGT 143	Technical Programming	4
		<u>18</u>
SEMESTER III		
COM 131	Applied Composition & Speech	3
EMT 232	Applied Mechanics*	4
QCT 122	Dimensional Measurement	3
EMT 242	Digital Control Circuits*	4
† Technical Elective		2-4
		<u>16-18</u>
SEMESTER IV		
PHY 131	Technical Physics	4
QCT 220	Physical & Environmental Testing*	3
EMT 228	Amplifiers and Control Circuits*	4
FLP 222	Fundamentals of Pneumatics*	3
EGT 804	Cooperative Work Experience or	2-4
† Technical Elective		
		<u>16-18</u>
Minimum Hours Required:		67

† Technical Elective — Must be selected from the following:

EGT 240	Electronic Control Systems	3
EMT 237	Electromagnetic and Digital Machine Control	3
ELP 244	Advanced Electric Power Systems	4
EMT 239	Principles of Microprocessor Control	4
FLP 225	Advanced Fluid Power Systems	4
EGR 187	Manufacturing Processes	2
QCT 227	Non-Destructive Testing	3
QCT 236	Advanced Quality Control Systems	4
EMT 233	Electrical Machinery	3

*A student may take Cooperative Work Experience (EGT 803, 804, 813 or 814) in lieu of a second year course not in his or her major (excluding Applied Physics and Applied Composition and Speech). Prior division approval is required for substitution.



ENGINEERING TECHNOLOGY - ELECTRIC POWER CERTIFICATE

(Certificate)

A one-year program providing the student with skill and development opportunities in the Electric Power industry. All of the courses required for the one-year certificate are applicable to the Engineering Technology Associate Degree.

		CREDIT HOURS
SEMESTER I		
ET 190	DC Circuits and Measurements	4
MTH 195	Technical Mathematics	3
EGR 186	Manufacturing Processes	2
DFT 182	Technical Drafting	2
EMT 233	Electrical Machinery	3
		14
SEMESTER II		
ET 191	AC Circuits	4
EGT 142	Instrumentation & Testing	3
EGT 240	Electronic Control Systems	3
ELP 244	Advanced Electric Power Systems	4
EMT 237	Electromagnetic and Digital Machine Control	3
		17
Minimum Hours Required:		31

ENGINEERING TECHNOLOGY - ELECTRO-MECHANICAL CERTIFICATE

(Certificate)

This one-year program is designed to provide the student with basic technical skills for entry into the automated industrial environment. All of the courses required for the one-year certificate are applicable to the Engineering Technology Associate Degree.

		CREDIT HOURS
SEMESTER I		
ET 190	DC Circuits and Measurements	4
EGR 186	Manufacturing Processes	2
EGT 141	Basic Hydraulics and Fluid Mechanics	4
MTH 195	Technical Math	3
EMT 232	Applied Mechanics	4
		17
SEMESTER II		
DFT 182	Technical Drafting	2
ET 191	AC Circuits	4
EGT 142	Instrumentation and Testing	3
ET 193	Active Devices	4
EMT 237	Electromagnetic and Digital Machine Control	3
MTH 196	Technical Mathematics	3
		19
Minimum Hours Required:		36

ENGINEERING TECHNOLOGY - FLUID POWER CERTIFICATE

(Certificate)

A one-year program providing the student with skill and development opportunities in the field of hydraulics and pneumatics. All of the courses required for the one-year certificate are applicable to the Engineering Technology Associate Degree.

		CREDIT HOURS
SEMESTER I		
EGT 141	Basic Hydraulics and Fluid Mechanics	4
ET 190	DC Circuits and Measurements	4
MTH 195	Technical Mathematics	3
DFT 182	Technical Drafting	2
EGR 186	Manufacturing and Processes	2
		15
SEMESTER II		
FLP 222	Fundamentals of Pneumatics	3
FLP 225	Advanced Fluid Power Systems	4
EGT 142	Instrumentation and Testing	3
EGT 240	Electronic Control Systems	3
MTH 196	Technical Mathematics	3
		16
Minimum Hours Required:		31

ENGINEERING TECHNOLOGY - QUALITY CONTROL CERTIFICATE

(Certificate)

This one-year program develops the basic skill necessary for advancement in a purchased materials, machine shop or assembly inspection department. All of the courses required for the certificate are applicable to the Engineering Technology Associate Degree.

		CREDIT HOURS
SEMESTER I		
QCT 121	Introduction to Quality Control	2
QCT 122	Dimensional Measurement	3
EGT 141	Basic Hydraulics & Fluid Mechanics	4
EGR 186	Manufacturing and Processes	2
MTH 195	Technical Mathematics	3
DFT 182	Technical Drafting	2
		16
SEMESTER II		
EGT 143	Technical Programming	4
QCT 227	Non-Destructive Testing	3
QCT 220	Physical/Environmental Testing	3
ET 190	DC Circuits	4
MTH 196	Technical Mathematics	3
		17
Minimum Hours Required:		33

ENGINEERING TECHNOLOGY - MANUFACTURING ENGINEERING OPTION

(Associate Degree)

The Manufacturing Engineering Technology option prepares the student for technician level employment in industrial manufacturing. Training in manufacturing processes, machine tools, drafting, blueprint reading and quality control is emphasized.

		CREDIT HOURS
SEMESTER I		
MTH 195	Technical Mathematics	3
ET 190	DC Circuits	4
BPR 177	Blueprint Reading I*	2
EGR 186	Manufacturing Processes	2
DFT 186	Basic Drafting	4
		15
SEMESTER II		
MTH 196	Technical Mathematics	3
ET 191	AC Circuits	4
BPR 178	Blueprint Reading II*	2
EGR 187	Manufacturing Processes	2
MS 133	Basic Lathe*	5
		16
SEMESTER III		
MS 134	Basic Milling Machine*	5
QCT 121	Introduction to Quality Control	2
COM 131	Applied Composition and Speech	3
CS 175	Introduction to Computer Science	3
EGT 804	Cooperative Work Experience or	3-4
† Elective		
		16-17
SEMESTER IV		
MGT 136	Principles of Management	3
EGT 143	Interpretation of Technical Data	4
HD 105	Interpersonal Relations	3
MGT 171	Introduction to Supervision	3
EGT 814	Cooperative Work Experience or	3-4
† Electives		
		16-17
Minimum Hours Required:		63

† Electives — Must be selected from the following:

EGT 803	Cooperative Work Experience	3
EGT 813	Cooperative Work Experience	3
ECO 201	Principles of Economics I	3
QCT 122	Dimensional Measurement	3
ET 193	Active Devices	4
QCT 220	Physical and Environmental Testing	3
EGT 141	Basic Hydraulics and Fluid Mechanics	4
PHY 131	Applied Physics	4
HUM 101	Introduction to the Humanities	3
SS 131	American Civilization	3
SPE 105	Fundamentals of Public Speaking	3
COM 132	Applied Composition and Speech	3

* Denotes courses offered at Mountain View College

MANAGEMENT CAREERS — ADMINISTRATIVE MANAGEMENT OPTION

(Associate Degree)

The Administrative Management option offers a continuation of the traditional management and business studies. This option is designed for students seeking a detailed examination of management practices, techniques, and theories.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech *	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 206	Principles of Marketing	3
ACC 201	Principles of Accounting I**	3
COM 132	Applied Composition and Speech *	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	3
		15
SEMESTER III		
ACC 202	Principles of Accounting II	3
BUS 234	Business Law	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
† Elective		3
		15
SEMESTER IV		
MGT 242	Personnel Administration	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
OFC 231	Business Communications	3
	Social Science elective or Humanities elective	3
† Elective		3
		18
Minimum Hours Required:		63

† Electives — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

MANAGEMENT CAREERS — MID-MANAGEMENT OPTION

(Associate Degree)

The Mid-Management option is a cooperative plan with members of the business community whereby the student attends college classes in management and related courses and concurrently works at a regular, paid, part-time or full-time job in a sponsoring business firm. To enter the Mid-Management option, students must make formal application and be interviewed by a member of the Mid-Management faculty before final acceptance will be granted.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 150	Management Training	4
MGT 154	Management Seminar: Role of Supervision	2
BUS 105	Introduction to Business	3
COM 131	Applied Composition and Speech*	3
		15
SEMESTER II		
MGT 151	Management Training	4
MGT 155	Management Seminar: Personnel Management	2
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
HUM 101	Introduction to the Humanities	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		18
SEMESTER III		
MGT 250	Management Training	4
MGT 254	Management Seminar: Organizational Development	2
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 251	Management Training	4
MGT 255	Management Seminar: Business Strategy, the Decision Process and Problem Solving	2
ECO 202	Principles of Economics II	3
Social Science elective or Humanities elective		3
† Elective		3
		15
Minimum Hours Required:		63

† Elective — May be selected from the following:

MGT 137	Principles of Retailing	3
MGT 153	Small Business Management	3
MGT 212	Special Problems in Business	1
MGT 230	Salesmanship	3
MGT 233	Advertising and Sales Promotion	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.



MANAGEMENT CAREERS — SMALL BUSINESS MANAGEMENT OPTION

(Associate Degree Program)

The Small Business Management option is designed to assist owners and managers of small businesses in developing the skills and techniques necessary for operation. This option is also designed for students who plan to become owners or operators of small businesses.

		CREDIT HOURS
SEMESTER I		
MGT 136	Principles of Management	3
MGT 153	Small Business Management	3
COM 131	Applied Composition and Speech*	3
HUM 101	Introduction to the Humanities	3
† Elective		3
		15
SEMESTER II		
MGT 157	Small Business Bookkeeping and Accounting Practices	3
BUS 105	Introduction to Business	3
COM 132	Applied Composition and Speech*	3
CS 175	Introduction to Computer Science	3
MTH 111	Mathematics for Business and Economics I or	3
MTH 112	Mathematics for Business and Economics II or	
MTH 130	Business Mathematics	
		15
SEMESTER III		
MGT 206	Principles of Marketing	3
MGT 211	Small Business Operations	3
ACC 201	Principles of Accounting I**	3
ECO 201	Principles of Economics I	3
PSY 131	Human Relations	3
		15
SEMESTER IV		
MGT 210	Small Business Capitalization, Acquisition and Finance	3
BUS 234	Business Law	3
ECO 202	Principles of Economics II	3
	Social Science elective or Humanities elective	3
† Elective		3
		15
Minimum Hours Required		60

† Electives — May be selected from the following:

MGT 212	Special Problems in Business	1
OFC 160	Office Machines	3
OFC 172	Beginning Typing	3

* Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. Students must take Speech 105 as an elective when substituting ENG 101 and 102.

** Students may substitute ACC 131 and ACC 132 for ACC 201. Only three hours may be applied to the required number of hours for granting the degree.

OFFICE CAREERS — ADMINISTRATIVE ASSISTANT OPTION

(Associate Degree)

The primary objective of the Administrative Assistant Option to the Office Careers Program is to prepare students for positions as assistants to administrators within public and private firms and agencies. Emphasis in this program is on the development of organizational and management skills in addition to basic office skills.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
BUS 105	Introduction to Business	3
† Elective		3
		17-18
SEMESTER II		
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
CS 175	Introduction to Computer Science	3
MGT 136	Principles of Management	3
‡ COM 132	Applied Composition and Speech	3
		17
SEMESTER III		
‡ OFC 273	Advanced Typing or	2
† Elective		
OFC 231	Business Communications	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting	
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
† Electives		6
		17
SEMESTER IV		
OFC 256	Office Management or	3
BUS 237	Organizational Behavior	
HUM 101	Introduction to Humanities	3
† Electives		9
		15
Minimum Hours Required:		66

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science	4
ECO 201	Principles of Economics I	3
SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.



OFFICE CAREERS — LEGAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent legal secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 159	Beginning Shorthand or	
OFC 103	Speedwriting	4
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		15-16
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
‡ OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		17-18
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 167	Legal Terminology and Transcription	3
OFC 231	Business Correspondence	3
# OFC 266	Advanced Shorthand	4
OFC 273	Advanced Typing or	2
† Elective		(3)
CS 175	Introduction to Computer Science	3
		18-19
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 274	Legal Office Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
		15-16

Minimum Hours Required:

65

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

†Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — PROFESSIONAL SECRETARY OPTION

(Associate Degree)

The primary objective of this option is to prepare students to become competent secretaries, capable of performing office and clerical duties within public and private firms and agencies. Students enrolled in the program will have an opportunity to secure intensive training in basic skills. An Associate in Applied Arts and Sciences Degree is awarded for successful completion.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 159	Beginning Shorthand or	4
OFC 103	Speedwriting	
† OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
‡ COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
		<u>15-16</u>
SEMESTER II		
OFC 166	Intermediate Shorthand*** or	4
OFC 104	Speedwriting Dictation	(3)
† OFC 174	Intermediate Typing or	2
OFC 273	Advanced Typing	
OFC 162	Office Procedures	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
BUS 105	Introduction to Business	3
‡ COM 132	Applied Composition and Speech	3
		<u>17-18</u>
SEMESTER III		
OFC 165	Introduction to Word Processing	3
OFC 231	Business Correspondence	3
CS 175	Introduction to Computer Science	3
# OFC 266	Advanced Shorthand	4
PSY 131	Human Relations or	3
PSY 105	Introduction to Psychology	
OFC 273	Advanced Typing or	2
† Elective		(3)
		<u>18-19</u>
SEMESTER IV		
OFC 265	Word Processing Practices and Procedures	3
OFC 275	Secretarial Procedures or	3
OFC 803	Cooperative Work Experience or	
OFC 804	Cooperative Work Experience	(4)
HUM 101	Introduction to Humanities	3
† Electives		6-7
		<u>15-17</u>
Minimum Required Hours:		65

continued

†Electives — Must be taken from the following:

OFC	Any OFC course may be selected	
OFC 803/804	Cooperative Work Experience	3-4
ACC 132	Bookkeeping II	3
ACC 202	Principles of Accounting II	3
BUS 143	Personal Finance	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
MGT 136	Principles of Management	3
MGT 242	Personnel Administration	3
CS 250	Contemporary Topics in Computer Science	3
CS 251	Special Topics in Computer Science & Data Processing	4
ECO 201	Principles of Economics I	3
‡ SPE 105	Fundamentals of Public Speaking	3

‡Students may be placed in typing courses based on proficiency level determined by previous training, experience and/or placement tests.

‡ Students may substitute ENG 101 for COM 131 and ENG 102 for COM 132 with permission of the Division Chair. However, students must take SPE 105 as an elective when substituting ENG 101 and ENG 102.

If OFC 103 and OFC 104 are taken, an approved elective may be substituted.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate)

The General Office Certificate Program is designed to provide the student with a basic working knowledge and skills in various office activities. A general knowledge of business concepts and procedures is provided.

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Electives		7
		19
SEMESTER II		
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		7
		16
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Accounting Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
‡ OFC 172	Beginning Typing**	3
ACC 131	Bookkeeping I or	3
ACC 201	Principles of Accounting I	
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
‡ ACC 132	Bookkeeping II or	3
† Elective		
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
† Electives		8
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 162	Office Procedures	3
OFC 165	Introduction to Word Processing	3
OFC 166	Intermediate Shorthand***	4
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

‡ Required if ACC 131 was taken previously.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS — GENERAL OFFICE

(Certificate — Office Clerical Emphasis)

		CREDIT HOURS
SEMESTER I		
OFC 160	Office Machines*	3
OFC 162	Office Procedures	3
† OFC 172	Beginning Typing**	3
COM 131	Applied Composition and Speech	3
MTH 130	Business Mathematics	3
† Elective		3
		18
SEMESTER II		
OFC 165	Introduction to Word Processing	3
OFC 174	Intermediate Typing	2
OFC 231	Business Communications	3
ACC 131	Bookkeeping I	3
BUS 105	Introduction to Business	3
CS 175	Introduction to Computer Science	3
		17
Minimum Hours Required:		35

†Electives — Must be taken from the following:

OFC 103	Speedwriting Theory	4
OFC 104	Speedwriting Dictation	3
OFC 159	Beginning Shorthand	4
OFC 166	Intermediate Shorthand***	4
OFC 231	Business Communications	3
ACC 132	Bookkeeping II	3
ACC 201	Principles of Accounting I	3
COM 132	Applied Composition and Speech	3
PSY 105	Introduction to Psychology or	3
PSY 131	Human Relations	
MGT 136	Principles of Management	3
BUS 234	Business Law	3
CS 250	Contemporary Topics in Computer Science	3
OFC 273	Advanced Typing	2
OFC 275	Secretarial Procedures	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)

‡Students who can demonstrate proficiency by previous training, experience or placement tests may substitute a course from the electives listed for the program.

*OFC 192, OFC 193 and OFC 194 taken cumulatively will be equivalent to OFC 160.

**OFC 176, OFC 177 and OFC 178 taken cumulatively will be equivalent to OFC 172.

***OFC 187, OFC 188 and OFC 189 taken cumulatively will be equivalent to OFC 166.

OFFICE CAREERS - INSURANCE

(Certificate)

		CREDIT HOURS
SEMESTER I		
INS 108	Personal and Commercial Auto Insurance	3
INS 109	Personal Lines - Homeowners/Fire/Marine	3
MTH 130	Business Mathematics	3
OFC 160	Office Machines	3
OFC 172	Beginning Typing** or	3
OFC 174	Intermediate Typing	(2)
		14-15
SEMESTER II		
INS 110	Commercial Casualty - Workers Compensation/General Liability/and Crime	3
INS 111	TMP Commercial Fire/Commercial Marine/Fidelity Bond	3
OFC 162	Office Procedures	3
OFC 174	Intermediate Typing** or	2
†Technical Elective		3
OFC 231	Business Communications	3
OFC 803	Cooperative Work Experience or	3
OFC 804	Cooperative Work Experience	(4)
		17-18
Minimum Hours Required:		31

†Electives — Must be taken from the following:

OFC 165	Introduction to Word Processing	3
OFC 273	Advanced Typing	2
CS 175	Introduction to Computer Science	3

*Students with previous training in typing will be placed according to ability.

**Students who took OFC 174 first semester, will take a technical elective second semester.

ORNAMENTAL HORTICULTURE TECHNOLOGY — GREENHOUSE FLORIST OPTION

(Associate Degree)

This option prepares a student to enter the florist industry. The student may direct his training toward his own goals through the selection of appropriate electives and occupational experience. The program places emphasis on those skills required for success in wholesale greenhouse flower production, retail floral design and sales, and retail greenhouse florist production and sales. Upon graduation, a student is qualified to enter a wide number of positions in crop production, sales and distribution, floral design and flower shop management.

		CREDIT HOURS
SEMESTER I		
HLN 131	Horticultural Science	4
HLN 132	Landscape Trees	2
BIO 115	Biological Science or	4
BIO 110	Introductory Botany	
COM 131	Applied Composition and Speech	3
MTH 195	Technical Mathematics or	3
MTH 130	Business Mathematics	
		16
SEMESTER II		
HLN 133	Landscape Shrubs, Vines, & Ground Cover	2
HLN 140	Herbaceous and Exotic Plants	3
CHM 115	General Chemistry or	4
PSC 118	Physical Science	
ART 110	Basic Design I	3
BUS 105	Introduction to Business or	3
MGT 153	Small Business Management	
		15
SEMESTER III		
HLN 235	Propagation of Woody Ornamental Plants	2
HLN 226	Greenhouse Horticulture	3
HLN 141	Floral Design	4
MGT 206	Principles of Marketing or	3
MGT 137	Principles of Retailing	
Electives		3
		15
SEMESTER IV		
HLN 234	Ornamental Crop Production	3
HLN 236	Florist Management	4
HLN 245	Problems and Practices in Industry	4
ACC 131	Bookkeeping or	3
MGT 157	Small Business Bookkeeping and Accounting Practices	
Elective		3
		17
Minimum Hours Required		63

ORNAMENTAL HORTICULTURE TECHNOLOGY — FLORIST CERTIFICATE

(Certificate)

This program prepares the student to enter positions in floral design, retail flower shop operations, and sales and distribution of flowers and florist supplies.

		CREDIT HOURS
SEMESTER I		
HLN 141	Floral Design	4
HLN 132	Landscape Trees	2
ART 110	Basic Design I	3
BUS 105	Introduction to Business or	3
MGT 153	Small Business Management	
MTH 130	Business Mathematics	3
		15
SEMESTER II		
HLN 236	Florist Management	4
HLN 133	Landscape Shrubs, Vines, & Ground Cover	2
HLN 140	Herbaceous and Exotic Plants	3
HLN 804	Cooperative Work Experience	4
ACC 131	Bookkeeping or	3
MGT 157	Small Business Bookkeeping and Accounting Practices	
		16
Minimum Hours Required:		31



ORNAMENTAL HORTICULTURE TECHNOLOGY — LANDSCAPE NURSERY OPTION

(Associate Degree)

This option prepares a student to enter both the landscaping industry and the nursery industry at a technician level. The student may direct his training toward his own goals through the selection of electives and occupational experiences. The course places emphasis on those skills required for success in landscape service, nursery production and sales, and landscaping planning and contracting business. A student who completes this training is also well prepared for work in park and recreational departments, shopping center malls and industrial parks and gardens.

		CREDIT HOURS
SEMESTER I		
HLN 131	Horticultural Science	4
HLN 132	Landscape Trees	2
BIO 115	Biological Science or	4
BIO 110	Introductory Botany	
HLN 145	Landscape Development I	3
HLN 146	Fundamentals of Landscape Planning	3
		16
SEMESTER II		
HLN 147	Landscape Development II	3
HLN 133	Landscape Shrubs, Vines, & Ground Cover	2
HLN 140	Herbaceous and Exotic Plants	3
MTH 195	Technical Mathematics or	3
MTH 130	Business Mathematics	
CHM 115	General Chemistry or	4
PSC 118	Physical Science	
		15
SEMESTER III		
HLN 235	Propagation of Woody Ornamental Plants	2
HLN 226	Greenhouse Horticulture	3
HLN 231	Landscape Design I	4
HLN 233	Nursery Operations	3
COM 131	Applied Composition and Speech	3
		15
SEMESTER IV		
HLN 232	Landscape Planning and Management	4
HLN 234	Ornamental Crop Production	3
HLN 245	Problems and Practices in Industry	4
ACC 131	Bookkeeping or	3
MGT 157	Small Business Bookkeeping and Accounting Practices	
BUS 105	Introduction to Business or	3
MGT 153	Small Business Management	
		17
Minimum Hours Required		63

ORNAMENTAL HORTICULTURE TECHNOLOGY — LANDSCAPE GARDENER CERTIFICATE

(Certificate)

This program prepares the student to enter positions in landscape construction, park maintenance, home landscape and garden services, and garden center and nursery sales. Through the selection of electives and occupational experiences the student can guide his training toward specific jobs.

		CREDIT HOURS
SEMESTER I		
HLN 131	Horticultural Science	4
HLN 132	Landscape Trees	2
HLN 146	Fundamentals of Landscape Planning	3
BUS 105	Introduction to Business or	3
MGT 153	Small Business Management	
MTH 195	Technical Mathematics or	3
MTH 130	Business Mathematics	
		15
SEMESTER II		
HLN 133	Landscape Shrubs, Vines, & Ground Cover	2
HLN 140	Herbaceous and Exotic Plants	3
HLN 145	Landscape Development I	3
HLN 804	Cooperative Work Experience	4
Elective		3
		15
Minimum Hours Required:		30

REAL ESTATE

(Associate Degree)

The program in real estate is designed to develop the fundamental skills, attitudes and experiences which enable the student to function in decision-making positions in the real estate profession.

		CREDIT HOURS
SEMESTER I		
COM 131	Applied Composition & Speech or	3
ENG 101	Composition & Expository Reading	
BUS 105	Introduction to Business	3
MTH 130	Business Mathematics or	3
MTH 111	Mathematics for Business and Economics	
RE 130	Real Estate Principles	3
RE 131	Real Estate Finance	3
		15
SEMESTER II		
COM 132	Applied Composition and Speech or	3
ENG 102	Composition and Literature	
RE 133	Real Estate Marketing	3
RE 135	Real Estate Appraisal	3
RE 136	Real Estate Law	3
Elective	(Psychology, Sociology or Human Development)	3
		15
SEMESTER III		
ECO 201	Principles of Economics I	3
RE 230	Real Estate Office Management	3
RE 250	Real Estate Internship I*	4
RE 254	Real Estate Seminar I*	2
‡ Technical Elective		3
		15
SEMESTER IV		
GVT 201	American Government	3
ACC 201	Principles of Accounting I	3
‡ Technical Electives		9
		15
Minimum Hours Required:		60

‡ Technical Electives — Must be selected from the following:

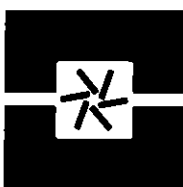
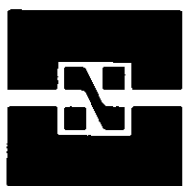
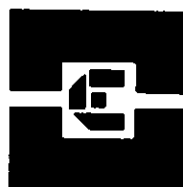
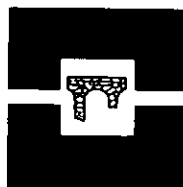
RE 233	Commercial Investment Real Estate	3
RE 235	Property Management	3
RE 251	Real Estate Internship II*	4
RE 255	Real Estate Seminar II*	2
ACC 202	Principles of Accounting II	3
ECO 202	Principles of Economics II	3
SPE 105	Fundamentals of Public Speaking	3
RE 240	Special Problems in Real Estate	1

* Preliminary interview by Real Estate Coordinator required. RE 250 and RE 254 must be taken concurrently. RE 251 and RE 255 must be taken concurrently.



Technical/Occupational Programs

For the Seven
Member Colleges
of the Dallas County
Community College District



DALLAS COUNTY COMMUNITY COLLEGE DISTRICT

Career Education Programs	BHC	CVC	EFC	ECC	MVC	NLC	RLC
Accounting Associate	x	x	x	x	x	x	x
Advertising Art	x						
Air Conditioning & Refrigeration		x	x			x	
Animal Medical Technology		x					
Apparel Design				x			
Architectural Technology				x			
Architectural Drafting				x			
Auto Body Technology	x		x				
Automotive Parts, Sales & Service	x						
Automotive Technology Apprenticeship		x					
Automotive Technology	x	x	x				
Aviation Maintenance Technology					x		
Aviation Technology					x		
Air Cargo Transport					x		
Aircraft Dispatcher					x		
Airline Marketing					x		
Air Traffic Control					x		
Career Pilot					x		
Fixed Base Operations/Airport Management					x		
Banking and Finance							x
Banking							x
Credit & Financial Management							x
Credit Union							x
Savings & Loan							x
Building Trades						x	
Carpentry—Residential & Commercial						x	
Electrical						x	
Child Development Associate	x		x				
CDA Training Certificate	x		x				
Special Child	x		x				
Administrative	x		x				
Infant-Toddler	x		x				
Commercial Music		x					
Arranger/Composer/Copyist		x					
Music Retailing		x					
Recording Technology		x					
Construction Management & Technology							x
Data Processing							
Information Systems				x			
Key Entry/Data Control				x			
Operator				x			
Programmer	x	x	x	x	x	x	x
Small Computer Systems Information Specialist				x			
Diesel Mechanics						x	
Distribution Technology						x	
Drafting & Design Technology			x	x	x		
Electronics Design Option			x				
Educational Paraprofessional/Assistant							x
Electronics Technology			x		x		
Avionics					x		
Digital Electronics			x				
Engineering Technology							x
Electric Power							x
Electro-Mechanical							x
Fluid Power							x
Manufacturing Engineering							x
Quality Control							x

BHC — Brookhaven College
CVC — Cedar Valley College
EFC — Eastfield College

ECC — El Centro College
MVC — Mountain View College

NLC — North Lake College
RLC — Richland College

	BHC	CVC	EFC	ECC	MVC	NLC	RLC
Fire Protection Technology				x			
Food Service				x			
Dietetic Assistant & Technician				x			
Food Service Operations				x			
School Food Service				x			
Graphic Arts/Communications			x				
Horology		x					
Hotel-Motel Operations				x			
Interior Design				x			
Legal Assistant				x			
Machine Parts Inspection					x		
Machine Shop					x		
Major Appliance Repair		x					
Management Careers	x	x	x	x	x	x	x
Administrative Management	x	x	x	x	x	x	x
Mid-Management	x	x	x	x	x	x	x
Purchasing Management			x			x	
Sales, Marketing & Retail Management	x	x					
Small Business Management		x		x	x	x	x
Medical				x			
Associate Degree Nursing	x*		x**	x		x**	x**
Dental Assisting Technology				x			
Medical Assisting Technology				x			
Medical Laboratory Technology				x			
Medical Transcription				x			
Radiography Technology				x			
Respiratory Therapy Technology				x			
Surgical Technology				x			
Vocational Nursing			x*	x		x*	
Motorcycle Mechanics		x					
Office Careers	x	x	x	x	x	x	x
Administrative Assistant	x	x	x	x	x	x	x
General Office Certificate	x	x	x	x	x	x	x
Insurance Certificate							x
Legal Secretary	x	x	x	x	x	x	x
Professional Secretary	x	x	x	x	x	x	x
Records Management	x	x		x			
Optical Technology						x	
Ornamental Horticulture Technology							x
Florist & Greenhouse Florist							x
Landscape Nursery & Gardener							x
Outboard Marine Engine Mechanics		x					
Pattern Design				x			
Precision Optics Technology						x	
Police Science Technology				x			
Postal Service Administration					x		
Real Estate						x	x
Retail Distribution and Marketing	x	x					
Commercial Design & Advertising		x					
Fashion Marketing	x	x					
Small Engine Mechanics		x					
Social Work Associate			x				
Solar Energy Technology						x	
Training Paraprofessionals for the Deaf			x				
Transportation Technology			x				
Welding Technology			x		x		

* Programs are offered at the designated colleges through El Centro College.

** Second Year courses are offered at the designated colleges through El Centro College.

RECIPROCAL TUITION AGREEMENT

DCCCD PROGRAMS

The following programs offered by Dallas County Community College District may be taken by Tarrant County residents at in-county tuition rates:

Program	Campus
Advertising Art	BHC
Animal Medical Technology	CVC
Apparel Design	ECC
Aviation Technology	MVC
Air Cargo	
Air Traffic Control	
Aircraft Dispatcher	
Airline Marketing	
Career Pilot	
Fixed Base Operations	
Avionics	MVC
Automotive Parts	BHC
Automotive Machinist	BHC
Building Trades	NLC
Carpentry	
Electrical	
Commercial Design & Advertising	CVC
Commercial Music	CVC
Construction Management	RLC
Diesel Mechanics	NLC
Distribution Technology	NLC
Engineering Technology	RLC
Food Service Operations	ECC
Graphic Communications	EFC
Horology	MVC
Hotel/Motel Operations	ECC
Human Services	EFC
Interior Design	ECC
Motorcycle Mechanics	CVC
Optical Technology	NLC
Outboard Marine	
Engine Mechanics	CVC
Pattern Design	ECC
Purchasing Management	EFC, NLC
Retail Management	BHC, CVC
Solar Energy Technology	NLC
Vocational Nursing	ECC

TCJC PROGRAMS

The following programs offered by Tarrant County Junior College may be taken by Dallas County residents at in-county tuition rates:

Program	Campus*
Agribusiness	NW
Cast Metals Technology	NE
Civil/Construction Technology	NE
Dental Hygiene	NE
Emergency Medical Technology	NE
Industrial Supervision	S
Long Term	
Health Care Administration	NE
Media Technology	NE
Medical Records Technology	NE
Nondestructive	
Evaluation Technology	S
Physical Therapist Assistant	NE
Property Tax Appraisal	NE
Radio-TV Repair	S

*NE — Northeast Campus, NW — Northwest Campus, S — South Campus.

STUDENTS CONSIDERING TRANSFER TO A FOUR-YEAR INSTITUTION

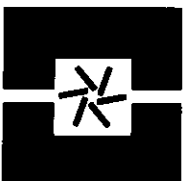
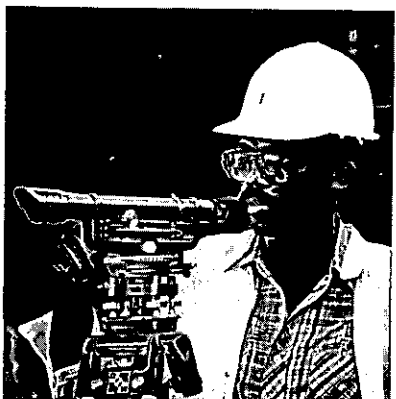
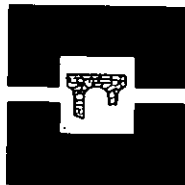
All courses which make up DCCCD technical/occupational programs are credit courses leading to an associate degree. Some courses are transferable to four-year institutions. Students who plan to transfer are advised to consult with a counselor to develop a technical/occupational course plan which best meets the degree requirements of the chosen four-year college or university.



Course Descriptions

Including General Education
and Technical/Occupational Courses

for the Seven
Member Colleges
of the Dallas County
Community College District





IMPORTANT INSTRUCTIONS

- **All courses listed in this catalog are not available at every college.** This catalog contains descriptions of both General Education courses and Technical/Occupational courses offered collectively by the seven colleges of the Dallas County Community College District. The listing is alphabetical by course subject title.
- **All courses listed in this catalog may not be offered during the current year.** It is suggested that students plan their schedules with the help of a college counselor well in advance of registration.

DEFINITION OF TERMS

The following terms are used throughout the catalog and particularly in this section of Course Descriptions. A brief explanation follows each term.

1. *Concurrent Enrollment*
(a) Enrollment by the same student in two different colleges of the District at the same time, or (b) enrollment by a high school senior in a high school and one of the District colleges at the same time, or (c) enrollment by a student in two related courses in the same semester.
2. *Contact Hours* - The number of clock hours a student spends in a given course during the semester.

3. *Credit Hours (Cr.)* - College work is measured in units called credit hours. A credit hour value is assigned to each course and is normally equal to the number of hours the course meets each week. Credit hours are sometimes referred to as semester hours.
4. *Elective* - A course chosen by the student that is not required for a certificate or degree.
5. *Flexible Entry Course* - A course that permits beginning or ending dates other than the beginning or ending of the semester. Consult the class schedule for further information.
6. *Laboratory Hours (Lab.)* - The number of clock hours in the fall or spring semester the student spends each week in the laboratory or other learning environment.
7. *Lecture Hours (Lec.)* - The number of clock hours in the fall or spring semester the student spends each week in the classroom.
8. *Major* - The student's main emphasis of study (for example, Automotive Technology, Psychology, etc.)
9. *Performance Grades* - Grades assigned point values, including A, B, C, D, and F.
10. *Prerequisite* - A course that must be successfully completed or a requirement such as related life experiences that must be met before enrolling in another course.

In the following course descriptions, the number of credit hours for each course is indicated in parenthesis opposite the course number and title. Courses numbered 100 (except Music 199, Art 199 and Theater 199) or above may be applied to requirements for associate degrees. Courses numbered below 100 are developmental in nature and may not be applied to degree requirements. Students are urged to consult their counselors or specific college catalogs for information about transferability of courses to four-year institutions. Course prerequisites may only be waived by the appropriate division chairperson.

ACCOUNTING (ACC) 131 (3)
BOOKKEEPING I (3 LEC.)

The fundamental principles of double-entry bookkeeping are presented and applied to practical business situations. Emphasis is on financial statements, trial balances, work sheets, special journals, and adjusting and closing entries. A practice set covering the entire business cycle is completed.

ACCOUNTING (ACC) 132 (3)
BOOKKEEPING II (3 LEC.)

Prerequisite: Accounting 131. This course covers accruals, bad debts, taxes, depreciation, controlling accounts, and business vouchers. Bookkeeping for partnerships and corporations is introduced.

ACCOUNTING (ACC) 201 (3)
PRINCIPLES OF ACCOUNTING I (3 LEC.)

This course covers the theory and practice of measuring and interpreting financial data for business units. Topics include depreciation, inventory valuation, credit losses, the operating cycle, and the preparation of financial statements. (This course is offered on campus and may be offered via television.)

ACCOUNTING (ACC) 202 (3)
PRINCIPLES OF ACCOUNTING II (3 LEC.)

Prerequisite: Accounting 201. Accounting procedures and practices for partnerships and corporations are studied. Topics include cost data and budget controls. Financial reports are analyzed for use by creditors, investors, and management.

ACCOUNTING (ACC) 203 (3)
INTERMEDIATE ACCOUNTING I (3 LEC.)

Prerequisite: Accounting 202. This course is an intensive study of the concepts, principles, and practice of modern financial accounting. Included are the purposes and procedures underlying financial statements.

ACCOUNTING (ACC) 204 (3)
MANAGERIAL ACCOUNTING (3 LEC.)

Prerequisite: Accounting 202. This course is a study of accounting practices and procedures used to

provide information for business management. Emphasis is on the preparation and internal use of financial statements and budgets. Systems, information, and procedures used in management planning and control are also covered.

ACCOUNTING (ACC) 205 (3)
BUSINESS FINANCE (3 LEC.)

Prerequisites: Economics 201 or 202 and Accounting 201. This course focuses on the financial structure in the free enterprise system. Topics include interest rates, value analysis, the financing of business firms and government, and security markets. Financial requirements for decision-making and capital formation are analyzed.

ACCOUNTING (ACC) 207 (3)
INTERMEDIATE ACCOUNTING II (3 LEC.)

This course continues Accounting 203. Principles and problems in fixed liabilities and capital stock are examined. Equities, business combinations and the analysis and interpretation of supplementary statements are also included.

ACCOUNTING (ACC) 238 (3)
COST ACCOUNTING (3 LEC.)

Prerequisite: Accounting 202. The theory and practice of accounting for a manufacturing concern are presented. The measurement and control of material, labor, and factory overhead are studied. Budget, variance analysis, standard costs, and joint and by-product costing are also included.

ACCOUNTING (ACC) 239 (3)
INCOME TAX ACCOUNTING (3 LEC.)

Prerequisite: Accounting 202 or the consent of the instructor. This course examines basic income tax laws which apply to individuals and sole proprietorships. Topics include personal exemptions, gross income, business expenses, non-business deductions, capital gains, and losses. Emphasis is on common problems.

ADVERTISING ART (ADV) 110 (3)

INTRODUCTION TO
ADVERTISING ART (48 CONTACT HOURS)

Available career options, job descriptions, and practice in concept generation and visual thinking are covered in this survey course. Discussions of the role of advertising in society are also included with emphasis on analysis of effective advertising materials.

ADVERTISING ART (ADV) 111 (3)

HISTORY AND PSYCHOLOGY OF
VISUAL COMMUNICATIONS
(48 CONTACT HOURS)

This course provides the beginning student with a visual history of art styles, an understanding of the way in which visual images are perceived, and analytical skills in judging the effectiveness of such images. The critical appraisal skills learned in this context should enhance the student's ability to evaluate work in later courses.

ADVERTISING ART (ADV) 120 (4)

LETTERING AND LAYOUT (120 CONTACT HOURS)

Prerequisites: Art 110 and 114 or concurrent enrollment in Art 111 or the consent of the instructor. This laboratory course includes construction of alphabets, introduction to typography, paste-up techniques, and layout formulas and rationales. Pencil, pen, and brush techniques are also covered.

ADVERTISING ART (ADV) 121 (4)

BEGINNING ILLUSTRATION (120 CONTACT HOURS)

Prerequisites: Art 110 and 114 or concurrent enrollment in Art 111 or the consent of the instructor. The fundamentals of advertising are presented. Techniques for wet and dry media, methods of developing ideas, and requirements of some reproduction processes are included. Both acrylic painting techniques and airbrush are covered. Laboratory fee.

ADVERTISING ART (ADV) 201 (4)

ILLUSTRATION FOR
REPRODUCTION (120 CONTACT HOURS)

Prerequisites: Advertising Art 120, 121 or the consent of the instructor. This course emphasizes the preparation of illustration for reproduction by commercial printing processes. Requirements of paper selection, ink, and printing specifications are covered in the context of project assignments for advertisements. Laboratory fee.

ADVERTISING ART (ADV) 202 (4)

ADVANCED ILLUSTRATION
(120 CONTACT HOURS)

Prerequisite: Advertising Art 121 or the consent of the instructor. This advanced course involves presentation and further development of the fundamentals of advertising illustration and techniques introduced in Advertising Art 121. Laboratory fee.

ADVERTISING ART (ADV) 203 (4)

ADVANCED GRAPHIC DESIGN
(120 CONTACT HOURS)

Prerequisite: The consent of the instructor. Presentation techniques and requirements for newspapers and magazines, direct mail, poster, and packaging are covered in this advanced course. Emphasis is on typography.

ADVERTISING ART (ADV) 204 (4)

ADVANCED PRESENTATIONS
(120 CONTACT HOURS)

Prerequisite: Advertising Art 203 or the consent of the instructor. This advanced course presents more complex problems dealing with packaging, brochures, annual reports, newspapers and magazines, specialty pieces, billboards, and corporate logos. Laboratory fee.

ADVERTISING ART (ADV) 205 (3)

PROFESSIONAL PRACTICES
(48 CONTACT HOURS)

Prerequisite: The consent of the instructor. This course is open to advertising art students only. It is an advanced course covering a wide

range of professional practices. Agency, department store, free-lance and related procedures are included as well as job opportunities, job-seeking techniques, professional organizations, and other aspects of professional life.

ADVERTISING ART (ADV) 711 (1)
(See Cooperative Work Experience)

ADVERTISING ART (ADV) 712 (2)
(See Cooperative Work Experience)

ADVERTISING ART (ADV) 703, 713 (3)
(See Cooperative Work Experience)

ADVERTISING ART (ADV) 704, 714 (4)
(See Cooperative Work Experience)

AIR CONDITIONING AND REFRIGERATION (ACR) 111 (3)
PRINCIPLES OF REFRIGERATION (2 LEC., 2 LAB.)

This course introduces the principles of refrigeration. Topics include terminology, heat and energy concepts, basic system components and operating characteristics, and installation procedures. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 112 (3)
PROPERTIES OF AIR (2 LEC., 2 LAB.)

Prerequisites: Air Conditioning and Refrigeration 111 and Mathematics 195. The thermodynamic properties of air are studied. Theories are applied to evaporative cooling, ventilation, humidity control, environmental conditions affecting human comfort, and health and industrial processes. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 113 (3)
FUNDAMENTALS OF ELECTRICITY (2 LEC., 3 LAB.)

Starting with basic wiring, wiring diagrams and symbols, this course includes electrical concepts of electron flow, resistance, voltage, current, power, and the construction and use of meters. The relation of electrical components to diagrams and applications to control circuits are emphasized. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 114 (3)
HEAT LOAD ANALYSIS (2 LEC., 2 LAB.)

Prerequisites: Air Conditioning and Refrigeration 111 and Mathematics 195. This course covers the methods and procedures of heating and cooling surveys for residences and small commercial systems. Included are ways to reduce equipment load for energy conservation and operating cost efficiency. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 115 (3)
UNIT AIR CONDITIONING SYSTEMS (2 LEC., 3 LAB.)

Prerequisites: Completion or enrollment in Air Conditioning and Refrigeration 111 and 113. The servicing of domestic unit air conditioning systems is presented. Refrigerant charging and evacuation procedures, electric motors and controls, and functional operations of major components are studied. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 116 (3)
SUMMER AIR CONDITIONING SYSTEMS (2 LEC., 3 LAB.)

Prerequisites: Credit or enrollment in Air Conditioning and Refrigeration 112, 114, and 115. Central residential and small commercial systems are studied. Topics include equipment, electric power distribution, and controls. Installation, operation, and troubleshooting are emphasized. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 117 (3)
DOMESTIC REFRIGERATION (2 LEC., 2 LAB.)

Prerequisites: Credit or enrollment in Air Conditioning and Refrigeration 111 and 113. This course presents the mechanical and electrical elements of refrigeration. Theories are applied to domestic refrigerators, freezers, and automatic ice cube makers. Emphasis is on operation, troubleshooting, and repair. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 118 (3)

WINTER AIR CONDITIONING SYSTEMS (2 LEC., 3 LAB.)

Prerequisites: Credit or enrollment in Air Conditioning and Refrigeration 113, 114, and 115. Direct gas fired and electric warm air heating systems are studied. Topics include humidification devices, specific equipment, wiring, and controls. Installation and service are emphasized. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 221 (3)

REFRIGERATION LOADS (2 LEC., 2 LAB.)

Prerequisites: Air Conditioning and Refrigeration 116. This course focuses on the analysis and estimation of refrigeration loads for medium and low temperature systems. Product storage data and procedures for calculating loads with a variety of products and refrigeration equipment are included. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 222 (3)

ADVANCED SYSTEMS (2 LEC., 3 LAB.)

Prerequisites: Air Conditioning and Refrigeration 116. Large commercial and industrial air conditioning systems are introduced. Basic system designs, equipment and control systems are the main topics. Instruction on air handling units, air volume boxes, centrifugal chillers, absorption systems, cooling towers, water treatment, and chilled water systems is included. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 223 (3)

MEDIUM TEMPERATURE REFRIGERATION SYSTEMS (2 LEC., 3 LAB.)

Prerequisite: Credit or enrollment in Air Conditioning and Refrigeration 221. Service and installation procedures for medium temperature equipment as found in food stores, warehouses, distribution centers, and processing plants are presented. Particular attention is given to electrical and mechanical features and to defrost subsystems. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 224 (3)

SYSTEM TESTING AND BALANCING (2 LEC., 2 LAB.)

Prerequisite: Credit or enrollment in Air Conditioning and Refrigeration 222. Concepts and procedures for determining the effectiveness and efficiency of an air conditioning system are studied. System balance, capacity, load requirements and energy consumption are considered. Also included are the performance data and the use of test instruments for measurement of air flow, water flow, energy consumption, and recording of temperature. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 227 (3)

LOW TEMPERATURE REFRIGERATION SYSTEMS (2 LEC., 3 LAB.)

Prerequisite: Credit or enrollment in Air Conditioning and Refrigeration 221. Service and installation procedures for low temperature equipment as found in food stores, warehouses, distribution centers, and industrial plants are presented. Particular attention is given to electrical and mechanical characteristics and to defrost system requirements. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 228 (3)

AIR CONDITIONING SYSTEM EQUIPMENT SELECTION (2 LEC., 3 LAB.)

Prerequisite: Credit or enrollment in Air Conditioning and Refrigeration 222. Methods of equipment selection are covered for air conditioning load requirements. Consideration is given to system layout, utility service, control schemes, duct sizing, and installation practices. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 229 (3)

REFRIGERATION EQUIPMENT SELECTION (2 LEC., 2 LAB.)

Prerequisite: Credit or enrollment in Air Conditioning and Refrigeration 223 or 227. This course presents a procedure for selecting equipment and estimating the capacity of commercial refrigeration systems. Consideration is given to component compatibility, system conti-

nuity control, balancing, and efficiency. Laboratory fee.

AIR CONDITIONING AND REFRIGERATION (ACR) 230 (3)
ENERGY CONSERVATION (2 LEC., 2 LAB.)

Prerequisite: Air Conditioning and Refrigeration 116. The flow of energy in an air conditioning or refrigeration system is examined in depth. Emphasis is on cost effectiveness and energy savings. Practical situations are examined where industry offers a range of equipment or construction designs using various sources of energy with different degrees of efficiency. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 150 (3)
BASIC PRINCIPLES OF ELECTRICITY (90 CONTACT HOURS)

This is a comprehensive course that includes air conditioning/refrigeration 151, 152, and 153. Students may register in the comprehensive course or any of the inclusive courses. This course is a study of the principles of electricity as applied in simple circuits and circuit components. Included are basic electrical units and test instruments. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 151 (1)
BASIC ELECTRICAL UNITS (30 CONTACT HOURS)

Basic electrical units are covered. Volts, ohms, amperes and watts are calculated and measured. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 152 (1)
SIMPLE CIRCUITS (30 CONTACT HOURS)

This course focuses on simple circuits. Topics include the interpretation of simple schematic and combination circuits with resistive loads. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 153 (1)
CIRCUIT COMPONENTS (30 CONTACT HOURS)

Components of circuits are examined. Circuits are constructed using switches, relays, solenoids, basic control and protective devices.

AIR CONDITIONING/ REFRIGERATION (AC) 155 (3)
ADVANCED ELECTRICAL CIRCUITS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 156 and 157. Students may register in the comprehensive course or either of the inclusive courses. Advanced electrical circuits are presented. Basic electrical principles are applied to the construction and diagnosis of complex electrical circuits and alternating current motors. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 156 (2)
COMPLEX CIRCUITS (60 CONTACT HOURS)

This course is an advanced study of complex circuits. Included are the construction and interpretation of complex schematics and the construction and diagnosis of complex electrical circuits with resistive, inductive and capacitive loads. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 157 (1)
A.C. MOTOR FUNDAMENTALS (30 CONTACT HOURS)

Magnetic principles as applied in AC motors are covered. Wiring, diagnosis, and service of AC motors are included, as well as starting and protective devices commonly used in the air conditioning industry.

**AIR CONDITIONING/
REFRIGERATION (AC) 160 (3)**

BASIC PRINCIPLES OF
REFRIGERATION (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 161, 162, and 163. Students may register in the comprehensive course or any of the inclusive courses.

Principles of physics as applied to refrigeration systems are studied. Topics include thermodynamics, gas laws, heat transfer, and properties of air and refrigerants. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 161 (1)**

ELEMENTARY PHYSICS AND
THERMODYNAMICS (30 CONTACT HOURS)

This course presents the principles of thermodynamics, physics, and gas laws as applied to basic refrigeration systems. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 162 (1)**

HEAT TRANSFER AND AIR
PROPERTIES (30 CONTACT HOURS)

Principles of heat flow and heat transfer are covered. Included are simple load calculations, air properties and basic psychrometric chart construction.

**AIR CONDITIONING/
REFRIGERATION (AC) 163 (1)**

REFRIGERANT
PROPERTIES (30 CONTACT HOURS)

Common refrigerant types are identified. Basic refrigerant properties are compared and the pressure-enthalpy diagram is constructed.

**AIR CONDITIONING/
REFRIGERATION (AC) 165 (3)**

VAPOR COMPRESSION
SYSTEMS (90 CONTACT HOURS)

This course covers the various features of vapor compression systems. The major components, their function, and relationship are examined. Also presented are the four processes of the vapor compression and system service, including evacuation and charging.

**AIR CONDITIONING/
REFRIGERATION (AC) 170 (3)**

PIPEFITTING
PROCEDURES (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 171 and 172. Students may register in the comprehensive course or either of the inclusive courses. Piping practices are studied. Topics include pipe size selection and techniques of soldering, silver-soldering and silver-brazing. Leak detection, and repair methods are also covered. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 171 (2)**

PIPE AND FITTINGS (60 CONTACT HOURS)

This course presents piping practices. Topics include the identification and selection of correct pipe sizes and fittings and the construction of piping circuits using proper soft-solder, silver-solder, and silver-brazing techniques. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 172 (3)**

LEAK DETECTION AND
REPAIR (30 CONTACT HOURS)

The location and repair of refrigeration system leaks are covered. Correct repair methods and materials are emphasized. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 175 (3)**

RESIDENTIAL LOAD
CALCULATIONS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 176, 177, and 178. Students may register in the comprehensive course or any of the inclusive courses. This course is a study of heating and cooling load calculations for psychrometric chart construction and interpretation. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 176 (1)

COOLING LOAD
CALCULATIONS (30 CONTACT HOURS)

Cooling load calculations for residences are presented. Topics include the identification of heat sources, calculation of heat transfer coefficients and calculation of the cooling load. Emphasis is on energy conservation. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 177 (1)

HEATING LOAD CALCULATIONS—
RESIDENTIAL (30 CONTACT HOURS)

Heating load calculations for residences are presented. Topics include the identification of sources of heat loss, calculation of heat transfer coefficients, and calculation of the heating load. Emphasis is on energy conservation. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 178 (1)

AIR PROPERTIES—
RESIDENTIAL (30 CONTACT HOURS)

Measurement of residential air properties is covered. Included are the plotting and interpretation of psychrometric charts and identification of methods of humidity control. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 180 (3)

RESIDENTIAL COOLING
SYSTEMS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 181, 182, and 183. Students may register in the comprehensive course or any of the inclusive courses. This course presents principles of refrigeration for residential cooling systems. Emphasis is on compressors, condensers, evaporators, metering devices, electrical components, and the reverse cycle system (heat pump). Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 181 (1)

REFRIGERATION SYSTEMS—
RESIDENTIAL (30 CONTACT HOURS)

Types of cooling systems for residences are covered. Major components are included, such as compressors, evaporators, condensers, and metering devices with emphasis on acceptable piping practices. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 182 (1)

ELECTRICAL SYSTEMS—
RESIDENTIAL COOLING (30 CONTACT HOURS)

The components of the electrical system for residential cooling are presented. Topics include electrical control devices, protective devices and AC motors. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 183 (1)

REVERSE CYCLE
SYSTEMS (30 CONTACT HOURS)

This course is a study of the residential heat pump and its use in summer/winter air conditioning. The electrical and mechanical system is included. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 185 (3)

RESIDENTIAL HEATING
SYSTEMS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 186, 187, and 188. Students may register in the comprehensive course or any of the inclusive courses. Principles and procedures used in residential heating systems are studied. Emphasis is on the gas and electric warm-air furnace. Included are the mechanical and electrical components of the heating systems. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 186 (1)**

WARM-AIR FURNACE—
GAS (30 CONTACT HOURS)

The gas warm-air furnace is examined. Included are the diagnosis and service of heat exchangers, burner assemblies and gas valves. The combustion process, vent systems and safety procedures are also studied. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 187 (1)**

WARM-AIR FURNACE—
ELECTRIC (30 CONTACT HOURS)

The electric warm-air furnace is examined. Included are the principles and practices of resistance heating, the components of the system, and their relationship. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 188 (1)**

ELECTRICAL SYSTEMS—
HEATING (30 CONTACT HOURS)

The electric heating systems are examined. Included are the identification and diagnosis of individual components of the electrical system and the relationship of the components to the system. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 190 (3)**

COMMERCIAL REFRIGERATION
SYSTEMS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 191, 192, and 193. Students may register in the comprehensive courses or in any of the inclusive courses. This course is a study of commercial refrigeration systems. Topics include system components such as flow-control and pressure control devices, defrost systems and humidity control. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 191 (1)**

INTRODUCTION TO
COMMERCIAL REFRIGERATION
SYSTEMS (30 CONTACT HOURS)

Commercial refrigeration systems are presented. Emphasis is on systems common to light commercial fixtures. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 192 (1)**

SYSTEM COMPONENTS—
COMMERCIAL REFRIGERATION
(30 CONTACT HOURS)

Major components of commercial systems are studied. Included are compressors, flow control, pressure control devices and the relationship of the components to the total system. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 193 (1)**

DEFROST SYSTEMS AND
HUMIDITY CONTROL (30 CONTACT HOURS)

This course covers the diagnosis, service, repair and replacement of components of defrost systems. Air properties and humidity control are included. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 195 (3)**

COMMERCIAL REFRIGERATION
SYSTEMS SERVICE (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 196, 197, and 198. Students may register in the comprehensive course or in the inclusive courses. This course presents the service of commercial refrigeration systems. Topics include the principles and practices for fixture installations, pipe-fitting procedures, leak detection and repair, evacuation and system charging for peak performance, system lubrication at low temperatures, and diagnosis and service of electrical system components. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 196 (1)

INSTALLATION PROCEDURES—
COMMERCIAL REFRIGERATION
(30 CONTACT HOURS)

Principles and practices for fixture installation are studied. Included are pipe-fitting procedures with emphasis on oil return. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 197 (1)

SYSTEM SERVICE AND REPAIR—
COMMERCIAL REFRIGERATION
(30 CONTACT HOURS)

System leaks are located and repaired. Also included are system evacuation and the refrigerant charge for peak performance. The diagnosis, and service of system components, such as compressors, evaporators, condensers, metering devices, and defrost mechanisms, are covered. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 240 (3)

AIR DISTRIBUTION SYSTEM—
RESIDENTIAL (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 241, 242 and 243. Students may register in the comprehensive course or any of the inclusive courses. Principles and practices of acceptable air distribution systems are presented. Topics include flow patterns, velocity volume and stratification for heating and cooling applications. Filter service, electronic air cleaners and humidifiers are also studied. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 198 (1)

ELECTRICAL SYSTEMS SERVICE—
COMMERCIAL REFRIGERATION
(30 CONTACT HOURS)

This course focuses on the servicing of electrical systems in commercial refrigeration. Included are the diagnosis, service, repair and replacement of components of electrical systems. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 241 (1)

AIR DISTRIBUTION—
COOLING (30 CONTACT HOURS)

Air distribution for residential cooling is studied. Topics include air flow, velocity, volume, flow patterns, methods of air distribution and system balance for best performance. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 242 (1)

AIR DISTRIBUTION—
HEATING (30 CONTACT HOURS)

Air distribution for residential heating is studied. Topics include air flow, velocity, volume, flow patterns, methods of air distribution and system balance for best performance. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 243 (1)

ELECTRONIC AIR CLEANERS
AND HUMIDIFIERS (30 CONTACT HOURS)

This course examines the principles of electronic air cleaners and humidifiers. Included are the service and adjustment of air cleaners and humidifiers and their use in environmental conditioning. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 245 (3)

RESIDENTIAL SYSTEMS
SERVICE (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 246 and 247. Students may register in the comprehensive course or either of the inclusive courses. The servicing of residential air conditioning systems is presented. Topics include the service, adjustment, repair and replacement of system components. Installation procedures are also covered. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 246 (2)**

SYSTEMS SERVICE AND REPAIR—
RESIDENTIAL (60 CONTACT HOURS)

This course focuses on the diagnosis, service, repair and replacement of air conditioning system components. Included are leak detection and repair, evaluation and charging procedures and adjustment of systems for peak performance. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 247 (1)**

INSTALLATION PROCEDURES—
RESIDENTIAL (30 CONTACT HOURS)

This course focuses on the installation of air conditioning systems. Included is the application of correct piping principles. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 250 (3)**

AIR CONDITIONING
EQUIPMENT SELECTION (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 251 and 252. Students may register in the comprehensive course or in either of the inclusive courses. Selection of the proper air conditioning equipment is presented. Topics include the calculation of residential cooling and heating loads using approved forms and the selection of equipment required for the calculated loads. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 251 (2)**

ADVANCED LOAD
CALCULATIONS (60 CONTACT HOURS)

This course focuses on the calculation of residential cooling and heating loads using the approved forms. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 252 (1)**

PROCESS EQUIPMENT
SELECTION (30 CONTACT HOURS)

This course focuses on the selection of residential air conditioning equipment to meet the calculated loads. Included is selection of the condensing unit, evaporator coil, and warm-air furnace (or heat pump). Emphasis is on energy conservation. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 255 (3)**

AIR DISTRIBUTION SYSTEMS
DESIGN (90 CONTACT HOURS)

This course is a comprehensive course that includes Air Conditioning/Refrigeration 256 and 257. Students may register in the comprehensive course or either of the inclusive courses. The custom design of air distribution systems according to the particular needs of the structure is covered. Included are advanced psychrometrics, duct design, diffuser selection and air-flow patterns. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 256 (1)**

ADVANCED PSYCHROMETRICS—
RESIDENTIAL (30 CONTACT HOURS)

This course is the specific study of advanced psychrometrics for residential use. Included are use of the psychrometric chart in air mixtures problems, apparatus dew point and by-pass factor selection, air properties and the determination of actual system performance. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 257 (2)**

AIR DISTRIBUTION EQUIPMENT
SELECTION (60 CONTACT HOURS)

This course is the specific study of equipment selection as indicated by calculated heating and cooling loads. Topics include the selection of air distribution duct systems, diffusers and air-flow patterns. Emphasis is on energy conservation. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 260 (3)

SPECIAL COMMERCIAL REFRIGERATION
APPLICATIONS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 261, 262 and 263. Students may register in the comprehensive course or in any of the inclusive courses. Commercial refrigeration principles are applied to special cases. Included are ice makers (flakers and cubers), beverages coolers and special display cases. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 261 (1)

ICE MAKERS—
FLAKERS (30 CONTACT HOURS)

This course focuses on ice makers (flakers). Topics include the diagnosis, service, repair and replacement of components of ice makers (flakers). Emphasis is on mechanical and control systems. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 262 (1)

ICE MAKERS—
CUBERS (30 CONTACT HOURS)

This course focuses on ice makers (cubers). Topics include the diagnosis, service, repair and replacement of components of ice makers (cubers). Emphasis is on harvest methods and control systems. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 263 (1)

BEVERAGE COOLERS AND SPECIAL
DISPLAY CASES (30 CONTACT HOURS)

This course focuses on beverage coolers and special display cases. Topics include the diagnosis and service of beverage coolers, water fountains, dairy cases and special display cases that require close temperature and/or humidity ranges. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 265 (3)

ADVANCED COMMERCIAL REFRIGERATION
SYSTEMS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration



266 and 267. Students may regeister in the comprehensive course or in either of the inclusive courses. Advanced commercial refrigeration systems are presented. Included are multiple compressors, evaporators, condensers and metering devices. Product and structural loads are calculated and analyzed. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 266 (1)

MULTIPLE SYSTEMS (30 CONTACT HOURS)

This course covers multiple systems. Included are the diagnosis, service, repair and replacement of components of the multiple compressor, evaporator, condenser, and metering device system. Emphasis is on control systems. Laboratory fee.

AIR CONDITIONING/ REFRIGERATION (AC) 267 (2)

PRODUCT AND STRUCTURAL
LOAD ANALYSIS (60 CONTACT HOURS)

This course covers the calculation and analysis of product and structural loads. The relationship of these loads to the total environmental system is included. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 270 (3)**
INDUSTRIAL AIR CONDITIONING
SYSTEMS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 271, 272 and 273. Students may register in the comprehensive course or in any of the inclusive courses. Industrial air conditioning systems are surveyed. Topics include the principles and operation of water-cooled condensing systems, water-treatment, water towers and piping. Also included are centrifugal and reciprocating compression systems. Absorption system principles are applied to industrial air conditioning. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 271 (1)**
WATER-COOLED CONDENSING
SYSTEM (30 CONTACT HOURS)

This course examines water-cooled condensing systems, water towers and water treatment. Applicable principles, pipe-sizing and piping practices are covered. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 272 (1)**
CENTRIFUGAL AND RECIPROCATING
COMPRESSOR SYSTEMS
(30 CONTACT HOURS)

This course examines the principles and operation of centrifugal and large reciprocating compressor systems. Emphasis is on the compressor components. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 273 (1)**
PRINCIPLES OF ABSORPTION
SYSTEMS (30 CONTACT HOURS)

This course examines the principles of absorption systems. Topics include the identification of components, operational theory of absorption systems and advantages and disadvantages of industrial absorption systems. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 275 (3)**
INDUSTRIAL AIR CONDITIONING
SERVICE (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 276, 277, and 278. Students may register in the comprehensive course or any of the inclusive courses. The servicing of industrial air conditioning systems is presented. Included are the service, repair and replacement of capacity control systems and lubrication systems. Also covered are principles and practices of refrigerant circuit piping, leak detection and repair, evacuation and system charging for best performance, and preventive maintenance and schedules.

**AIR CONDITIONING/
REFRIGERATION (AC) 276 (1)**
CAPACITY CONTROL AND
LUBRICATION SYSTEMS (30 CONTACT HOURS)

This course focuses on the adjustment, service, repair, and replacement of components of capacity control systems. Lubrication systems and oil pressure control devices are included. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 277 (1)**
REFRIGERANT CIRCUIT
SERVICE (30 CONTACT HOURS)

This course focuses on refrigerant circuit service. Included are leak detection and repairs, evacuation, charging procedures for best system performance and piping principles and practices. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 278 (1)**
PREVENTIVE MAINTENANCE
PROCEDURES (30 CONTACT HOURS)

This course focuses on system components requiring preventive maintenance. The preparation of preventive maintenance schedules is covered. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 280 (3)**

HYDRONIC SYSTEMS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 281 and 282. Students may register in the comprehensive course or in either of the inclusive courses. Hydronic air conditioning systems are studied. Water chiller, and low-pressure boiler systems are included. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 281 (1)**

WATER CHILLERS (30 CONTACT HOURS)

This course covers specifically the principles of operation and service of systems using water chillers as a secondary refrigerant. Control and protective devices are included. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 282 (2)**

LOW-PRESSURE BOILERS
(60 CONTACT HOURS)

This course covers specifically low-pressure boilers. Included are the combustion process, burner assemblies, fuel circuit devices, heat exchanger control and protection devices. The electrical system is also studied. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 285 (3)**

ADVANCED INDUSTRIAL AIR CONDITIONING
SYSTEMS (90 CONTACT HOURS)

This is a comprehensive course that includes Air Conditioning/Refrigeration 286, 287, and 288. Students may register in the comprehensive course or in any of the inclusive courses. Advanced industrial air conditioning systems are presented. Applied psychrometrics in air mixtures, coil by-pass factors, evaporator coil dew point, total system load are included. Multi-zone systems, air distribution systems, and air balancing are covered. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 286 (1)**

ADVANCED PSYCHROMETRICS—
INDUSTRIAL AIR CONDITIONING
(30 CONTACT HOURS)

Use of the psychrometric chart and air-measuring instruments in air mixtures, evaporator coil performance, calculating total system load and balancing system components. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 287 (1)**

MULTI-ZONE SYSTEMS (30 CONTACT HOURS)

This course examines multi-zone systems. Topics include components of the multi-zone system, operational and diagnostic procedures, and balancing system performance. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 288 (1)**

AIR DISTRIBUTION SYSTEMS
AND AIR BALANCING (30 CONTACT HOURS)

This course examines air distribution systems and air balancing. Principles of industrial air conditioning distribution systems; flow patterns, face and by-pass dampers are included as well as air balancing for total system performance. Laboratory fee.

**AIR CONDITIONING/
REFRIGERATION (AC) 290 (3)**

INDUSTRIAL AIR CONDITIONING
CONTROL SYSTEMS
(90 CONTACT HOURS)

Control systems for industrial air conditioning are presented. Included are the diagnosis, service, repair and replacement of components of electrical, pneumatic, and electronic control systems. Emphasis is on control system principles. Laboratory fee.

**AIR CONDITIONING
(AC) 703, 713, 803, 813 (3)**

(See Cooperative Work Experience)

**AIR CONDITIONING
(AC) 704, 714, 804, 814 (4)**

(See Cooperative Work Experience)

ANIMAL MEDICAL TECHNOLOGY**(AMT) 101 (1)**MEDICAL TERMINOLOGY FOR
TECHNICIANS (1 LEC.)

The fundamentals of medical terminology are covered, with emphasis on prefixes, suffixes and root words and the meaning of the most commonly used words in medical areas, as they apply to the technician in daily practice.

ANIMAL MEDICAL TECHNOLOGY**(AMT) 110 (2)**ANIMAL CARE AND SANITATION:
CANINE (1 LEC., 2 LAB.)

This course covers the common diseases of the canine species and diseases of public health importance, disease transmission and the proper procedures for their prevention. The lab requires the students to help maintain the animals used by the Animal Medical Technology Program for various courses. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY**(AMT) 111 (2)**ANIMAL CARE AND SANITATION:
FELINE, PORCINE (1 LEC., 2 LAB.)

This course covers the common diseases of the feline and porcine species and diseases of public health importance, disease transmission and the proper procedures for prevention. The lab requires the students to help maintain the animals used by the Animal Medical Technology Program for various courses. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY**(AMT) 112 (2)**ANIMAL CARE AND SANITATION:
EQUINE (1 LEC., 2 LAB.)

This course covers the common diseases of the equine and diseases of public health importance, disease transmission and the proper procedures for their prevention. The lab requires the students to help maintain the animals used by the Animal Medical Technology Program for various courses. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY**(AMT) 130 (4)**INTRODUCTION TO ANIMAL
MEDICAL TERMINOLOGY (3 LEC., 3 LAB.)

This course is an introduction to employment areas, ethical and professional requirements, terminology and basic animal handling and care. Included are a survey of common breeds of domestic livestock, pets and research animals and an outline of sanitation and disease principles. Laboratories provide experience and observation in restraint, behavior, grooming and basic animal nursing practices. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY**(AMT) 137 (4)**COMPARATIVE MAMMALIAN
ANATOMY AND PHYSIOLOGY (3 LEC., 3 LAB.)

Mammalian structure is presented on a comparative basis. A histological and gross study of selected organ systems is made using the dog, cat and selected organs of the cow. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY**(AMT) 138 (5)**

APPLIED BIOCHEMISTRY (4 LEC., 3 LAB.)

This course surveys animal cell structure and function. Emphasis is on the relationship of carbohydrate, protein and lipid utilization. Physiochemical laws involved in cellular homeostatic maintenance are used. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY**(AMT) 139 (3)**PHARMACOLOGY FOR
TECHNICIANS (3 LEC.)

Prerequisite: Animal Medical Technology 138. Various chemicals and drugs used in veterinary practice are studied. Topics include the measurement of drugs, common routes of administration, proper handling and storage, principles of efficient ordering, dispensing and inventory control. Requirements of narcotic, stimulant and depressant drug control are emphasized. Basic drug categories and their use in relation to disease treatment are outlined.

ANIMAL MEDICAL TECHNOLOGY (AMT) 210 (2)

ANIMAL CARE AND SANITATION:
BOVINE (1 LEC., 2 LAB.)

The course covers the common diseases of the bovine and diseases of public health importance, disease transmission and the proper procedures for their prevention. The lab requires the students to help maintain the animals used by the Animal Medical Technology Program for various courses. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 230 (4)

ANESTHETIC AND SURGICAL
ASSISTING TECHNIQUES (3 LEC., 3 LAB.)

Prerequisite: Animal Medical Technology 137. This course introduces commonly employed preanesthetic and general anesthetic agents, their methods of administration, patient monitoring while under the effects of these agents and handling of anesthetic emergencies. Principles and techniques of animal, personnel and instrument preparation for surgery, surgical assisting and post operative care are also emphasized. Laboratory periods involve individual practice in anesthetizing and monitoring animal patients and preparing for assisting the veterinarian during surgery. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 231 (4)

COMPARATIVE MAMMALIAN
ANATOMY AND PHYSIOLOGY II (3 LEC., 3 LAB.)

Prerequisite: Animal Technology 137. This course is a continuation of Animal Medical Technology 137. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 237 (3)

PRINCIPLES AND PRACTICE
OF RADIOGRAPHY (2 LEC., 3 LAB.)

Prerequisite: Animal Medical Technology 230. Lectures present the theory behind the production of X-rays, machine operation and maintenance, technique chart development, factors involved in producing diagnostic

quality radiographs and radiation safety procedures and precautions. Laboratory sessions focus on techniques and practice in proper positioning of the patient, calculation of correct KV and MAS settings for adequate radiographic exposure, manual processing of exposed radiographic film, quality analysis and film storage and handling. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 241 (5)

CLINICAL PATHOLOGY
TECHNIQUES AND PRACTICES I (3 LEC., 6 LAB.)

Prerequisite: Credit or concurrent enrollment in Animal Medical Technology 231. Clinical laboratory methods are covered. Topics include parasitological, microbiological and tissue sample collection, analysis, identification and reporting to the veterinarian. Laboratory emphasis on identification of common parasites, morphology, cultural and staining characteristics of pathogenic bacteria and preparation of routine microbiological culture media. Blood analysis is introduced, including preparation of routine microbiological culture media, preparation of blood smears, differential cell counts, hemoglobin and packed cell volume determinations. The importance of understanding parasite life cycles and spread of disease by bacteria as well as host tissue changes occurring is stressed. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 242 (3)

EXOTIC AND RESEARCH
ANIMAL CARE AND
MANAGEMENT (2 LEC., 3 LAB.)

Prerequisite: Animal Medical Technology 130 and 231. This course introduces handling, restraint, sexing and uses of the common research laboratory and exotic animal species. Methods of husbandry and management to control or prevent common diseases species in each of the species considered. Techniques of rodent anesthesia and surgery are presented and practiced. The purpose, concepts and theory of gnotobiotics

and axenic techniques are explained. The ethical differences in functional responsibility occurring between animal medical technicians employed in research institutions as compared to employment in veterinary hospitals are emphasized. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 243 (5)

CLINICAL PATHOLOGY
TECHNIQUES AND PRACTICE II
(3 LEC., 6 LAB.)

Prerequisite: Animal Medical Technology 241. This course continues the study and practice of lab methods for blood analysis. Included are red and white cell counts, reticulocyte counts, clotting time, sedimentation rates, cross-matching, serology and various blood chemistry analyses. Practice is provided in urine collection, chemical analysis, and urinary sediment and cellular identification. Emphasis is placed on correlating sample data with changes in affected physiological parameters. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 244 (3)

LARGE ANIMAL ASSISTING
TECHNIQUES (2 LEC., 4 LAB.)

This course covers the skills and knowledge needed to support and assist large animal practitioners. Emphasis is on principles and techniques in basic history, physical exams (T.P.R.), administration of drugs on veterinarian's prescription, surgical assistance, bleeding and fluid administration, mastitis control, foot and hoof care, reproductive management assisting and record-keeping. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 245 (2)

CLINICAL SEMINAR (2 LEC.)

This course is designed to allow the student to receive on-the-job instruction from an authorized veterinarian concerning daily routine procedures.

ANIMAL MEDICAL TECHNOLOGY (AMT) 249 (4)

ANIMAL HOSPITAL NURSING (3 LEC., 3 LAB.)

This course integrates and brings into sharp focus skills, techniques and knowledge acquired in earlier courses. In addition, new material, concepts and methods are presented in the areas of infectious and non-infectious disease pet animal nursing, emergency first aid, intensive care techniques, dental problems and prophylaxis and client management and relations. Laboratory fee.

ANIMAL MEDICAL TECHNOLOGY (AMT) 250 (2)

SPECIAL PROJECTS IN AMT (3 LEC.)

This course provides for individual study in some special interest area of the student's major field. The study is under the guidance of a specific faculty member who acts as advisor and performance evaluator. At the discretion of the student's advisor, a technical paper may be required together with an oral presentation for student information and discussion. Professional staff members may be invited to any special project presentation to aid in discussion of the topic presented. It is the responsibility of the faculty advisor to provide proper liaison and coordination with personnel in the Learning Resources Center if the student's special project involves software production of specialized animal medical techniques.

ANIMAL MEDICAL TECHNOLOGY (AMT) 702 (2)

(See Cooperative Work Experience)

ANIMAL MEDICAL TECHNOLOGY (AMT) 703 (3)

(See Cooperative Work Experience)

ANTHROPOLOGY (ANT) 100 (3)

INTRODUCTION TO
ANTHROPOLOGY (3 LEC.)

This course surveys the origin of mankind involving the processes of physical and cultural evolution, ancient man, and preliterate man. Attention is centered on fossil evidence, physiology and family/group roles and status.

ANTHROPOLOGY (ANT) 101 (3)

CULTURAL ANTHROPOLOGY (3 LEC.)

Cultures of the world are surveyed and emphasis given to those of North America. Included are the concepts of culture, social and political organization, language, religion and magic, and elementary anthropological theory. (This course is offered on campus and may be offered via television.)

ANTHROPOLOGY (ANT) 104 (3)

AMERICAN INDIAN CULTURE (3 LEC.)

Native Americans are studied from three perspectives: Native American history and prehistory; traditional Indian cultures; and native Americans today. The latter theme stresses current topics such as discrimination, poverty, employment, reservations. The Bureau of Indian Affairs, self-determination, health care, etc.

ANTHROPOLOGY (ANT) 110 (3)

THE HERITAGE OF MEXICO (3 LEC.)

This course (cross-listed as History 110) is taught in two parts each semester. The first part of the course deals with the archaeology of Mexico beginning with the first humans to enter the North American continent and culminating with the arrival of the Spanish in 1519 A.D. Emphasis is on archaic cultures, the Maya, the Toltec, and Aztec empires. The second part of the course deals with Mexican history and modern relations between the United States and Mexico. The student may register for either History 110 or Anthropology 110 but may receive credit for only one of the two.

ANTHROPOLOGY (ANT) 208 (3)

MULTICULTURAL STUDIES (3 LEC.)

Prerequisite: Anthropology 101 or consent of instructor. This course is a multicultural approach to the study of modern Texas. Emphasis is on African, Anglo and Hispanic cultures. Field experiences and interviews are interspersed with lecture to provide opportunities for personal contact with various cultural behaviors.

ANTHROPOLOGY (ANT) 210 (3)

LANGUAGE, CULTURE AND
PERSONALITY (3 LEC.)

Prerequisite: Anthropology 101 or consent of instructor. Interrelated aspects of language, culture and personality are presented. Special consideration is given to intellectual, social and behavioral problems characteristic of multilingual, multicultural societies.

ANTHROPOLOGY (ANT) 231 (3)

INTRODUCTION TO
ARCHEOLOGY (3 LEC.)

This course is an anthropological approach to archeology. Topics include an introduction to the study of humanity's past. How archeologists retrieve, process, analyze and interpret surviving prehistoric materials is covered, as well as a survey of world prehistory through neolithic times.

APPAREL DESIGN I (APP) 232 (3)

DESIGN DEVELOPMENT (2 LEC., 4 LAB.)

Prerequisites: Sophomore standing and concurrent enrollment in Apparel Design 237 or the consent of the instructor. The principles of good design for mass-produced apparel are studied, especially as they apply to structural and decorative design. Careful attention is given to fabric selection and trimming that are appropriate for current styles. Laboratory fee.

APPAREL DESIGN II (APP) 233 (3)
DESIGN DEVELOPMENT (2 LEC., 4 LAB.)

Prerequisites: Sophomore standing and concurrent enrollment in Apparel Design 238 or the consent of the instructor. This is a continuation of developing design principles. The garment cost and construction techniques are emphasized along with selection of fabric and trimming. Laboratory fee.

APPAREL DESIGN I (APP) 237 (2)
STYLE TRENDS AND RESEARCH (2 LEC.)

Prerequisites: Sophomore standing and concurrent enrollment in Apparel Design 232 or the consent of the instructor. This course is a study of current trends in the apparel industry. The student develops workroom sketches of designs for children, junior petite, junior, active sportswear, misses, and suits.

APPAREL DESIGN II (APP) 238 (2)
STYLE TRENDS AND RESEARCH (2 LEC.)

Prerequisites: Sophomore standing and concurrent enrollment in Apparel Design 233 or the consent of the instructor. This course is a continuation of the current trends in apparel industry. The student develops sketches of designs for half sizes, dressy dresses, and lingerie. The student selects one size range for a complete research report.

ARCHITECTURE (ARC) 128 (3)
HISTORY OF ARCHITECTURE I (3 LEC.)

This course includes the development of influences on architecture from ancient man through the Byzantine period.

ARCHITECTURE (ARC) 129 (3)
HISTORY OF ARCHITECTURE II (3 LEC.)

This course includes the development of influences on architecture from the Romanesque period to the Industrial Revolution.

ARCHITECTURE (ARC) 130 (3)
ARCHITECTURAL GRAPHICS I (2 LEC., 4 LAB.)

Orthographic projection, isometric and oblique drawing, shade and shadow are studied. Linework and lettering in pencil and ink are emphasized. Laboratory fee.

ARCHITECTURE (ARC) 133 (3)
ARCHITECTURAL GRAPHICS II (2 LEC., 4 LAB.)

Perspective drawing, shade and shadow are presented. Emphasis is on the theory of drawing, linework and lettering in pencil and ink. Laboratory fee.

ARCHITECTURE (ARC) 134 (3)
FREEHAND DRAWING I (2 LEC., 4 LAB.)

This course covers pencil drawing with emphasis on eye to hand coordination. Principles of light, shade, scale, proportion, line and tonal quality using both pencil and conte crayon are included. Exercises use book references, human models and indoor-outdoor sketching. Laboratory fee.

ARCHITECTURE (ARC) 135 (3)
FREEHAND DRAWING II (2 LEC., 4 LAB.)

Drawing with pen and ink is the main focus. Also included is the use of brush with ink and ink washes for tonal effects. Exercises use book references, human models and indoor-outdoor sketching. Laboratory fee.

ARCHITECTURE (ARC) 146 (3)
ARCHITECTURAL DESIGN — GRADE I (2 LEC., 4 LAB.)

Basic design principles and their application to architectural design are studied. Human awareness and reaction to the environment and its effect on architectural problem-solving are emphasized. Laboratory fee.

ARCHITECTURE (ARC) 147 (3)

ARCHITECTURAL DESIGN — GRADE I (2 LEC., 4 LAB.)

Prerequisite: Architecture 146. The application of design principles to architectural experiences is investigated. Analysis, schematic study, and the development of spatial problems related to human occupancy and needs are studied. Emphasis is placed on the development and integration of skills needed to formulate and communicate design concepts. Laboratory fee.

ARCHITECTURE (ARC) 150 (3)

BUILDING TECHNOLOGY I — MATERIALS AND METHODS (2 LEC., 4 LAB.)

Architectural materials and their uses are analyzed. Specifications and codes are introduced, and structural systems are investigated. Laboratory fee.

ARCHITECTURE (ARC) 153 (3)

CONSTRUCTION DRAWINGS — WOOD FRAME (2 LEC., 4 LAB.)

Prerequisite: Architecture 130 or the consent of the instructor. Construction drawings are introduced. Wood frame construction is studied. The relationship with design and specifications is included. Emphasis is on the total concept of construction documents and detailing. Laboratory fee.

ARCHITECTURE (ARC) 220 (3)

PERSONALITIES IN ART AND ARCHITECTURE (3 LEC.)

This course includes an in-depth study of the influential people throughout history who were the motivating human factors behind the evolutionary development of art and architecture.

ARCHITECTURE (ARC) 226 (3)

SURVEY OF INTERIOR ARCHITECTURE I (3 LEC.)

This course includes a survey of historical interior architecture development beginning with the ancient civilizations.

ARCHITECTURE (ARC) 227 (3)

SURVEY OF INTERIOR ARCHITECTURE II (3 LEC.)

This course is a continuation of Survey of Interior Architecture I. This course includes the historical development of interior architecture to the present.

ARCHITECTURE (ARC) 230 (3)

HISTORY OF MODERN ARCHITECTURE (3 LEC.)

Prerequisite: Sophomore standing. The influences and architectural expressions of man are examined. The time period spaces the Industrial Revolution to the present day.

ARCHITECTURE (ARC) 232 (3)

BASIC ARCHITECTURAL PHOTOGRAPHY (2 LEC., 4 LAB.)

Prerequisites: Architecture 147, Photography 110, and sophomore standing. Emphasis is on successful presentation of interior, exterior, and detailed architectural areas and using photography as the visual medium. Equipment and techniques necessary to become proficient in these areas are studied. Laboratory fee.

ARCHITECTURE (ARC) 233 (3)

HISTORY OF ARCHITECTURE SURVEY TO 1850 (3 LEC.)

This course surveys architecture and influences upon its development to the time of the Industrial Revolution.

ARCHITECTURE (ARC) 240 (3)

MEDIA SKILLS I (2 LEC., 4 LAB.)

This course introduces various media used in presentations. Pencil, water color, pen and ink, colored pencil and felt tip markers are used on assorted materials in a variety of techniques.

ARCHITECTURE (ARC) 241 (3)

MEDIA SKILLS II (2 LEC., 4 LAB.)

Additional media techniques are presented. Pastel, carbon pencil, tempera, and transparent and opaque water color are included.



ARCHITECTURE (ARC) 242 (3)
PRESENTATION I (2 LEC., 4 LAB.)

Prerequisites: Architecture 133 or Interior Design 123 or Art 115 or the consent of the instructor. This is a course in professional delineation wherein the student produces from a given set of architectural drawings finished interior and exterior renderings utilizing the principles of design, perspective, composition, freehand, and mechanical drawing capabilities and rendering techniques. Laboratory fee.

ARCHITECTURE (ARC) 243 (3)
PRESENTATION II (2 LEC., 4 LAB.)

Prerequisites: Architecture 133 or Interior Design 123 or Art 115 or the consent of the instructor. This course is a continuation of Presentation I. Laboratory fee.

ARCHITECTURE (ARC) 245 (3)
DESIGN SKETCHING (2 LEC., 4 LAB.)

Prerequisites: Architecture 133 or Interior Design 123 or Art 115 or the consent of the instructor. This course includes an introduction to and the development of graphic skills needed to formulate and communicate design

concepts. Study and practice of visualization and freehand perspective drawing of the students' own design. Concepts in various media are the main activities. Laboratory fee.

ARCHITECTURE (ARC) 246 (3)
ARCHITECTURAL DESIGN — GRADE II (2 LEC., 4 LAB.)

Prerequisites: Architecture 130 and 147. Research into design theory is conducted to solve architectural problems. Emphasis is on functional and aesthetic values through three-dimensional problem solving studies. Laboratory fee.

ARCHITECTURE (ARC) 247 (3)
ARCHITECTURAL DESIGN — GRADE II (2 LEC., 4 LAB.)

Prerequisite: Architecture 246. This course is a continuation of Architecture 246. Emphasis is on functional and aesthetic solutions based upon individual programming and research. Laboratory fee.

ARCHITECTURE (ARC) 251 (3)
BUILDING TECHNOLOGY II — HEAVY CONSTRUCTION (2 LEC., 4 LAB.)

Prerequisite: Architecture 150. This course includes the study of construction materials, systems, and techniques used in heavy construction, with emphasis on steel and concrete. A general overview of mechanical and electrical systems and their requirements is provided. Laboratory fee.

ARCHITECTURE (ARC) 252 (3)
BUILDING TECHNOLOGY III — SPECIFICATIONS AND OFFICE PRACTICE (2 LEC., 4 LAB.)

Prerequisites: Architecture 150 and Architecture 153 or the consent of the instructor. Introduction and practice is provided in specification writing and construction estimating. Exploration is made of the organization of the construction process including the organization of an architect's office, administration of construction contracts, and governmental requirements. Laboratory fee.

ARCHITECTURE (ARC) 254 (3)
CONSTRUCTION DRAWINGS II — STEEL FRAME (2 LEC., 4 LAB.)

Prerequisites: Architecture 150 and

Architecture 153 or the consent of the instructor. Steel frame construction is studied. Introduction to commercial construction drawings is provided, including plans, elevations, sections, structural drawings, details, and schedules for steel frame buildings. Laboratory fee.

ARCHITECTURE (ARC) 255 (3)
CONSTRUCTION DRAWINGS III — CONCRETE AND MASONRY (2 LEC., 4 LAB.)

Prerequisite: Architecture 153. This course involves the study of concrete and masonry construction techniques and their construction drawings. Included are structural drawings, details, schedules, plans, sections, and elevations. Laboratory fee.

ARCHITECTURE (ARC) 256 (3)
CONSTRUCTION DRAWINGS IV — DETAILING (2 LEC., 4 LAB.)

Prerequisite: Architecture 153. Study is made of the concept of detailing, viewed as a means of controlling the total building process. Detailing subjects include structural, stairs, door and window, interior finish, roof-to-wall, and cabinets. Emphasis is placed upon technique, accuracy, and the ability to solve architectural detail problems. Laboratory fee.

ARCHITECTURAL TECHNOLOGY (ARC) 802, 812 (2)
(See Cooperative Work Experience)

ARCHITECTURAL TECHNOLOGY (ARC) 803, 813 (3)
(See Cooperative Work Experience)

ARCHITECTURAL TECHNOLOGY (ARC) 804, 814 (4)
(See Cooperative Work Experience)

ART (ART) 103 (1)
INTRODUCTION TO ART (3 LAB.)

Materials and techniques of studio art are introduced for the non-major. Included are basic design concepts and traditional media. Laboratory fee.

ART (ART) 104 (3)
ART APPRECIATION (3 LEC.)

Films, lectures, slides and discussions focus on the theoretical, cultural and

historical aspects of the visual arts. Emphasis is on the development of visual and aesthetic awareness.

ART (ART) 105 (3)
SURVEY OF ART HISTORY (3 LEC.)

This course covers the history of art from prehistoric time through the Renaissance. It explores the cultural, geophysical and personal influences on art styles.

ART (ART) 106 (3)
SURVEY OF ART HISTORY (3LEC.)

This course covers the history of art from the Baroque period through the present. It explores the cultural, geophysical and personal influences on art styles.

ART (ART) 110 (3)
DESIGN I (2 LEC., 4 LAB.)

Basic concepts of design with two-dimensional materials are explored. The use of line, color, illusion of space or mass, texture, value, shape and size in composition is considered.

ART (ART) 111 (3)
DESIGN II (2 LEC., 4 LAB.)

Basic concepts of design with three-dimensional materials are explored. The use of mass, space, movement and texture is considered. Laboratory fee.

ART (ART) 114 (3)
DRAWING I (2 LEC., 4 LAB.)

This beginning course investigates various media, techniques and subjects. It explores perceptual and descriptive possibilities and considers drawing as a developmental process as well as an end in itself.

ART (ART) 115 (3)
DRAWING II (2 LEC., 4 LAB.)

Prerequisite: Art 114. This course is an expansion of Art 114. It stresses the expressive and conceptual aspects of drawing, including advanced compositional arrangements, a range of wet and dry media, and the development of an individual approach to theme and content.



ART (ART) 116 (3)
INTRODUCTION TO JEWELRY I (2 LEC., 4 LAB.)

Prerequisites: Art 110, Art 111, or the consent of the instructor. The basic techniques of fabrication and casting of metals are presented. Emphasis is on original design. Laboratory fee.

ART (ART) 117 (3)
INTRODUCTION TO JEWELRY II (2 LEC., 4 LAB.)

Prerequisite: Art 116. This course continues Art 116. Advanced fabrication and casting techniques are presented. Emphasis is on original design. Laboratory fee.

ART (ART) 118 (3)
CREATIVE PHOTOGRAPHY FOR THE ARTIST I (2 LEC., 4 LAB.)

Prerequisites: Art 110, Art 114, or the consent of the instructor. Creative use of the camera is studied. Photosensitive materials are examined as a means of making expressive graphic images. Emphasis is black and white processing and printing techniques. Laboratory fee.

ART (ART) 119 (3)
CREATIVE PHOTOGRAPHY FOR THE ARTIST II (2 LEC., 4 LAB.)

Prerequisite: Art 118 or the consent of the instructor. This course is a continuation of Art 118. Emphasis is on individual expression. Laboratory fee.

ART (ART) 122 (3)
ADVERTISING DESIGN (2 LEC., 4 LAB.)

Prerequisite: Art 110, Art 111, Art 115, or the consent of the instructor. Advertising concepts are presented. Emphasis is on the development of logo designs, magazine ads, TV story boards, posters, letterheads and envelopes.

ART (ART) 199 (1)
ART SEMINAR (1 LEC.)

Area artists, critics and art educators speak with students about the work exhibited in the gallery and discuss current art styles and movements. They also discuss specific aspects of being artists in contemporary society. This course may be repeated for credit.

ART (ART) 201 (3)
DRAWING III (2 LEC., 4 LAB.)

Prerequisites: Art 110, Art 111, Art 115, Sophomore standing and/or permission of the division chair. This course covers the analytic and expressive drawing of the human figure. Movement and volume are stressed. Laboratory fee.

ART (ART) 202 (3)
DRAWING IV (2 LEC., 4 LAB.)

Prerequisites: Art 201, Sophomore standing and/or permission of the division chair. This course continues Art 201. Emphasis is on individual expression. Laboratory fee.

ART (ART) 203 (3)
ART HISTORY (3 LEC.)

Prerequisites: Art 105 and Art 106. The development of the art of western culture during the Renaissance Period is presented. Emphasis is on the development of Renaissance art in Northern and Southern Europe.

ART (ART) 204 (3)

ART HISTORY (3 LEC.)

Prerequisites: Art 105 and Art 106. The development of the art of western culture from the late 19th century through today is presented. Emphasis is on the development of modern art in Europe and America.

ART (ART) 205 (3)

PAINTING I (2 LEC., 4 LAB.)

Prerequisites: Art 110, Art 111, Art 115 or the consent of the instructor. This studio course stresses fundamental concepts of painting with acrylics and oils. Emphasis is on painting from still life, models and the imagination.

ART (ART) 206 (3)

PAINTING II (2 LEC., 4 LAB.)

Prerequisite: Art 205. This course continues Art 205. Emphasis is on individual expression.

ART (ART) 208 (3)

SCULPTURE I (2 LEC., 4 LAB)

Prerequisites: Art 110, Art 111, Art 115 or the consent of the instructor. Various sculptural approaches are explored. Different media and techniques are used. Laboratory fee.

ART (ART) 209 (3)

SCULPTURE II (2 LEC., 4 LAB)

Prerequisite: Art 208. This course continues Art 208. Emphasis is on individual expression. Laboratory fee.

ART (ART) 210 (3)

COMMERCIAL ART I (2 LEC., 4 LAB)

Prerequisites: Art 110, Art 111, Art 115 or the consent of the instructor. The working world of commercial art is introduced. Typical commercial assignments are used to develop professional attitudes and basic studio skills. Laboratory fee.

ART (ART) 211 (3)

COMMERCIAL ART II (2 LEC., 4 LAB.)

Prerequisite: Art 210. This course continues Art 210. Added emphasis is on layout and design concepts. Work with simple art form reproduction techniques and the development of a professional portfolio are also included. Laboratory fee.

ART (ART) 212 (3)

ADVERTISING ILLUSTRATION (2 LEC., 4 LAB.)

Prerequisite: Art 210. Problems of the illustrator are investigated. Elements used by the illustrator are explored. Problem-solving projects are conducted.

ART (ART) 213 (3)

COMMERCIAL DESIGN GROUP (2 LEC., 4 LAB.)

Prerequisite: Art 210. Students operate a design studio and work directly with clients to solve their particular visual communication needs. They create graphic art products, such as brochures, identity programs and posters. Printed samples for portfolios may be acquired.

ART (ART) 215 (3)

CERAMICS I (2 LEC., 4 LAB)

Prerequisites: Art 110, Art 111, Art 115 or the consent of the instructor. This course focuses on the building of pottery forms by coil, slab and use of the wheel. Glazing and firing are also included. Laboratory fee.

ART (ART) 216 (3)

CERAMICS II (2 LEC., 4 LAB.)

Prerequisite: Art 215 or the consent of the instructor. Glaze technology is studied. Advanced problems in the creation of artistic and practical ceramic ware. Laboratory fee.

ART (ART) 220 (3)

PRINTMAKING I (2 LEC., 4 LAB)

Prerequisites: Art 110, Art 111, Art 115, or the consent of the instructor. Basic printmaking processes are introduced. Included are planographic, intaglio, stencil and relief processes. Laboratory fee.

ART (ART) 222 (3)

PRINTMAKING II (2 LEC., 4 LAB.)

Prerequisite: Art 220. This course is a continuation of Printmaking I. Laboratory fee.

ART (ART) 228 (3)

THREE-DIMENSIONAL DESIGN (2 LEC., 4 LAB.)

Prerequisite: Art majors: Art 110, 111, 114. Drafting Technology majors: Drafting 183, Engineering 186. Development of three-dimensional projects in metal, plastic, and wood through the stages of design: idea, sketches, research, working drawing, model and finished product. Emphasis is on function, material and esthetic form. Laboratory fee.

ASTRONOMY (AST) 101 (3)

DESCRIPTIVE ASTRONOMY (3 LEC.)

This course surveys the fundamentals of astronomy. Emphasis is on the solar system. Included is the study of the celestial sphere, the earth's motions, the moon, planets, asteroids, comets, meteors and meteorites. (This course is offered on campus and may be offered via television.)

ASTRONOMY (AST) 102 (3)

GENERAL ASTRONOMY (3 LEC.)

Stellar astronomy is emphasized. Topics include a study of the sun, the properties of stars, star clusters, nebulae, interstellar gas and dust, the Milky Way Galaxy and external galaxies.

ASTRONOMY (AST) 103 (1)

ASTRONOMY LABORATORY I (3 LAB.)

Prerequisite: Credit or concurrent enrollment in Astronomy 101. The student uses simple equipment to make elementary astronomical observations of the motions of celestial objects. Also covered are elementary navigational techniques, graphical techniques of calculating the position of a planet or comet, and construction of simple observing equipment. This course includes night observations. Laboratory fee.

ASTRONOMY (AST) 104 (1)

ASTRONOMY LABORATORY II (3 LAB.)

Prerequisite: Credit or concurrent enrollment in Astronomy 102. The student makes and uses elementary astronomical observations. Topics include timekeeping, the various uses of spectra, and the motions of stars and galaxies. This laboratory includes night observations. Laboratory fee.

ASTRONOMY (AST) 111 (4)

FUNDAMENTALS OF ASTRONOMY (3 LEC., 3 LAB.)

This course concerns fundamental aspects of the solar system and the historical development of astronomical ideas. Included are studies of the celestial sphere and motions of the earth, the moon, planets, and other minor bodies. The origin and evolution of the solar system are also covered. The laboratory includes outdoor viewing sessions and study of celestial motions, elementary navigation, constellation identification, and telescope construction. Laboratory fee.

ASTRONOMY (AST) 112 (4)

GENERAL INTRODUCTORY ASTRONOMY (3 LEC., 3 LAB.)

This course concerns fundamental properties of stars, stellar systems, star clusters, nebulae, interstellar gas and dust, and galaxies. Included is the study of the sun, Milky Way galaxy, stellar evolution, black holes, and current cosmological ideas. The laboratory includes outdoor viewing sessions and the study of time-keeping, use of spectra, and motions of stars and galaxies. Laboratory fee.

AUTO BODY (AB) 111 (3)

BASIC METAL PRINCIPLES (90 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 112. The use of hand and air tools is covered. Filling of plastic is included. Preparing the metal, sanding, masking, and priming surfaces on minor damages are emphasized. Laboratory fee.

AUTO BODY (AB) 112 (2)

APPLIED BASIC METAL PRINCIPLES (60 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 111. This course emphasizes hands-on use of hand and air tools used in metal repair. Techniques covered in Auto Body 111 will be applied to minor repair. Laboratory fee.

AUTO BODY (AB) 113 (3)

MINOR METAL REPAIR (90 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 114. Body construction and sheet metal alignment are studied. Emphasis is on the various techniques of applying plastic to minor damages. Laboratory fee.

AUTO BODY (AB) 114 (2)

APPLIED MINOR METAL REPAIR (60 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 113. This course emphasizes the hands-on techniques used in sheet metal alignment and damage correction. Procedures and tools covered in Auto Body 113 will be covered. Laboratory fee.

AUTO BODY (AB) 121 (3)

BASIC PAINT PRINCIPLES (90 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 122. This course presents the use of sanders and other equipment. Sanding and applying primer and paint are stressed. The use and operation of the spray gun are covered. Laboratory fee.

AUTO BODY (AB) 122 (2)

APPLIED BASIC PAINT PRINCIPLES (60 CONTACT HOURS)

Prerequisite: Concurrent enrollment

in Auto Body 121. This course will cover hands-on techniques in the use of power and hand sanding as well as use of the spray gun. The techniques covered in Auto Body 121 will be covered. Laboratory fee.

AUTO BODY (AB) 123 (3)

PAINT BLENDING AND SPOT REPAIR TECHNIQUES (90 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 124. The use of manufacturers' codes, mass and tint tone methods, and color selection are examined. Initial color matching, correction, and color tinting are covered. Spray gun maintenance, operation, patterns and corrective adjustments receive particular attention. Polishing, touch-up, and detailing procedures are studied. Topics include the use of rubbing compounds, polishes, and buffing techniques. Minor surface repairs are also included. Laboratory fee.

AUTO BODY (AB) 124 (2)

APPLIED BLENDING AND SPOT REPAIR TECHNIQUES (60 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 123. This course examines potential problems that occur in the application of the finish on today's automobile. Recognition, prevention, and correction of problems are stressed. Laboratory fee.

AUTO BODY (AB) 139 (3)

BODY SHOP OPERATIONS (48 CONTACT HOURS)

The basic business principles of managing an automobile service shop are studied. Emphasis is on management functions, financial analysis, and governmental regulations.

AUTO BODY (AB) 211 (3)

MAJOR PANEL REPLACEMENT (90 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 212. The use of power tools and cutting tools is presented. Emphasis is on the repair and replacement of panels. Laboratory fee.

AUTO BODY (AB) 212 (2)

APPLIED MAJOR PANEL REPLACEMENT (60 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 211. This course emphasizes repair and replacement of panels on in-service automobiles. The adjustment, repair and replacement of equipment and minor electrical apparatus are also covered. Laboratory fee.

AUTO BODY (AB) 213 (3)

MAJOR COLLISION AND FRAME REPAIR (90 CONTACT HOURS)

Students learn to use power frame alignment equipment through lecture, demonstration, and actual job repairs. Laboratory fee.

AUTO BODY (AB) 221 (3)

ADVANCED PAINT TECHNIQUES (90 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 222. This course focuses on the development of painting skills. Emphasis is on mixing colors, matching colors, and texture. Special decorative effects are also covered, such as simulated wood and vinyl application. Transfer repair, renewal, removal, film application, painting and taping techniques are included. Laboratory fee.

AUTO BODY (AB) 222 (2)

APPLIED ADVANCED PAINT TECHNIQUES (60 CONTACT HOURS)

Prerequisite: Concurrent enrollment in Auto Body 221. This course further develops painting skills with hands-on training, emphasizing mixing colors and matching color and texture of paint on in-service automobiles. Laboratory fee.

AUTO BODY (AB) 245 (3)

WELDING FOR AUTO BODY (90 CONTACT HOURS)

This course covers the basics of oxyacetylene welding, spot welding (electric), and electric arc welding. Laboratory fee.

AUTO BODY (AB) 803 (3)

(See Cooperative Work Experience)

AUTO BODY (AB) 804 (4)

(See Cooperative Work Experience)

AUTOMOTIVE PARTS SALES AND SERVICE (AP) 100 (2)

ORIENTATION TO THE AUTO PARTS INDUSTRY (60 CONTACT HOURS)

This course is an orientation to the automotive parts industry. The industry's importance in the total automotive field is described. The history and development of the industry, its current role in the U.S. economy, and future trends and issues are covered.

AUTOMOTIVE PARTS SALES AND SERVICE (AP) 110 (1)

AUTO PARTS SAFETY (30 CONTACT HOURS)

Safety practices are presented. Emphasis is on proper working conditions and safety precautions within an auto parts facility.

AUTOMOTIVE PARTS SALES AND SERVICE (AP) (130) (2)

AUTOMOTIVE EQUIPMENT, TOOLS, AND ACCESSORIES (60 CONTACT HOURS)

Automotive hand tools and equipment are covered. Both selection and use are included, as well as the identification of accessories and product knowledge.

AUTOMOTIVE PARTS SALES AND SERVICE (AP) 150 (2)

AUTO PARTS SALES TECHNIQUES (60 CONTACT HOURS)

This course is a study of counter sales techniques. Included is analysis of the sales invoice. Emphasis is on customer sales, telephone use, and customer relations.

AUTOMOTIVE PARTS SALES AND SERVICE (AP) 160 (3)

AUTO PARTS INVENTORY OPERATIONS (90 CONTACT HOURS)

The course covers the receiving, stocking, and shipping of automobile parts. Various topics are included, such as methods of opening packages and the storing of merchandise. Inventory and stock control are also covered.

AUTOMOTIVE PARTS SALES AND SERVICE (AP) 170 (3)

AUTOMOTIVE VEHICLE
COMPONENTS (90 CONTACT HOURS)

The terminology, operation, and replacement of parts are presented. Specific attention is given to the parts of the engine, transmission, brake systems, and suspension and steering assemblies.

AUTOMOTIVE PARTS SALES AND SERVICE (AP) 180 (2)

ORDER PROCESSING AND
ANALYSIS (60 CONTACT HOURS)

This course focuses on placing and processing orders. Topics include indexing and filing systems, price sheets, and the manufacturers' specialized catalogs.

AUTOMOTIVE PARTS SALES AND SERVICE (AP) 190 (1)

THE ROLE OF THE
COUNTERPERSON (30 CONTACT HOURS)

Duties of the auto parts salesperson are presented. Specific topics are sales techniques, office procedures, delivery, and housekeeping duties.

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP (ATA) 100 (3)

AUTOMOTIVE FUNDAMENTALS
(48 CONTACT HOURS)

This course introduces general auto maintenance procedures. Topics include shop safety, hand tools, shop equipment, and manuals and schematics. Apprentices who believe they are qualified by experience or previous training may take an examination to establish credit for this course.

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP (ATA) 101 (3)

BASIC ELECTRICAL SYSTEMS
(48 CONTACT HOURS)

The theory and principles of electrical systems are presented. Batteries, starters, charging systems, and ignition systems are studied. Testing and basic service procedures are also included.

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP (ATA) 102 (3)

AUTOMOTIVE SERVICE DEPARTMENT
MANAGEMENT (48 CONTACT HOURS)

This course examines the auto service department. Topics include organizational structure, operation, marketing and promotional methods, management, and financial aspects.

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP (ATA) 103 (3)

SUSPENSION, STEERING AND BRAKE
SYSTEMS (48 CONTACT HOURS)

Suspension, steering, and brake systems are covered. Disc and drum brakes, front and rear suspension systems, and manual and power steering systems are included. Tires, wheels, and alignment are also studied. Emphasis is on inspection, diagnosis, and service techniques. Upon successful completion of this course, the apprentice is prepared for the N.I.A.S.E. Front End and Brake Systems Examinations (2).

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP (ATA) 104 (3)

AUTOMOTIVE PARTS DEPARTMENT
MANAGEMENT (48 CONTACT HOURS)

This course examines the auto parts department. Topics include organizational structure, catalog interpretation, terminology, inventory control, warehousing, and distribution.

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP (ATA) 105 (3)

ENGINE TUNE-UP PROCEDURES
(48 CONTACT HOURS)

Prerequisite: Automotive Technology Apprenticeship 101. Tune-up procedures are presented. The fuel system, carburetor, ignition system, and emission control systems are covered. Emphasis is on precision diagnosis by use of the engine analyzer as well as troubleshooting procedures. Upon successful completion of this course, the apprentice is prepared for the N.I.A.S.E. Engine Tune-Up Examination.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 191 (3)**
INTERNSHIP I (640 CONTACT HOURS)

Supervised, on-the-job training, coordinated with classroom activities.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 192 (3)**
INTERNSHIP II (640 CONTACT HOURS)

Supervised, on-the-job training, coordinated with classroom activities.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 193 (3)**
INTERNSHIP III (640 CONTACT HOURS)

Supervised, on-the-job training coordinated with classroom activities.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 200 (3)**
ADVANCED ELECTRICAL SYSTEMS
(48 CONTACT HOURS)

Prerequisite: Automotive Technology Apprenticeship 101. Advanced electrical systems are presented. Topics include chassis electrical systems, integrated circuits, instrument panel controls, wiring vacuum systems, and accessory controls. Emphasis is on interpretation of diagrams and schematics. Systematic troubleshooting procedures are also stressed. Upon completion of this course, the apprentice is prepared for the N.I.A.S.E. Electrical Systems Examination.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 201 (3)**
AUTOMOTIVE AIR CONDITIONING AND
HEATING SYSTEMS (48 CONTACT HOURS)

This course covers basic thermodynamics principles and heating and air conditioning systems. Topics include systems components, systems testing, diagnosis, and servicing. Also included are control systems. Upon completion of this course, the apprentice is prepared for the N.I.A.S.E. Heating and Air Conditioning Systems Examination.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 202 (3)**
BASIC ENGINE REPAIR (48 CONTACT HOURS)

The study and repair of engines are the focus of this course. Four-cycle, two-cycle, rotary, and diesel engines are all included. Cooling and lubrication systems, valves and valve trains, cylinder head reconditioning, and the diagnosis of engine problems are studied.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 203 (3)**
ENGINE OVERHAUL
PROCEDURES (48 CONTACT HOURS)

Prerequisite: Automotive Technology Apprenticeship 202. Procedures to remove, disassemble, rebuild, assemble, and install the engine are covered. Emphasis is on precision measuring techniques. Also included are tune-up and road testing. Upon completion of this course, the apprentice is prepared for the N.I.A.S.E. Engine Repair Examination.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 204 (3)**
CLUTCHES, DIFFERENTIALS, AND
DRIVE SHAFTS (48 CONTACT HOURS)

Release clutches, drive lines, and differential assemblies are studied. Included are the design, operation, diagnosis, and repair of these parts. Emphasis is on differential diagnosis and repair.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 205 (3)**
TRANSMISSIONS (48 CONTACT HOURS)

This course is an introduction to transmissions and gear trains. Included are conventional 3-speed transmissions, synchronized 3-, 4- and 5-speed transmissions. Emphasis is on diagnostic procedures and servicing. Upon completion of this course and Automotive Technology Apprenticeship 204, the apprentice is prepared for the N.I.A.S.E. Automatic and Standard Transmissions Examinations (2).

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 294 (3)**

INTERNSHIP IV (640 CONTACT HOURS)

Supervised on-the-job training,
coordinated with classroom activities.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 295 (3)**

INTERNSHIP V (640 CONTACT HOURS)

Supervised on-the-job training,
coordinated with classroom activities.

**AUTOMOTIVE TECHNOLOGY
APPRENTICESHIP (ATA) 296 (3)**

INTERNSHIP VI (640 CONTACT HOURS)

Supervised on-the-job training,
coordinated with classroom activities.

**AUTOMOTIVE TECHNOLOGY (AT)
108 (4)**

MINOR VEHICLE SERVICES (120 CONTACT HOURS)

This course introduces shop operations, customer relations; flat rate manuals, service manuals, safety, organizational design, pay structure, equipment, tools and basic operational theories. Also included are service procedures for lubrication, batteries, the cooling system, wheels and tires and new car pre-delivery service. Laboratory fee.

**AUTOMOTIVE TECHNOLOGY (AT)
110 (4)**

ENGINE REPAIR I (120 CONTACT HOURS)

The operational theory of the internal combustion engine is studied. Engine rebuilding, mechanical diagnosis and failure analysis are introduced. Emphasis is on the proper use of hand tools, measuring instruments and equipment. Laboratory fee.

**AUTOMOTIVE TECHNOLOGY (AT)
112 (4)**

ENGINE REPAIR II (120 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Automotive Technology 110. This course is a continuation of Engine Repair I. Engine rebuilding is continued with emphasis on in-service automobile repair. Laboratory fee.

**AUTOMOTIVE TECHNOLOGY (AT)
114 (4)**

ENGINE ANALYSIS AND TUNE UP (120 CONTACT HOURS)

Techniques for diagnosing the automobile engine and other areas are covered. Electronics and conventional ignition systems are stressed. Carburetion and fuel injection systems are introduced. Complete tune-up procedures, using the latest test equipment are studied to insure the proper application to the automobile. Laboratory fee.

**AUTOMOTIVE TECHNOLOGY (AT)
116 (4)**

FUEL AND EMISSION SYSTEMS (120 CONTACT HOURS)

This course covers the principles and functions of the automotive fuel system including the carburetor, fuel pump, gas tank and emission control systems. Diagnosis and repair and adjustment of emission control systems, repair and adjustment of the carburetor, fuel injection and their components are stressed. Laboratory fee.

**AUTOMOTIVE TECHNOLOGY (AT)
118 (4)**

ELECTRICAL SYSTEMS (120 CONTACT HOURS)

This course covers the automobile electrical system, including batteries, wiring, lighting, alternators, generators, starters and voltage regulators. The use of electrical test equipment and schematics are covered. The proper care and use of tools is stressed. Laboratory fee.

**AUTOMOTIVE TECHNOLOGY (AT)
221 (4)**

HEATING AND AIR CONDITIONING SYSTEMS (120 CONTACT HOURS)

This course focuses on the principles of operation and service techniques applied to automobile and air conditioning systems. Topics include components, testing, diagnosing charging and repair practices. Laboratory fee.

AUTOMOTIVE TECHNOLOGY (AT)**223 (4)****BRAKE SYSTEMS (120 CONTACT HOURS)**

This course covers diagnosis and repair of both drum and disc brake systems, power brake boosters, master cylinders, wheel cylinders and related component parts. Laboratory fee.

AUTOMOTIVE TECHNOLOGY (AT)**225 (4)****FRONT END SYSTEMS (120 CONTACT HOURS)**

This course will cover the proper techniques and procedures for complete front-end service, wheel alignment, replacement of worn parts, balancing wheels and related front-end and steering mechanisms. Laboratory fee.

AUTOMOTIVE TECHNOLOGY (AT)**227 (4)****STANDARD TRANSMISSION AND DRIVE TRAINS (120 CONTACT HOURS)**

This course includes the operating principles, construction, and maintenance of the manual transmission and related drive-train components. Laboratory fee.

AUTOMOTIVE TECHNOLOGY (AT)**229 (4)****AUTOMATIC TRANSMISSIONS I (120 CONTACT HOURS)**

The theory, operation and diagnosis of automatic transmissions are studied. Rebuilding of automatic transmission is introduced. Laboratory fee.

AUTOMOTIVE TECHNOLOGY (AT)**231 (4)****AUTOMATIC TRANSMISSIONS II (120 CONTACT HOURS)**

Prerequisite: Credit or concurrent enrollment in Automotive Technology 229. This course is a continuation of Automatic Transmissions I. Transmission rebuilding is continued with emphasis on in-service automobile repair. Laboratory fee.

AUTOMOTIVE TECHNOLOGY (AT)**723 (3)****COOPERATIVE WORK EXPERIENCE (176 CONTACT HRS.)**

Prerequisite: Enrollment in the General Motors Automotive Service Educational Program. This course consists of weekly seminars meeting 2 hours per week and 8 weeks of full-time on-the-job experience. Theory and instruction received in the previous courses taught with a GM emphasis are applied to work in the sponsoring dealership.

AUTOMOTIVE TECHNOLOGY (AT)**733 (3)****COOPERATIVE WORK EXPERIENCE (156 CONTACT HRS.)**

Prerequisite: Enrollment in the General Motors Automotive Service Educational Program. This course consists of weekly seminars meeting 2.5 hours per week and 7 weeks of full-time on-the-job experience. Theory and instruction received in the previous courses taught with a GM emphasis are applied to work in the sponsoring dealership.

AUTOMOTIVE TECHNOLOGY (AT)**823 (3)****COOPERATIVE WORK EXPERIENCE (136 CONTACT HRS.)**

Prerequisite: Enrollment in the General Motors Automotive Service Educational Program. This course consists of weekly seminars meeting 2.75 hours per week and 6 weeks of full-time on-the-job experience. Theory and instruction received in the previous courses taught with a GM emphasis are applied to work in the sponsoring dealership.

AUTOMOTIVE TECHNOLOGY (AT)**824 (4)****COOPERATIVE WORK EXPERIENCE (276 CONTACT HRS.)**

Prerequisite: Enrollment in the General Motors Automotive Service Educational Program. This course consists of weekly seminars meeting 1.5 hours per week and 13 weeks of full-time on-the-job experience. Theory and instruction received in the previous courses taught with a GM emphasis are applied to work in the sponsoring dealership.

AUTOMOTIVE TECHNOLOGY (AT) 834 (4)

COOPERATIVE WORK EXPERIENCE (256 CONTACT HRS.)

Prerequisite: Enrollment in the General Motors Automotive Service Educational Program. This course consists of weekly seminars meeting 1.25 hours per week and 12 weeks of full-time on-the-job experience. Theory and instruction received in the previous courses taught with a GM emphasis are applied to work in the sponsoring dealership.

AUTOMOTIVE TECHNOLOGY

(See Cooperative Work Experience)

704, 804 (4) BHC
713, 813 (3) BHC, CVC
714, 814 (4) BHC, CVC
803, 813 (3) BHC, EFC

AVIATION MAINTENANCE TECHNOLOGY (APM) 100 (5)

AIRCRAFT BASIC SCIENCE (150 CONTACT HOURS)

This course covers mathematics and physics of flight used in computing aircraft weight and balance. It also is an introduction to mechanic's privileges and limitations, Federal Aviation Regulations, and forms and publications used by the aircraft industry.

AVIATION MAINTENANCE TECHNOLOGY (APM) 101 (5)

APPLIED AIRCRAFT SCIENCE (150 CONTACT HOURS)

Aircraft hardware and materials, non-destructive testing, and precision measurements are presented. The fabrication and installation of fluid lines and fittings are included. Servicing methods and ground operations are also covered, as well as cleaning and corrosion control.

AVIATION MAINTENANCE TECHNOLOGY (APM) 102 (5)

BASIC ELECTRICITY (150 CONTACT HOURS)

The nature and relationships of voltage, current, and resistance designed specifically for aircraft electrical systems are studied. Topics include batteries, generators, alternators, and motors. Service and

maintenance are both emphasized. The interpretation of aircraft drawings, charts, and wiring diagrams is also covered.

AVIATION MAINTENANCE TECHNOLOGY (APM) 200 (5)

AIRFRAME STRUCTURES (150 CONTACT HOURS)

This course introduces wooden structures for aircraft. Covering materials, finishes, and application procedures are included. Fuel systems, the use of oxyacetylene welding equipment, and the inspection of aircraft welds are also covered.

AVIATION MAINTENANCE TECHNOLOGY (APM) 201 (5)

SHEET METAL STRUCTURES (150 CONTACT HOURS)

Sheet metal structures are the focus of this course. Included are honeycomb and laminated structures as well as doors and windows. The identification, selection, and installation of rivets and fasteners are also covered.

AVIATION MAINTENANCE TECHNOLOGY (APM) 202 (5)

HYDRAULICS AND LANDING GEAR (150 CONTACT HOURS)

Hydraulic and pneumatic principles are presented and applied to basic units and systems. Topics include wheels, tires, brakes, and fixed and retractable landing gear. Inspection, maintenance and repair are all stressed.

AVIATION MAINTENANCE TECHNOLOGY (APM) 203 (5)

AIRFRAME ELECTRICAL SYSTEMS (150 CONTACT HOURS)

Electrical components and related wiring are studied. Topics include instrument systems, communications, navigation equipment, power requirements, and antenna use. Proper methods of installation, removal, disassembly, and repair are emphasized.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 204 (5)**

UTILITY SYSTEMS (150 CONTACT HOURS)

This course covers atmospheric conditions and their modification for cabin heating, cooling, ventilation, and pressurization. It is an introduction to protection systems for ice, rain, and fire. Emphasis is on assembly and rigging by the use of manuals to install, inspect, align, and balance structural components.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 205 (5)**

INSPECTION AND REVIEW (150 CONTACT HOURS)

Methods and procedures for completing required inspections are presented. Included is a review of all general and airframe material. FAA examinations for the Airframe Certificate are taken upon the completion of this course.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 220 (5)**

RECIPROCATING ENGINES (150 CONTACT HOURS)

This course focuses on the reciprocating engine. Topics include piston displacement, compression ratio, and horsepower calculations. The classification and description of engine types are also covered. Emphasis is on the disassembly, inspection, overhaul, assembly, and testing of reciprocating engines.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 221 (5)**

GAS TURBINE POWERPLANTS (150 CONTACT HOURS)

This course focuses on gas turbine engines. Basic operating principles are examined, the effects of temperature, pressure, volume, and velocities of the working gases are explored. Components and functions are identified. Emphasis is on the disassembly, inspection, assembly, and testing of turbine engines.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 222 (5)**

 POWERPLANT ELECTRICAL
SYSTEMS (150 CONTACT HOURS)

Powerplant systems and their parts are studied. Topics include powerplant magnetos and ignition systems, starter and generator systems, engine instrument systems, and engine fire protection systems. Emphasis is on the theory, construction, control, operation, maintenance, and servicing of these systems.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 223 (5)**

 POWERPLANT ACCESSORY
SYSTEMS (150 CONTACT HOURS)

Accessory systems are covered. Included are aircraft propellers and their control systems. Lubricating, induction and supercharging, cooling and exhaust systems are also included.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 224 (5)**

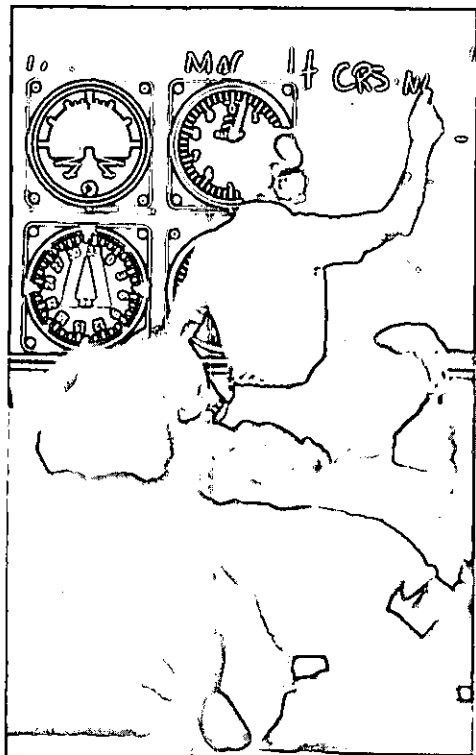
 FUEL METERING AND
TROUBLESHOOTING (150 CONTACT HOURS)

This course provides information about the various fuel systems used for aircraft engines. The principles, operation, overhaul, and repair of various carburetors and direct fuel injection units are presented. Emphasis is on the recognition, analysis, and elimination of common powerplant troubles as well as engine installation and removal.

**AVIATION MAINTENANCE
TECHNOLOGY (APM) 225 (5)**

 POWERPLANT REVIEW AND
INSPECTION (150 CONTACT HOURS)

Methods and procedures for completing an airworthiness inspection are the focus of this course. Included is a review of all general and powerplant material. FAA examinations for the Powerplant Certificate are taken at the completion of this course.



AVIATION TECHNOLOGY (AVT) 110 (3)

INTRODUCTION TO AVIATION (3 LEC.) (48 CONTACT HOURS)

This course introduces various aspects of the aviation industry. It covers the history, development, and advances in aircraft from balloon flight to the supersonic transport. The industry's economic and sociological effects on people and communities are also included. Special emphasis is on the origin and growth of airlines and the aviation industry.

AVIATION TECHNOLOGY (AVT) 121 (3)

GROUND SCHOOL PRIVATE (3 LEC.) (48 CONTACT HOURS)

This course includes the study of Federal Aviation Regulations, flight dynamics, meteorology, navigation, use of the radio, and general service of aircraft. The course is designed to fulfill the Ground School Requirements for the FAA Private Pilot Certificate.

AVIATION TECHNOLOGY (AVT) 122 (3)

AVIATION LAW (3 LEC.) (48 CONTACT HOURS)

Prerequisite: Aviation Technology 110 or concurrent enrollment in Air Transportation. Procedural laws and regulations are studied. Local, national, and international procedures are included as well as those relating both to public and private sectors of air commerce. Topics include the development of aviation law, regulatory agencies, and quasi-official study and advisory groups. Special emphasis is on flight procedures (flight plans), ports of entry, customs, clearances, contraband, quarantines, aviation hazards, and liabilities. The present legal structure and possible future changes are covered, including reciprocity agreements.

AVIATION TECHNOLOGY (AVT) 123 (3)

GROUND SCHOOL COMMERCIAL (3 LEC.) (48 CONTACT HOURS)

Prerequisite: Private Pilot Certificate. This course is an in-depth analysis of all topics covered in the Commercial Pilot written examination. Emphasis is on problem development and solutions. Advanced exercises are included in the areas of aircraft operation, meteorology, navigation, communications, theory and hazards of attitude instrument flight, flight physiology, and emergency procedures. This course is designed to fulfill the Ground School Requirements of the FAA for the Commercial Pilot Certificate.

AVIATION TECHNOLOGY (AVT) 128 (3)

AERO ENGINES AND SYSTEMS (3 LEC.) (48 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Aviation Technology 110, Electronics Technology 235, or the equivalent. Basic power plant types and principles of operation are presented. Reciprocating, rotary, jet, and rocket engines are included. Also covered are configurations, such as in-line, radial, vee and horizontally opposed, turbo-prop, turbo-jet, fan-jet,

and ram-jet. Also included are numerous systems, such as the fuel, ignition, electrical, environmental, lubrication, hydraulics, pneumatics, fire detection and extinguishing, cooling, tachometer, monitoring, manual control, and power boosted systems.

AVIATION TECHNOLOGY

(AVT) 135 (2)

FLIGHT BASIC (9 LAB., 25 FLIGHT) (34 CONTACT HOURS)

This course provides 25 hours of flight instruction (15 hours dual, 10 hours solo flight). Two hours in the Synthetic Flight Trainer are required. A current Second-Class Medical Certificate is required. Flight and laboratory fee.

AVIATION TECHNOLOGY

(AVT) 137 (1)

FLIGHT PRIVATE PILOT (4 LAB., 20 FLIGHT) (24 CONTACT HOURS)

This course provides 20 hours of flight instruction (10 hours dual and 10 hours solo flight). Pre-flight instruction and briefing are included. Students receive credit for the course upon completion of the flight prerequisite for the Private Pilot Flight Examination. Flight and laboratory fee.

AVIATION TECHNOLOGY

(AVT) 210 (4)

FEDERAL AVIATION REGULATIONS, AIRSPACE AND AIR TRAFFIC CONTROL SERVICES (3 LEC., 4 LAB.) (52 CONTACT HOURS)

It is recommended that this course be taken concurrently with one of the ground school courses. This course is an in-depth study of Federal Aviation Regulations, Air Traffic Control Procedures, the National Airspace System, and NTSB Regulations. Rated pilots may take this course to prepare for the 24-month flight review. A total of 4 hours in the Synthetic Flight Trainer is required. Instruction is in the use of various radar services. Laboratory fee.

AVIATION TECHNOLOGY

(AVT) 212 (3)

AIRPORT MANAGEMENT (3 LEC.) (48 CONTACT HOURS)

Prerequisites: Required core courses and Business 136. The major functions of airport management are presented. Topics include the adequacy of facilities and services, organization, personnel, maintenance, planning and zoning, operations, revenues and expenses, public relations, ecology, and safety. A study of the socio-economic effect of airports on the communities they serve is also covered.

AVIATION TECHNOLOGY

(AVT) 220 (3)

AERO DYNAMICS (3 LEC.) (48 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Mathematics 196. The aeronautical applications of physical laws are studied. Areas considered include gravitational laws, forces and stresses, Bernoulli's principle, gyroscopic principles, and velocity-sonic relationships. The dynamics of airfoils, high efficiency lift devices, energy conversion to reactive forces related to aerobatics, and precision flight are also covered.

AVIATION TECHNOLOGY

(AVT) 221 (3)

ADVANCED NAVIGATION (2 LEC., 2 LAB.) (64 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Aviation Technology 226 or the consent of the instructor. This course covers flight planning. Consideration is given to adverse atmospheric conditions, navigational capabilities, and safety. The course also includes the analysis of atmospheric maps, charts, and weather radar. The interpretation and use of all operational data are also presented. Laboratory fee.

AVIATION TECHNOLOGY**(AVT) 223 (3)**

AIRLINE MANAGEMENT (3 LEC.) (48 CONTACT HOURS)

Prerequisites: Required core courses and Business 136. This course covers the organization, operation, and management of an airline. Topics include planning, facility requirements, financing, aircraft selection criteria, route feasibility studies, market and passenger trends, and population trends affecting load factors. Problems unique to airline operations are explored.

AVIATION TECHNOLOGY**(AVT) 224 (3)**

GROUND SCHOOL INSTRUMENT (3 LEC.) (48 CONTACT HOURS)

Prerequisite: Private or Commercial Pilot Certificate. This course presents aircraft attitude control, flight procedures, and maneuvering by reference solely to cockpit instruments. Completion of this course will qualify the student to take the FAA Instrument Rating Written Examination.

AVIATION TECHNOLOGY**(AVT) 225 (3)**

AVIATION MARKETING (3 LEC.) (48 CONTACT HOURS)

Prerequisites: Required core courses and Business 233. The significance and functions of marketing are stressed from the airline viewpoint. Topics include market research, sales, advertising and promotion concepts, traffic, demand analysis, and price determination theory.

AVIATION TECHNOLOGY**(AVT) 226 (3)**

METEOROLOGY (3 LEC.) (48 CONTACT HOURS)

Basic concepts of meteorology are studied. Weather data and measuring devices are covered. Topics include weather maps and symbols, U.S. Weather Bureau documents, structure and general circulation of the atmosphere, theories of air mass, fronts, pressure areas, temperature gradients and inversions, violent atmospheric activities, and ecological considerations.

AVIATION TECHNOLOGY**(AVT) 227 (2)**

FLIGHT COMMERCIAL I (8 LAB., 30 FLIGHT) (38 CONTACT HOURS)

Prerequisite: Private Pilot Certificate. This course provides 30 hours of flight instruction (10 hours dual and 20 hours solo flight) to apply toward the Commercial Pilot Certificate. Pre-flight instruction and briefing are included. A current Second-Class Medical Certificate is required. Flight and laboratory fee.

AVIATION TECHNOLOGY**(AVT) 228 (3)**

FLIGHT COMMERCIAL II (8 LAB., 46 FLIGHT) (54 CONTACT HOURS)

Prerequisite: Aviation Technology 227 and concurrent enrollment in Aviation Technology 123. This course provides 46 hours of flight instruction (10 hours dual instrument instruction, 6 hours dual instruction, and 30 hours of solo flight) to apply toward the Commercial Pilot Certificate. Pre-flight instruction and briefing are included, as are 5 hours of night flight. Flight and laboratory fee.

AVIATION TECHNOLOGY**(AVT) 229 (3)**

FLIGHT COMMERCIAL III (4 LAB., 46 FLIGHT) (50 CONTACT HOURS)

Prerequisite: Aviation Technology 123 and 228. This course provides 46 hours flight instruction (6 hours dual flight, 30 hours solo flight, and 10 hours dual and practice flight in a more sophisticated aircraft) to fulfill flight-law requirements for the Commercial Pilot Certificate. Pre-flight instruction and briefing are included. Students receive course credit upon completion of the flight prerequisite to the Commercial Pilot Flight Examination. Flight and laboratory fee.

AVIATION TECHNOLOGY**(AVT) 230 (3)**

FLIGHT COMMERCIAL IV-INSTRUMENT (26 LAB., 20 FLIGHT) (46 CONTACT HOURS)

Prerequisite: Private or Commercial Pilot Certificate. This course provides 45 hours of flight instruction (25 hours of instrument flight instruction and 20 hours instruction in an instrument,

synthetic trainer). Pre-flight instruction and briefing are included. Laboratory fee.

AVIATION TECHNOLOGY (AVT)

249 (3)

AIR TRANSPORTATION, TRAFFIC AND CARGO (3 LEC.)

Prerequisites: Required core courses and credit or concurrent enrollment in Management 136. Transportation methods of passengers and cargo are examined. The need, nature and structure of the air transportation segment of the aviation industry are studied. Emphasis is on the diagnosis and solution of problems at terminals. Topics include air cargo, air mail, air express, air freight, air taxi, air carrier, commuter, business and pleasure.

AVIATION TECHNOLOGY

(AVT) 250 (2)

FLIGHT INSTRUCTOR GROUND SCHOOL (2 LEC.) (32 CONTACT HOURS)

Prerequisite: Commercial Pilot Certificate or Private Pilot Certificate with 200 hours logged flight time. Principles of flight and ground instruction are presented. Instructional techniques, analysis of maneuvers, and Federal Aviation Regulations are included. Completion of this course should qualify the student to pass the Flight Instructor Written Examination.

AVIATION TECHNOLOGY (AVT)

251 (2)

FLIGHT INSTRUCTOR AIRPLANE/SINGLE OR MULTI-ENGINE (40 CONTACT HRS.)

Prerequisite: Commercial pilot certificate or private pilot certificate with 200 hours logged flight time. This course focuses on the science of flight instruction. Evaluation of student performance and maneuver analysis are included. The required instructional flight disciplines are covered in order to qualify students for the FAA Flight Instructor Rating. Simulator fee.

AVIATION TECHNOLOGY (AVT)

252 (3)

INSTRUMENT FLIGHT INSTRUCTOR GROUND SCHOOL (48 CONTACT HRS.)

Prerequisites: Instrument Rating and Commercial Pilot Certificate; pass

written examination on airspace and regulations or concurrent enrollment in Aviation Technology 210. Instructional techniques of the Synthetic Flight Trainer are presented. Included are instrument flight rules, instrument charts, instrument procedures, and the use of aircraft instruments for instrument flight. Emphasis is on developing instructional techniques and materials. The course is designed to prepare students for the FAA Instrument Flight Instructor Flight Test and Written Test. Students will be required to conduct instruction in Synthetic Ground Trainers.

AVIATION TECHNOLOGY (AVT)

253 (1)

FLIGHT INSTRUCTOR-AIRPLANE INSTRUMENT (20 CONTACT HRS.)

Prerequisite: Certified Flight Instructor Rating. This course includes 20 hours of flight training in the science of flight instruction including evaluation of student performance and maneuver analysis. The required flight disciplines that qualify the student for the FAA Flight Instructor-Airplane Instrument Rating are covered. Ten (10) hours in the Synthetic Flight Trainer are required. Flight and laboratory fee.

AVIATION TECHNOLOGY (AVT)

254 (1)

FLIGHT ADVANCED I (16 CONTACT HRS.)

Prerequisite: A Private Pilot Certificate or a Commercial Pilot Certificate. This course includes 10 hours of flight instruction. All flying is in modern twin-engine aircraft and is designed to give the advanced pilot a greater depth of aircraft experience. The course includes pre-flight instruction and briefing. It leads to the FAA Multi-Engine Pilot Rating. Flight fee.

AVIATION TECHNOLOGY (AVT)

255 (3)

TYPE RATING TURBO JET GROUND SCHOOL (48 CONTACT HOURS)

Prerequisites: Commercial Pilot Certificate and Instrument Rating. This course will provide an analysis of normal, abnormal and emergency operation of the flight control, engine, fuel, electrical, pneumatic, navigation

and auxiliary systems and use of the manufacturer's performance data for a specific make and model (type) of small, multi-engine, turbo-jet powered airplane. A review of procedures related to pre-flight, takeoffs, enroute flight, landings, engine-out procedures, no-flap landings, collision avoidance and wake turbulence avoidance will also be included.

AVIATION TECHNOLOGY (AVT)

256 (3)

FLIGHT ADVANCED II - JET TYPE RATING
(170 CONTACT HOURS)

Prerequisites: Commercial Pilot Certificate and Instrument Rating. This course includes ten hours of flight instruction, and ten hours of pre- and post-flight instruction. All flying is in a small multi-engine, turbo-jet powered airplane. It leads to the FAA Multi-Engine Jet airplane type rating. Flight fee.

AVIATION TECHNOLOGY (AVT)

261 (3)

AIRCRAFT DISPATCHER I (48 CONTACT HRS.)

This course includes a survey of FAA regulations and duties of an aircraft dispatcher plus basic flight planning for transport category aircraft.

AVIATION TECHNOLOGY (AVT)

262 (4)

PRACTICAL DISPATCHING (58 CONTACT HRS.)

The content of this course is described in the current FAA Aircraft Dispatcher Circular. The content is designed to prepare the student for the FAA written exam for aircraft dispatcher. Ten hours are required in the Simulated Flight Trainer. (Simulated instrument flight hours can be accumulated both on and off campus but must be verified by the instructor.) Simulator fee.

AVIATION TECHNOLOGY (AVT)

263 (3)

FLIGHT ENGINEER GROUND SCHOOL
(48 CONTACT HRS.)

Prerequisites: Aviation Technology 261 and Aviation Technology 262 or the equivalent experience and/or credentials. This course includes FAA regulations, flight theory and aerodynamics, basic meteorology with respect to engine operations, center of gravity computations, airplane systems and equipment, and normal and emergency operating procedures. This information prepares the student for the flight engineer's written tests. Specific emphasis is placed on the Boeing 727 and Boeing 707 as aircraft which are used for flight engineer training by civil United States air carriers.

AVIATION TECHNOLOGY (AVT)

264 (3)

AIR TRANSPORT PILOT GROUND SCHOOL
(48 CONTACT HRS.)

Prerequisites: Aviation Technology 261 and Aviation Technology 262 or the equivalent experience and/or credentials. This course is designed to prepare the student for the Air Transport Pilot Written Test and includes operations of air carrier aircraft, navigation by instruments, the general system and material relative to weather information collection and dissemination, meteorology, weather conditions, air navigation facilities, airplane weather observations and influence of terrain on meteorological conditions, radio communications, and basic principles of loading and weight distribution.

AVIATION TECHNOLOGY (AVT)

270 (5)

ORIENTATION TO AIR TRAFFIC CONTROL
(80 CONTACT HRS.)

This course is designed to acquaint new employees with the FAA organization, the options within the air traffic service, and the emergency readiness requirements. It provides a basic orientation to the history, structure, and functions of the FAA with emphasis on air traffic service. National, local, and individual policies and obligations are also presented.

AVIATION TECHNOLOGY (AVT)**272 (2)**AIRCRAFT TYPES AND CHARACTERISTICS/
AIR TRAFFIC CONTROL COMMUNICATIONS
(32 CONTACT HRS.)

This course is designed to introduce developmental controllers to the information necessary to identify the types of aircraft by name or model by its physical characteristics and to state the normal range of operating speeds, altitudes, the weight class and category, as well as developing the ability to identify the procedures, phraseology, and discipline pertaining to radio communications in accordance with FCC regulations. Emergency communications and visual communications used by air traffic control facilities are also presented.

AVIATION TECHNOLOGY (AVT)**274 (3)**AIR TRAFFIC COMPUTER OPERATIONS
(48 CONTACT HRS.)

This course is designed to train the student to operate the components of the central computer complex in an enroute air traffic control center and includes computer operations; input and output devices and their operating characteristics and message format, content, and computer responses.

AVIATION TECHNOLOGY (AVT)

(See Cooperative Work Experience)

701, 711, 801, 811 (1)**702, 712, 802, 822 (2)****703, 713, 803, 813 (3)****704, 714, 804, 814 (4)****AVIONICS TECHNOLOGY (AV)****129 (3)**INTRODUCTION TO AIRCRAFT ELECTRONIC
SYSTEMS (2 LEC., 2 LAB)

This course relates aircraft electronic systems to aircraft flight and navigation. Emphasis is on the operation and function of the electronic systems. The laboratory requirements include demonstrations of the operation of the systems and the use of some ramp test equipment. Laboratory fee.

AVIONICS TECHNOLOGY (AV)**132 (4)**AIRCRAFT ELECTRICAL AND ELECTRONIC
SYSTEMS INSTALLATION (3 LEC., 3 LAB.)

Prerequisite: Avionics Technology 129. Suggested pre- or co-requisites: Electronics Technology 191 or Electronics Technology 135. This is a course of study and practical experience in the installing of avionic systems in aircraft, mounting of electronic equipment, construction and installation of electrical wiring and cables, proper use of tools, selection of materials, and accepted methods and procedures to insure aircraft safety, mechanical integrity, electrical reliability, and compliance with applicable FAA regulations. Laboratory fee.

AVIONICS TECHNOLOGY (AV)**235 (4)**OPERATIONAL TESTING OF AIRCRAFT
ELECTRONIC SYSTEMS (3 LEC., 3 LAB.)

Prerequisite: Avionics Technology 129. Suggested pre- or co-requisites: Electronics Technology 191 or Electronics Technology 135. This course integrates technical drawing interpretation, wiring interface checkout and the application of ramp test equipment in common usage. In the laboratory, the student will perform functional checks of aircraft electrical and electronic systems using appropriate procedures for determining the operating condition of the equipment and techniques for correcting equipment malfunctions. The students should gain practical experience in avionics equipment in the aircraft and on the bench. Laboratory fee.

AVIONICS TECHNOLOGY (AV)

(See Cooperative Work Experience)

701, 711, 801, 811 (1)**702, 712, 802, 822 (2)****703, 713, 803, 813 (3)****704, 714, 804, 814 (4)****BANKING AND FINANCE****(BF) 100 (3)**INTRODUCTION TO CREDIT
UNION BUSINESS (3 LEC.)

This course presents a survey of the history and philosophy of credit unions

as a part of the U.S. economy. Topics include credit union organizational structure, legal basis, regulatory agencies, general functions, duties of board and committees, reports, precedures, accounting statements, and data processing.

BANKING AND FINANCE

(BF) 101 (3)

CREDIT MANAGEMENT (3 LEC.)

Prerequisite: Banking and Finance 115. Methods of credit management and control are presented and applied to cases. Topics include making credit decisions, fixing credit limits, and handling complicated accounts. Adjustments, extensions, composition settlements, assignments, reorganizations, and bankruptcies are also covered. Emphasis is on analysis of profitability, capacity to pay debts and provide essential services, and ability to withstand adversity. Trade credit is examined as a commitment of corporate assets.

BANKING AND FINANCE

(BF) 103 (3)

INTRODUCTION TO BANKING (3 LEC.)

This course is an overview of the internal organization and operation of the departments of a full service bank. Emphasis is on an operational perspective of banking services.

BANKING AND FINANCE (BF)

104 (3)

MONEY AND BANKING (3 LEC.)

Prerequisite: Economics 201. Basic economic principles related to money and banking are presented. Emphasis is on the practical application of the economics of money and banking to the financial institution. Topics include the structure of the commercial banking system and the nature and functions of money. Bank investments, loans, earnings, and capital are also covered. The Federal Reserve System, The Treasury Department, and the changing international monetary system are included.

BANKING AND FINANCE

(BF) 105 (3)

COMPARATIVE FINANCIAL INSTITUTIONS (3 LEC.)

The nature, functions and relationships of different financial institutions are explored. Money markets and capital are included. Banking, savings and loan, and financial credit institutions are investigated. The role, characteristics, operations, capabilities and customer orientation of each are noted. The effect of state and federal regulatory agencies is also covered.

BANKING AND FINANCE

(BF) 106 (2)

INTRODUCTION TO THE SAVINGS ASSOCIATION BUSINESS (2 LEC.)

This course is an introduction to the modern business world and to the role of savings associations. The historical development, present-day organization, competition and future direction of associations are presented.

BANKING AND FINANCE

(BF) 107 (2)

SAVINGS ASSOCIATION OPERATIONS (2 LEC.)

This course is an overview of the internal operations of a savings association. Topics include the responsibilities to various departments and the interrelationship of all job assignments.

BANKING AND FINANCE

(BF) 110 (3)

FEDERAL RESERVE SYSTEM (3 LEC.)

The operations and policies of the Federal Reserve System are examined. Attention is given to international monetary affairs, especially the changing role of gold. Economic developments and goals which affect the stability of the American economy are explored. Federal Reserve efforts to adapt and influence the changing economic environment are included.

BANKING AND FINANCE**(BF) 111 (3)**

TRUST FUNCTIONS AND SERVICES (3 LEC.)

This course covers the services of institutions engaged in trust business. Topics include the history of trust services and institutions, trust powers and government supervision, and trust department services. Also included are property, wills, estates, personal agencies, different kinds of trusts, and guardianship. Investment of trust funds and management of property and mortgages are also presented.

BANKING AND FINANCE**(BF) 112 (3)**

INSTALLMENT CREDIT (3 LEC.)

Installment credit is the focus of this course. Topics include credit evaluation, open-end credit, marketing bank services, and collection policies and procedures. Also included are legal aspects, financial statement analysis, installment lending, and leasing. Management of the credit department, insurance and rate structure and yields are also covered.

BANKING AND FINANCE**(BF) 113 (3)**

CREDIT CARD BANKING (3 LEC.)

This course examines the operation of a bank charge plan. It briefly examines the marketing of credit cards.

BANKING AND FINANCE**(BF) 114 (3)**

TELLER TRAINING (2 LEC., 1 LAB)

The basics of teller operation are presented. The fundamentals of negotiable instruments and the care and handling of money are included. Other topics are deposits, checking and savings transactions, special teller functions, and balancing, cashing, and paying checks. The importance of public relations in the teller's job security measures, fraud and robbery are also covered.

BANKING AND FINANCE**(BF) 115 (3)**

CREDIT AND COLLECTION PRINCIPLES (3 LEC.)

This course examines credit and collections. Topics include the nature and function of credit, types of credit and bank and commercial credit. Also covered are credit risk, sources of information, analysis of agency reports, interchange services and collection procedures.

BANKING AND FINANCE**(BF) 116 (1)**

CONSTRUCTION LENDING (1 LEC.)

Construction lending in commercial banks is presented. Topics include an analysis of applications, permanent financing and loan participations and servicing. Commitment procedures, bonding and developer guarantees, and advances are covered. Inspections, legal work, unsecured construction financing, and land development loans are studied. Bank relationships with mortgage bankers are also included.

BANKING AND FINANCE**(BF)****117 (2)**

LETTERS OF CREDIT (2 LEC.)

This course focuses on letters of credit. Shipping documents, mechanics of letters of credit, payment, reimbursement, and document examination are all included.

BANKING AND FINANCE**(BF) 118 (1)**

INSTALLMENT LOAN INTERVIEWS (1 LEC.)

This course introduces the techniques of interviewing a loan customer. Topics include Regulation B requirements and the handling of problem customers.

BANKING AND FINANCE**(BF) 119 (1)**

NEW ACCOUNTS (1 LEC.)

Basic problems in working with new bank accounts are surveyed. The function of the new account and its relationship with marketing are described. Various legal questions are explored, and the legal rights of survivorship are examined.

BANKING AND FINANCE**(BF) 120 (1)**

SELLING BANK SERVICES (1 LEC.)

The recognition and meeting of customer's needs are the focus of this course. Topics include checking accounts, savings accounts, savings services, loans to individuals, safe deposit, travelers checks and cross-selling.

BANKING AND FINANCE**(BF) 121 (1)**

LOSS PREVENTION (1 LEC.)

This course covers check examination and cashing. Check swindles, identification with and without credentials, holdups and security procedures are all included.

BANKING AND FINANCE**(BF) 122 (1)**

SAFE DEPOSIT (1 LEC.)

Safe deposit operations are presented. Security concerns, access, insurance, contracts, and powers of attorney are included. Customer relations, record-keeping and safekeeping procedures are also covered.

BANKING AND FINANCE**(BF) 123 (1)**

LOAN AND DISCOUNT (1 LEC.)

This course emphasizes promissory notes. Topics include calculating interest and discounting commercial paper. Guarantees and general collateral agreements are also covered. Processing documents are also covered. Processing documents which accompany notes secured by stocks, bonds and savings account passbooks is presented. The concepts of attachment, perfection, priority, default and foreclosure are also included.

BANKING AND FINANCE**(BF) 124 (1)**

STOCKS AND BONDS (1 LEC.)

The nature and function of stocks and bonds are presented. Topics include the transfer of ownerships and the kinds of stocks, bonds, and government securities.

BANKING AND FINANCE**(BF) 125 (3)**SAVINGS ASSOCIATION
LENDING (3 LEC.)

This course introduces the lending operations of procedures for handling conventional family mortgage loans, home improvement loans, and mobile home loans. Savings association lending is included. The role of government in home financing, the management of real estate owned and whole loan sales and participations are also studied.

BANKING AND FINANCE**(BF) 200 (3)**CREDIT UNION MANAGEMENT
AND ADMINISTRATION (3 LEC.)

This course covers administration and provision of member services. Topics include loan policies, financial planning and analysis, personnel policies, member relations, delinquency control and collections and risk management.

BANKING AND FINANCE**(BF) 201 (3)**

ADVANCED CREDIT ANALYSIS (3 LEC.)

Prerequisite: Banking and Finance 115. The techniques of making decisions about credit are studied. Methods of financial analysis are discussed and applied to the solution of business problems. Risk appraisal is also studied in terms of general economic conditions, the natures of particular businesses and the conditions and trends in various industries.

BANKING AND FINANCE**(BF) 202 (3)**

CREDIT LAW (3 LEC.)

Laws regarding credit are examined. Emphasis is on credit regulation and commercial and consumer laws in Texas.

BANKING AND FINANCE**(BF) 203 (3)**

PUBLIC RELATIONS AND MARKETING OF FINANCIAL SERVICES (3 LEC.)

This course describes the importance of public relations to the finance industry. Public relations is considered for the industry as a whole and also for individual institutions, such as commercial banks, savings and loan associations and credit unions. Emphasis is also placed on the promotion and marketing of financial services and the evaluation of different marketing practices.

BANKING AND FINANCE**(BF) 204 (3)**

FEDERAL REGULATIONS OF BANKING (3 LEC.)

The federal regulation of banking is covered. Topics include regulatory agencies, bank charters, bank reports and examinations, limitations on operations, and the regulation of expansion. Emphasis is on bank supervision rather than influence through fiscal and monetary policies.

BANKING AND FINANCE**(BF) 205 (3)**

ANALYZING FINANCIAL STATEMENTS (3 LEC.)

Prerequisite: Accounting 201. This course focuses on the characteristics and analysis of financial statements. The goals, methods, and tools of analysis are covered. Topics for analysis include profit and loss, accounts receivable, inventories, projected statements, cash budgets, and balance sheets. The relationship of balance sheet accounts to sales is also covered.

BANKING AND FINANCE**(BF) 206 (3)**

NEGOTIABLE INSTRUMENTS AND THE PAYMENTS MECHANISM (3 LEC.)

This course presents the legal aspects of negotiable instruments. Emphasis is on federal and state banking statutes, court decisions, and administrative regulations. Topics include the legal aspects of deposit, collection, dishonor and return, and payment of checks and cash items. The relationship of various

parties within a bank and between depositors are explored. Some legal aspects of other bank operations are also introduced.

BANKING AND FINANCE**(BF) 207 (2)**

SAVINGS ACCOUNT ADMINISTRATION (2 LEC.)

The administration of savings accounts is described. Topics include insurance, procedures for opening accounts, and procedures for handling inactive accounts. Loans secured by savings accounts and creditor actions in reaching debtors' accounts are also covered. Liquidity levels, advertising, and additional services to savers are included.

BANKING AND FINANCE**(BF) 208 (3)**

FINANCIAL COUNSELING AND CREDIT GRANTING (3 LEC.)

This course covers credit applicant interview and relations, credit investigation, determining credit worthiness, the credit/loan decision, loan rejections, legal considerations, and disclosure. Family resource management, consumer decision making, member benefits, counseling techniques, and applicant personalities are also presented and discussed.

BANKING AND FINANCE**(BF) 713, 803, 813 (3)**

(See Cooperative Work Experience)

BIOLOGY (BIO) 101 (4)

GENERAL BIOLOGY (3 LEC., 3 LAB.)

This course is a prerequisite for all higher level biology courses and should be taken in sequence. Topics include the cell, tissue, and structure and function in plants and animals. Laboratory fee.

BIOLOGY (BIO) 102 (4)

GENERAL BIOLOGY (3 LEC., 3 LAB.)

This course is a continuation of Biology 101. Topics include Mendelian and molecular genetics, evolutionary mechanisms, and plant and animal development. The energetics and regulation of ecological communities are also studied. Laboratory fee.

BIOLOGY (BIO) 110 (4)
INTRODUCTORY BOTANY (3 LEC., 3 LAB.)

This course introduces plant form and function. Topics ranging from the cell through organs are included. Emphasis is on the vascular plants, including the taxonomy and life cycles of major plant divisions. Laboratory fee.

BIOLOGY (BIO) 115 (4)
BIOLOGICAL SCIENCE (3 LEC., 3 LAB.)

Selected topics in biological science are presented for the non-science major. Topics include the cell concept and basic chemistry as it relates to biology. An introduction to genetics, evolution, cellular processes, such as mitosis, meiosis, respiration, and photosynthesis, and plant and animal reproduction is also covered. Laboratory fee. (This course is offered on campus and may be offered via television.)

BIOLOGY (BIO) 116 (4)
BIOLOGICAL SCIENCE (3 LEC., 3 LAB.)

Selected topics in biological science are presented for the non-science major. Topics include the systems of the human body, disease, drug abuse, aging, evolution, ecology, and people in relation to their environment. Laboratory fee.

BIOLOGY (BIO) 120 (4)
INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY (3 LEC., 3 LAB.)

Prerequisite: Prior enrollment in Biology 115 is recommended for those with no previous high school biology. Major topics include cell structure and function, tissues, organization of the human body, and the following organ systems: skeletal, muscular, nervous, and endocrine. This course is a foundation course for specialization in Associate Degree Nursing and Allied health disciplines. Other students interested in the study of structure and function of the human body should consult a counselor. Emphasis is on homeostasis. Laboratory fee.



BIOLOGY (BIO) 121 (4)
INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY (3 LEC., 3 LAB.)

Prerequisite: Biology 120. This course is a continuation of Biology 120. Major topics include the following organ systems: digestive, circulatory, respiratory, urinary, and reproductive. Emphasis is on homeostasis. Laboratory fee.

BIOLOGY (BIO) 123 (4)
APPLIED ANATOMY AND PHYSIOLOGY (3 LEC., 2 LAB.)

This course surveys human anatomy and physiology. The various body systems are studied and examined. This course is suggested for students of the health occupations in accordance with their program requirements. It is open to other students. This course will apply toward meeting the science requirement for non-science majors. No previous science background is presumed. Laboratory fee.

BIOLOGY (BIO) 203 (4)
INTERMEDIATE BOTANY (3 LEC., 3 LAB.)

Prerequisites: Biology 101 and 102. The major plant groups are surveyed. Emphasis is on morphology, physiology, classification, and life cycles. Evolutionary relationships of plants to each other and their economic importance to humans are also covered. Laboratory fee.

BIOLOGY (BIO) 211 (4)

INVERTEBRATE ZOOLOGY (3 LEC., 3 LAB.)

Prerequisite: 8 hours of biological science. This course surveys the major groups of animals below the level of chordates. Consideration is given to phylogeny, taxonomy, morphology, physiology, and biology of the various groups. Relationships and importance to higher animals and humans are stressed. Laboratory fee.

BIOLOGY (BIO) 216 (4)

GENERAL MICROBIOLOGY (3 LEC., 4 LAB.)

Prerequisite: Biology 102 or the consent of the instructor. Microbes are studied. Topics include growth, reproduction, nutrition, genetics, and ecology of micro-organisms. Laboratory activities constitute a major part of the course. Laboratory fee.

BIOLOGY (BIO) 217 (4)

FIELD BIOLOGY (3 LEC., 4 LAB.)

Prerequisite: Eight hours of biological science or the consent of the division chairperson. Local plant and animal life are surveyed in relationship to the environment. Aquatic and terrestrial communities are studied with reference to basic ecological principles and techniques. Emphasis is upon classification, identification, and collection of specimens in the field. This course may be repeated for credit.

BIOLOGY (BIO) 221 (4)

ANATOMY AND PHYSIOLOGY I (3 LEC., 3 LAB.)

Prerequisite: Biology 102 or the consent of the instructor. This course examines cell structure and function, tissues, and the skeletal, muscular, and nervous systems. Emphasis is on structure, function, and the interrelationships of the human systems. Laboratory fee.

BIOLOGY (BIO) 222 (4)

ANATOMY AND PHYSIOLOGY II (3 LEC., 3 LAB.)

Prerequisite: Biology 221 or the consent of the instructor. Second course of a two course sequence. Structure and function as related to the human circulatory, respiratory, urinary, digestive, reproductive, and endocrine systems. Emphasis is placed on the interrelationships of these systems. Laboratory fee.

BIOLOGY (BIO) 224 (4)

ENVIRONMENTAL BIOLOGY (3 LEC., 3 LAB.)

Prerequisite: 6 hours of biology. The principles of aquatic and terrestrial communities are presented. Emphasis is on the relationship of these principles to the problems facing people in a modern technological society. Laboratory fee.

BIOLOGY (BIO) 226 (4)

GENETICS (3 LEC., 3 LAB.)

This course focuses on genetics. Topics include Mendelian inheritance, recombination genetics, the biochemical theory of genetic material, and mutation theory. Plant and animal materials are used to study population genetics, linkage, gene structure and function, and other concepts of heredity. Laboratory fee.

BIOLOGY (BIO) 230 (4)

MAMMALIAN PHYSIOLOGY (3 LEC., 3 LAB.)

Prerequisite: 12 hours of biology, 8 hours of inorganic chemistry, or concurrent registration in organic chemistry, and the consent of the instructor. This course is a study of the function of various mammalian systems. Emphasis is on interrelationships. Instruments are used to measure various physiological features. Laboratory fee.

BIOLOGY (BIO) 235 (4)

COMPARATIVE ANATOMY OF THE VERTEBRATES (3 LEC., 4 LAB.)

Prerequisites: Biology 101 and 102. For science majors and pre-medical and pre-dental students. Major groups of vertebrate class is studied. Emphasis is on morphology and evolutionary relationships. Laboratory fee.

BLUEPRINT READING (BPR) 177 (2)

BLUEPRINT READING (1 LEC., 3 LAB.) (64 CONTACT HOURS)

Engineering drawings are described and explained. Topics include multi-view projection, sections, auxiliaries, bill of materials, symbols, notes, conventions, and standards. The skills of visualization, dimensioning, and sketching of machine parts are covered.

BLUEPRINT READING (BPR) 178 (2)

BLUEPRINT READING (1 LEC., 3 LAB.) (64 CONTACT HOURS)

Prerequisite: Blueprint Reading 177. The different types of prints are read. More complex prints are included. Types of prints include machine, piping, architectural, civil, structural, electrical, electronic, numerical control documents, and aircraft. Calculations required in blueprint reading are emphasized.

BUSINESS (BUS) 105 (3)

INTRODUCTION TO BUSINESS (3 LEC.)

This course provides an overall picture of business operations. Specialized fields within business organizations are analyzed. The role of business in modern society is identified. (This course is offered on campus and may be offered via television.)

BUSINESS (BUS) 143 (3)

PERSONAL FINANCE (3 LEC.)

Personal financial issues are explored. Topics include financial planning, insurance, budgeting, credit use, home ownership, savings, investment, and tax problems.

BUSINESS 157

SMALL BUSINESS, BOOKKEEPING AND ACCOUNTING PRACTICES (3 LEC.)

The essentials of business accounting followed by how to prepare and analyze basic financial statements pertinent to all business operators.

BUSINESS (BUS) 234 (3)

BUSINESS LAW (3 LEC.)

This course presents the historical and ethical background of the law and current legal principles. Emphasis is on contracts, property, and torts.

BUSINESS (BUS) 237 (3)

ORGANIZATIONAL BEHAVIOR (3 LEC.)

The persisting human problems of administration in modern organizations are covered. The theory and methods of behavioral science as they relate to organizations are included.

BUSINESS

(See Cooperative Work Experience)

701, 711, 801, 811 (1)**702, 712, 802, 822 (2)****703, 713, 803, 813 (3)****704, 714, 804, 814 (4)****CARPENTRY (CAR) 101 (3)**

WOODWORKING TOOLS AND MATERIALS (90 CONTACT HOURS)

This course focuses on the use of woodworking tools and equipment. Machines used include the table saw, jointer, planer, radial arm saw, router, sander, and various portable power tools. Proper safety procedures are emphasized. Laboratory fee.

CARPENTRY (CAR) 102 (3)

SITE PREPARATION (90 CONTACT HOURS)

Knowledge and skills for site preparation are presented. Included are laying out and constructing foundations for domestic buildings, constructing and placing piers, erecting concrete foundation forms, and pouring concrete foundations. Laboratory fee.

CARPENTRY (CAR) 103 (1)

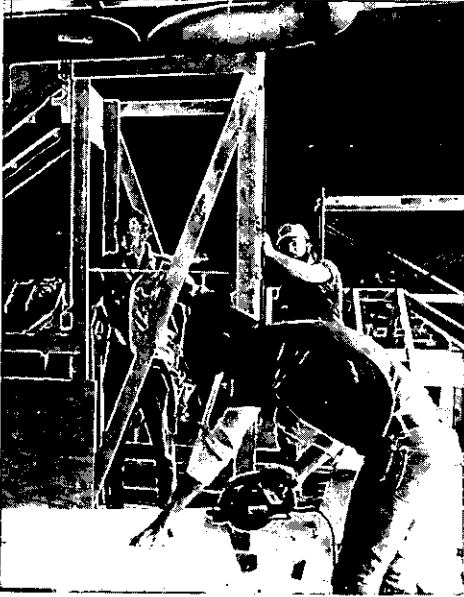
CONSTRUCTION SAFETY (30 CONTACT HOURS)

Construction safety is covered. This course is based on standards of the Occupational Safety and Health Administration for residential commercial construction.

CARPENTRY (CAR) 104 (3)

RESIDENTIAL FRAMING (90 CONTACT HOURS)

Erection of frame structures is the focus of this course. Both balloon and western framing are included. The



construction of floor systems, ceilings, and walls is also covered. Safety procedures are emphasized. Laboratory fee.

CARPENTRY (CAR) 105 (3)
ROOF FRAMING I (90 CONTACT HOURS)

This course covers the knowledge and skills needed to lay rafters of all types. The cutting and erecting of rafters for gable, shed, and gambrel roof are included. The styles and terminology of roof framing are also included. Laboratory fee.

CARPENTRY (CAR) 106 (3)
EXTERIOR TRIM AND FINISH (90 CONTACT HOURS)

Exterior wall coverings, roof cornice, and roofing are the topics of this course. Wall coverings, roof sheathing, shingles, and cornice are applied to different styles of roofs and buildings. Laboratory fee.

CARPENTRY (CAR) 107 (3)
CONSTRUCTION COST ESTIMATING (48 CONTACT HOURS)

Prerequisite: Blueprint Reading 177. This course covers cost estimates for residential and small commercial structures. Estimates are made from blueprints and specifications. Emphasis is on the process of bid preparation.

CARPENTRY (CAR) 108 (3)
MODERN CONSTRUCTION PRACTICES (90 CONTACT HOURS)

The basic terminology used in commercial construction is surveyed. The design and erection of tilt-up wall construction are studied. The erection and study of pre-cast panels and other new systems for commercial building are included. Laboratory fee.

CARPENTRY (CAR) 109 (3)
CONCRETE SLABS IN COMMERCIAL BUILDING (90 CONTACT HOURS)

The different designs and systems used in concrete slabs are examined. Both below grade and suspended slabs are included. Emphasis is on practical knowledge in the erection, shoring and scaffolding of slabs. Laboratory fee.

CARPENTRY (CAR) 201 (3)
CABINET BUILDING I (90 CONTACT HOURS)

The design and layout of modern cabinets are presented. Emphasis is on quality work. Included are making material lists, drafting cabinet details, and installing factory-built cabinets. Laboratory fee.

CARPENTRY (CAR) 202 (3)
CABINET BUILDING II (90 CONTACT HOURS)

This course focuses on cabinet designs and construction. All stages from rough materials to a finished product are covered. Laboratory fee.

CARPENTRY (CAR) 203 (3)
STAIR BUILDING (90 CONTACT HOURS)

The knowledge and skills needed in building stairs are presented. Included are riser and tread calculation, material estimates, layout, and construction. The course also covers the construction of stair forms for concrete stairs. Laboratory fee.

CARPENTRY (CAR) 204 (3)

COMMERCIAL WALL FORMS
(90 CONTACT HOURS)

Wall systems are examined. Different types and systems of construction are covered. Included are basement walls, retaining walls, patented walls, and job-built walls. Emphasis is on the erection of these walls. Laboratory fee.

CARPENTRY (CAR) 205 (3)

ROOFING FRAMING II (90 CONTACT HOURS)

Hip and mansard roof systems are presented. Layouts and cutting and erection of each type of roof system are covered. The design and erection of a truss roof system is also included. Laboratory fee.

CARPENTRY (CAR) 206 (3)

VERTICLE PIERS AND
COLUMNS (90 CONTACT HOURS)

The construction of piers and concrete columns is the focus of this course. Different forms are studied. Emphasis is on the layout and erection of different systems. Laboratory fee.

CARPENTRY (CAR) 208 (3)

INTERIOR FINISH I (90 CONTACT HOURS)

This course covers interior finish. Cutting, applying, and finishing paneling is included. Dry wall and trim are also included. The fitting and hanging of interior doors and installing of hardware are covered. Laboratory fee.

CARPENTRY (CAR) 209 (3)

INTERIOR FINISH
II-COMMERCIAL (90 CONTACT HOURS)

This course covers interior finish of commercial buildings. Included are store fronts, metal frame walls and floor systems, moveable partitions, and dropped and suspended ceiling systems. Layout and erection of systems are practiced. Laboratory fee.

CARPENTRY (CAR) 210 (3)

HORIZONTAL BEAM FORM AND FIRE
ENCASEMENT FORMS (90 CONTACT HOURS)

The design of horizontal beams and fireproof encasement forms is studied. Different types of materials and commercial systems are included. Emphasis is on safety. Laboratory fee.

CARPENTRY (CAR) 211 (1)

PROPERTIES OF CONCRETE
(30 CONTACT HOURS)

The nature of concrete is explored. Emphasis is on the manufacturing of concrete, the selection and design of concrete, and methods used in placing and finishing concrete. Laboratory fee.

CARPENTRY (CAR)

(See Cooperative Work Experience)

CHEMISTRY (CHM) 101 (4)

GENERAL CHEMISTRY (3 LEC., 3 LAB.)

Prerequisites: Developmental Mathematics 093 or equivalent and any one of the following: high school chemistry, Chemistry 115, or equivalent. This course is for science and science-related majors. It covers the laws and theories of matter. The laws and theories are used to understand the properties of matter, chemical bonding, chemical reactions, the physical states of matter, and changes of state. The fundamental principles are applied to the solution of quantitative problems relating to chemistry. Laboratory fee.

CHEMISTRY (CHM) 102 (4)

GENERAL CHEMISTRY (3 LEC., 3 LAB.)

Prerequisite: Chemistry 101. This course is for science and science-related majors. It is a continuation of Chemistry 101. Previously learned and new concepts are applied. Topics include solutions and colloids, chemical kinetics and equilibrium, electrochemistry, and nuclear chemistry. Qualitative inorganic analysis is also included. Laboratory fee.



CHEMISTRY (CHM) 115 (4)
CHEMICAL SCIENCES (3 LEC., 3 LAB.)

Prerequisite: Developmental Mathematics 091 or the equivalent. This course is for non-science majors. It traces the development of theoretical concepts. These concepts are used to explain various observations and laws relating to chemical bonding reactions, states of matter, solutions, electrochemistry, and nuclear chemistry. Also included is the descriptive chemistry of some common elements and inorganic compounds. Laboratory fee.

CHEMISTRY (CHM) 116 (4)
CHEMICAL SCIENCES (3 LEC., 3 LAB.)

Prerequisite: Chemistry 115 or the consent of the instructor. This course is for non-science majors. It covers organic chemistry and

biochemistry. The important classes of organic compounds are surveyed. The concept of structure is the central theme. Biochemistry topics include carbohydrates, proteins, lipids, chemistry of heredity, disease and therapy, and plant biochemistry. Laboratory fee.

CHEMISTRY (CHM) 170 (3)
CHEMISTRY OF FLAMMABLE MATERIALS (3 LEC.)

Prerequisite: Chemistry 116. Characteristics and behavior of various materials that burn or react violently are studied. Flammable liquids, combustible solids, and gases are included. Storage, transportation, and handling are covered. Emphasis is on emergency situations and methods of control.

CHEMISTRY (CHM) 201 (4)
ORGANIC CHEMISTRY I (3 LEC., 4 LAB.)

Prerequisite: Chemistry 102. This course is for science and science-related majors. It introduces organic chemistry. The fundamental types of organic compounds are presented. Their nomenclature, classification, reactions, and applications are included. The reactions of aliphatic and aromatic compounds are discussed in terms of modern electronic theory. Emphasis is on reaction mechanisms, stereo-chemistry, transition state theory, and organic synthesis. Laboratory fee.

CHEMISTRY (CHM) 202 (4)
ORGANIC CHEMISTRY II (3 LEC., 4 LAB.)

Prerequisite: Chemistry 201. This course is for science and science-related majors. It is a continuation of Chemistry 201. Topics include aliphatic and aromatic systems, polyfunctional compounds, amino acids, proteins, carbohydrates, sugars, and heterocyclic and related compounds. Instrumental techniques are used to identify compounds. Laboratory fee.

CHEMISTRY (CHM) 203 (4)
QUANTITATIVE ANALYSIS (2 LEC., 6 LAB.)

Prerequisite: Chemistry 102, Mathematics 101 or Mathematics 104

or the equivalent. Principles for quantitative determinations are presented. Topics include gravimetry, oxidation-reduction, indicators, and acid-base theory. Gravimetric and volumetric analysis is emphasized. Colorimetry is introduced. Laboratory fee.

CHEMISTRY (CHM) 205 (2)
CHEMICAL CALCULATIONS (2 LEC.)

Prerequisite: Chemistry 102. Chemical calculations are reviewed. Emphasis is on stoichiometry and chemical equilibrium.

CHEMISTRY (CHM) 234 (4)
INSTRUMENTAL ANALYSIS (2 LEC., 6 LAB.)

Prerequisite: Chemistry 203 or the consent of the instructor. The role of modern electronic instrumentation in analysis is explored. Topics include infrared and ultraviolet spectroscopy, gas chromatography, potentiometric titration, electrochemistry, continuous flow analysis, scintillation counting, electrophoresis, flame photometry, and atomic absorption spectrophotometry as analytical tools. Laboratory fee.

CHILD DEVELOPMENT (CD) 100 (1)
DIRECTED PARTICIPATION OF EARLY CHILDHOOD PROGRAMS (30 CONTACT HOURS)

This course provides in-depth observation and participation experiences and activities with young children at the Parent/Child Study Center and other appropriate child-care facilities. It is repeated four times concurrently with required Child Development core or elective courses.

CHILD DEVELOPMENT (CD) 125 (4)
INFANT AND TODDLER LEARNING ENVIRONMENTS ACTIVITIES AND MATERIALS (3 LEC., 2 LAB)

This course is a study of appropriate learning experiences for infants and toddlers in child-care facilities. Emphasis is on quality environments, learning activities, materials and effective teaching techniques. The laboratory experience includes observing and participating in the Parent/Child Study Center and community child-care facilities.

CHILD DEVELOPMENT (CD) 127 (3)
EARLY CHILDHOOD DEVELOPMENT, 5-12 YEARS (3 LEC.)

This course covers the principles of normal child growth and development from five through twelve years of age. Emphasis is on physical, intellectual, emotional, and social growth. Special attention is given to before and after school care.

CHILD DEVELOPMENT (CD) 135 (4)
INTRODUCTION TO EARLY CHILDHOOD PROGRAMS AND SERVICES (3 LEC., 2 LAB)

This course is a study of historical and current early childhood development programs and services, as well as individuals influencing these programs. Laws and standards regulating these child-care facilities are covered. The laboratory experience includes observation of and participation with pre-schools and child-care centers in the community.

CHILD DEVELOPMENT (CD) 137 (4)
EARLY CHILDHOOD LEARNING ENVIRONMENTS, ACTIVITIES AND MATERIALS (3 LEC., 2 LAB.)

This course is a study of appropriate learning experiences for young children in child-care facilities. Emphasis is on quality environments, learning activities, materials and effective teaching techniques. The laboratory experience includes observation and participation in the Parent/Child Study Center and community child-care facilities.

CHILD DEVELOPMENT (CD) 140 (3)
EARLY CHILDHOOD DEVELOPMENT, 0-3 YEARS (3 LEC.)

This course covers the principles of normal child growth and development from conception through three years. Emphasis is on physical, intellectual, emotional, and social growth.

CHILD DEVELOPMENT (CD) 141 (3)
EARLY CHILDHOOD DEVELOPMENT, 3-5 YEARS (3 LEC.)

This course covers the principles of normal child growth and development from three through five years of age. Emphasis is on physical, intellectual, emotional, and social growth.

CHILD DEVELOPMENT (CD) 150 (3)
NUTRITION, HEALTH AND SAFETY
OF THE YOUNG CHILD (2 LEC., 2 LAB.)

Practical experience and information on the nutritional, health, and safety needs of the young child are provided. A survey of community services for parents and teachers is included. Students earn a first aid certificate during this course.

CHILD DEVELOPMENT (CD) 200 (1)
APPLICATION OF LEARNING THEORIES (30
CONTACT HOURS)

This course provides application of child development learning theories with young children at the Parent/Child Study Center and other appropriate child-care facilities. It is repeated four times concurrently with required Child Development core or elective courses.

CHILD DEVELOPMENT (CD) 203 (3)
PARENTS AND THE CHILD
CAREGIVER/TEACHER (3 LEC.)

Relationships between caregivers, teacher and parents of young children are studied. Emphasis is on ways to develop parental involvement in child care facilities. The course includes observation and participation with teachers, parents, and young children in group settings.

CHILD DEVELOPMENT (CD) 209 (3)
EARLY CHILDHOOD DEVELOPMENT SPECIAL
PROJECTS (3 LEC.)

Registration for this course must be preceded by an interview with a child development instructor. A particular dimension of child care is explored in depth by the student in an individual project. Participation in a designated child care center or facility directly related to the student's special project is included.

CHILD DEVELOPMENT (CD) 233 (4)
DIRECTED PARTICIPATION OF EARLY
CHILDHOOD PROGRAMS (2 LEC., 5 LAB)

This course provides in-depth observation and participation experiences and activities with young children at the Parent/Child Study Center and other appropriate child-care facilities.

CHILD DEVELOPMENT (CD) 236 (3)
THE SPECIAL CHILD: GROWTH AND
DEVELOPMENT (3 LEC.)

Children with special needs are studied with emphasis on physical, mental, and emotional/behavioral problems. This course provides a broad overview of these problem areas and serves as an introduction to the study of exceptional children.

CHILD DEVELOPMENT (CD) 238 (3)
INTRODUCTION TO ADMINISTRATION OF
CHILD CARE PROGRAMS (3 LEC.)

The management of preschool/day care centers is studied. Topics include budgeting, record-keeping, food, health and referral services, and personnel practices.

CHILD DEVELOPMENT (CD) 239 (3)
STUDIES IN CHILD GUIDANCE (2 LEC., 2
LAB.)

This course is a study of appropriate ways of guiding and teaching young children. Emphasis is on guidance principles that develop a positive self-concept in early childhood while recognizing individual differences and varied family situations. The course includes observation of and participation with young children in child-care facilities and interpretation of anecdotal records and case studies of young children.

CHILD DEVELOPMENT (CD) 244 (4)
APPLICATION OF CHILD DEVELOPMENT
LEARNING THEORIES (2 LEC., 5 LAB.)

This course provides application of child development learning theories with young children at the Parent/Child Study Center and other appropriate child-care facilities.

CHILD DEVELOPMENT (CD) 246 (3)
ADVANCED ADMINISTRATIVE PRACTICES
FOR CHILD CARE FACILITIES (3 LEC.)

Prerequisite: Child Development 238. This course is a study of advanced administrative procedures for child-care programs. Topics include planning, financial management, personnel policies, evaluation, leadership styles, and facility design.

CHILD DEVELOPMENT (CD) 250 (3)

SUPPORTIVE SERVICES FOR EXCEPTIONAL CHILDREN (3 LEC.)

The focus of this course is on identifying local, state, and national resources for exceptional children and their families. Referral and resource information for special children is gathered through field studies, community involvement, and independent activities.

CHILD DEVELOPMENT (CD) 251 (4)

LEARNING PROGRAMS FOR CHILDREN WITH SPECIAL NEEDS (2 LEC., 5 LAB.)

This course focuses on successful model programs for encouraging maximum learning from young children with special needs. Materials, activities, and methods of working with children are examined.

CHILD DEVELOPMENT (CD) 253 (3)

ABUSE WITHIN THE FAMILY (2 LEC., 2 LAB.)

The symptoms and causes of abusive behaviors within the family are the focus of this course. Emphasis is on developing skills and competencies in working with these families to help them lessen and alleviate abusive behaviors and experiences.

CHILD DEVELOPMENT (CD) 813 (3)

(See Cooperative Work Experience)

CHINESE (CHI) 101 (4)

BEGINNING CHINESE I (3 LEC., 2 LAB.)

This course is a beginning course in Chinese. Oral practice, elementary reading, and grammar will be stressed. Laboratory fee.

CHINESE (CHI) 102 (4)

BEGINNING CHINESE II (3 LEC., 2 LAB.)

Prerequisite: Chinese 101 or the equivalent. This course continues the oral practice, elementary reading, and grammar studies begun in Chinese 101. Laboratory fee.

CHINESE (CHI) 201 (3)

INTERMEDIATE CHINESE I (3 LEC.)

Prerequisite: Chinese 102 or the equivalent. Reading, cultural background, conversation, and composition are stressed in this course.

CHINESE (CHI) 202 (3)

INTERMEDIATE CHINESE II (3 LEC.)

Prerequisite: Chinese 201 or the equivalent. This course is a continuation of Chinese 201, with stress on reading, cultural background, conversation, and composition.

COLLEGE LEARNING SKILLS

(CLS) 100 (1)

COLLEGE LEARNING SKILLS (1 LEC.)

This course is for students who wish to extend their learning skills for academic or career programs. Individualized study and practice are provided in reading, study skills and composition. This course may be repeated for a maximum of three credits.

COMMUNICATIONS (COM) 131 (3)

APPLIED COMPOSITION AND SPEECH (3 LEC.)

Communication skills are studied as a means of preparing for one's vocation. Practice in writing letters, applications, resumes, and short reports is included.

COMMUNICATIONS (COM) 132 (3)

APPLIED COMPOSITION AND SPEECH (3 LEC.)

Prerequisite: Communications 131 or consent of instructor. The study of communication processes is continued. Emphasis is on written persuasion directly related to work. Expository techniques in business letters and documented reports are covered. Practice in oral communication is provided.

COMPUTING SCIENCE (CS) 174 (3)

FUNDAMENTALS OF COMPUTING (3 LEC.)

Prerequisite: Two years high school algebra or Developmental Mathematics 093. This course is an introductory course designed primarily for students desiring credit towards a minor or major in computer science or other scientific field. It includes a study of algorithms and an introduction to a procedure-oriented language with general applications.

COMPUTING SCIENCE (CS) 175 (3)
INTRODUCTION TO COMPUTER SCIENCE (3 LEC.)

This course is an introduction to the fundamentals of information processing machines. Topics include history of computers, vocabulary, cultural impact, development of basic algorithms, number systems, and applications of elementary programming logic made through the use of the BASIC programming language.

COMPUTING SCIENCE (CS) 181 (3)
INTRODUCTION TO FORTRAN PROGRAMMING (2 LEC., 2 LAB.)

Prerequisites: Computing Science 174 or Computing Science 175 and Math 101 or the consent of the instructor based on equivalent experience. This course is an introduction to computing techniques using the FORTRAN language. Emphasis is on applications used to solve numeric problems in engineering, physical science, and mathematics. Laboratory fee.

COMPUTING SCIENCE (CS) 182 (3)
INTRODUCTION TO BASIC PROGRAMMING (2 LEC., 2 LAB.)

Prerequisites: Computing Science 174 or Computing Science 175 or the consent of the instructor based on equivalent experience. An introduction to the BASIC programming language. Proficiency will be developed as the student codes and executes several BASIC programs using interactive computing equipment. Laboratory fee.

COMPUTING SCIENCE (CS) 183 (3)
INTRODUCTION TO PL/1 PROGRAMMING (2 LEC., 2 LAB.)

Prerequisites: Computing Science 174 or Computing Science 175 or the consent of the instructor based on equivalent experience. Study of PL/1 language with numeric and non-numeric applications. Computing techniques will be developed in such areas as program design, basic aspects of string processing, recursion, internal search/sort methods, and simple data structures. Laboratory fee.

COMPUTING SCIENCE (CS) 184 (3)
INTRODUCTION TO COBOL PROGRAMMING (2 LEC., 2 LAB.)

Prerequisites: Computing Science 174 or Computing Science 175 or the consent of the instructor based on equivalent experience. An introduction to the COBOL programming language. Topics will include algorithmic processes, problem solving methods, programming style, flow charts, and various files processing techniques. Emphasis is on the language, its flexibility and power rather than on applications. Laboratory fee.

COMPUTING SCIENCE (CS) 185 (3)
INTRODUCTION TO PASCAL PROGRAMMING (2 LEC., 2 LAB.)

Prerequisites: Computing Science 174 or Computing Science 175 and Math 101 or the consent of the instructor based on equivalent experience. This course is an introduction to PASCAL. Topics will include problem solving and structured programming techniques introduced through examples from applications such as text processing, numerical computing, and simulation, together with programming assignments. Laboratory fee.

COMPUTING SCIENCE (CS) 186 (3)
INTRODUCTION TO ASSEMBLY LANGUAGE (2 LEC., 2 LAB.)

Prerequisites: Computing Science 174 or Computing Science 175 and six semester hours of computer programming or the consent of the instructor based on equivalent experience. This course is an introduction to ASSEMBLY language programming. Topics will include machine representation of data and instructions, logical input/output control systems, subroutine and addressing concepts, and presentation of selected macro instructions. Laboratory fee.



COMPUTING SCIENCE (CS) 250 (3)
CONTEMPORARY TOPICS IN COMPUTER SCIENCE (3 LEC.)

Prerequisite: Will vary based on topics covered and will be annotated in each semester's class schedule. Recent developments and topics of current interest are studied. Topics may include introduction to micro/mini computer systems, programming languages, or other advanced data processing concepts such as CICS. May be repeated when topics vary.

COMPUTING SCIENCE (CS) 251 (4)
SPECIAL TOPICS IN COMPUTER SCIENCE (3 LEC., 3 LAB.)

Prerequisite: Will vary based on topics covered and will be annotated in each semester's class schedule. Current developments in the rapidly changing field of computer science and data processing are studied. Such topics may include advanced programming language concepts in BASIC, RPG II and RPG III, and PASCAL, or advanced data entry concepts. May be repeated when topics vary. Laboratory fee.

CONSTRUCTION MANAGEMENT AND TECHNOLOGY (CMT) 121 (3)

CONSTRUCTION MATERIALS, METHODS AND EQUIPMENT I (2 LEC., 3 LAB.)

This course introduces construction materials, methods, and equipment. The origin, nature, and normal uses of materials are investigated. The integration of materials into finished projects is also covered. Laboratory fee.

CONSTRUCTION MANAGEMENT AND TECHNOLOGY (CMT) 122 (3)

CONSTRUCTION MATERIALS, METHODS AND EQUIPMENT II (2 LEC., 3 LAB.)

This course continues the study of construction materials, methods, and equipment. Laboratory fee.

CONSTRUCTION MANAGEMENT AND TECHNOLOGY (CMT) 123 (4)

CONSTRUCTION GRAPHICS (2 LEC., 6 LAB.)

Construction technology and construction graphic communications are introduced. The student learns to read blueprints and understand the expressed and implied meanings of symbols, conventions, and drawing. Free hand sketching and basic drafting required of construction supervisors are also included. Laboratory fee.

CONSTRUCTION MANAGEMENT AND TECHNOLOGY (CMT) 124 (4)

ELECTRICAL AND MECHANICAL EQUIPMENT FOR BUILDINGS (3 LEC., 3 LAB.)

The nature and use of materials and equipment in various systems are explained. Included are plumbing, heating, ventilation, air conditioning, electrical, and conveying systems. The design theories and uses of the completed systems are introduced.

CONSTRUCTION MANAGEMENT AND TECHNOLOGY (CMT) 132 (3)

THE CONSTRUCTION INDUSTRY (3 LEC.)

This course surveys the growth, magnitude, and economic importance of the construction industry. Emphasis is on understanding the interrelationship between the many trades, professions, and agencies in construction.

**CONSTRUCTION MANAGEMENT
AND TECHNOLOGY (CMT) 136 (4)**

SURVEYING AND
MEASUREMENTS (2 LEC., 6 LAB.)

Prerequisite: Mathematics 195 or the equivalent. This course is for students with little or no training in surveying. It covers the theory, methods, equipment, and problems of surveying and measurement. Field work provides the opportunity to apply the theory.

**CONSTRUCTION MANAGEMENT
AND TECHNOLOGY (CMT) 138 (4)**

CONSTRUCTION MANAGEMENT I
(3 LEC., 3 LAB.)

This course covers the responsibilities of a supervisor. Topics include organization, human relations, grievances, training, rating, promotion, quality and quality control, management-employee relations, scheduling of work, and job and safety instructions. Roles played by labor and management in the development of American industry are studied. Forces affecting labor supply, employment, and industrial relations in a democracy are analyzed. Emphasis is on safety and its value to economic operations and employee morale.

**CONSTRUCTION MANAGEMENT
AND TECHNOLOGY (CMT) 230 (4)**

QUALITY CONTROL AND COST
CONTROL (3 LEC., 3 LAB.)

Prerequisite: Construction Management and Technology 121, 122, and 234, or the consent of the instructor. Quality control approaches to construction are included. Construction costs and economics are separated, analyzed, and evaluated. Methods to control costs are explored. CPM scheduling and techniques are covered. Laboratory fee.

**CONSTRUCTION MANAGEMENT
AND TECHNOLOGY (CMT) 231 (3)**

CONSTRUCTION CONTRACTS
AND SPECIFICATIONS (2 LEC., 3 LAB.)

Prerequisite: Construction Management and Technology 121, 122, and 123 or consent of the instructor. Written construction communications are the focus of this course. Included is the study of construction contracts and specifications. Their preparation, implementation, modification, administration, and legal pitfalls are covered. Laboratory fee.

**CONSTRUCTION MANAGEMENT
AND TECHNOLOGY (CMT) 234 (4)**

ESTIMATING (2 LEC., 6 LAB.)

Prerequisite: Credit or concurrent enrollment in Construction Management and Technology 123 and 231 or consent of the instructor. Construction estimation is presented. Topics include quality surveying and the interpretation and uses of bid documents. Students learn to compute and assemble labor and material costs, unit and lump sum costs, and preliminary and final estimates. Laboratory fee.

**CONSTRUCTION MANAGEMENT
AND TECHNOLOGY (CMT) 236 (4)**

BUILDING CODES AND SAFETY (3 LEC., 3 LAB.)

This course presents construction methods in relation to zoning and building codes and occupational safety standards and regulations. The interrelationships among federal, state and municipal authorities and construction operations are examined in detail. Emphasis is placed on the development and implementation of effective loss and accident prevention planning.

**CONSTRUCTION MANAGEMENT
AND TECHNOLOGY (CMT) 237 (4)**

SOILS, FOUNDATIONS AND
REINFORCED CONCRETE (3 LEC., 3 LAB.)

Prerequisite: Construction Management and Technology 121 and 122; Engineering 289 desirable. Soil characteristics for a good foundation are studied. Topics include soil sampling and testing. Concrete design,

placement, and testing are also covered. Some study of asphaltic pavements is included. Laboratory fee.

CONSTRUCTION MANAGEMENT AND TECHNOLOGY (CMT) 238 (4)
CONSTRUCTION MANAGEMENT II
(3 LEC., 3 LAB.)

Prerequisite: Construction Management and Technology 138. This course examines project planning and development. Topics include feasibility studies, financing, planning, programming, design, and construction. Office engineering techniques and problem-solving are covered.

COOPERATIVE WORK EXPERIENCE

701, 711, 801, 811 (1)

702, 712, 802, 812 (2)

703, 713, 803, 813 (3)

704, 714, 804, 814 (4)

Prerequisite: Completion of two courses in the student's major or instructor or coordinator approval. These courses consist of seminars and on-the-job experience. Theory and instruction received in the courses of the students' major curricula are applied to the job. Students are placed in work-study positions in their technical occupational fields. Their skills and abilities to function successfully in their respective occupations are tested. These work internship courses are guided by learning objectives composed at the beginning of each semester by the students, their instructors or coordinators, and their supervisors at work. The instructors determine if the learning objectives are valid and give approval for credit.

DANCE (DAN) 116 (1)
REHEARSAL AND PERFORMANCE (4 LAB.)

This course supplements beginning dance techniques classes. Basic concepts of approaching work on the concert stage - stage directions, stage areas, and the craft involved in rehearsing and performing are emphasized. This course may be repeated for credit.

DANCE (DAN) 150 (3)
BEGINNING BALLET I (1 LEC., 3 LAB.)

This course explores basic ballet techniques. Included are posture, balance, coordination, rhythm, and flow of physical energy through the art form. Theory, terminology, ballet history, and current attitudes and events in ballet are also studied. Barre exercises and centre floor combinations are given. Laboratory fee.

DANCE (DAN) 151 (3)
BEGINNING BALLET II (1 LEC., 3 LAB.)

Prerequisite: Dance 150. This course is a continuation of Dance 150. Emphasis is on expansion of combinations at the barre. Connecting steps learned at centre are added. Jumps and pirouettes are introduced. Laboratory fee.

DANCE (DAN) 155 (1)
JAZZ I (3 LAB.)

The basic skills of jazz dance are introduced. Emphasis is on technique and development, rhythm awareness, jazz styles, and rhythmic combinations of movement. Laboratory fee.

DANCE (DAN) 156 (1)
JAZZ II (3 LAB.)

Prerequisite: Dance 155 or the consent of the instructor. Work on skills and style in jazz dance is continued. Technical skills, combinations of steps and skills into dance patterns, and exploration of composition in jazz form are emphasized. Laboratory fee.

DANCE (DAN) 160 (3)
INTRODUCTION TO DANCE HISTORY (3 LEC.)

A history of dance forms is presented. Primitive, classical, and contemporary forms are included.

DANCE (DAN) 200 (1)
REHEARSAL AND PERFORMANCE (4 LAB.)

Prerequisite: Dance 116 or the consent of the instructor. This course supple-



ments intermediate dance technique classes. It is a continuation of Dance 116 with emphasis on more advanced concepts as they apply to actual rehearsals and performances. This course may be repeated for credit.

DANCE (DAN) 250 (3)

INTERMEDIATE BALLET I (1 LEC., 3 LAB.)

Prerequisite: Dance 151. The development of ballet technique is continued. More complicated exercises at the barre and centre floor are included. Emphasis is on long series of movements, adagio and jumps. Precision of movement is stressed. Laboratory fee.

DANCE (DAN) 251 (3)

INTERMEDIATE BALLET II (1 LEC., 3 LAB.)

Prerequisite: Dance 250. This course begins pointe work for women. Specialized beats and tours are begun for men. Individual proficiency and technical virtuosity are developed. Laboratory fee.

DANCE (DAN) 252 (1)

COACHING AND REPERTOIRE (2 LAB.)

Prerequisite: Dance 251 and the consent of the instructor. Variations (male and female) and pas de deux from standard ballet repertoire are studied and notated. The dancer is given individual coaching, with special attention given to the correction of problems. This course may be repeated for credit. Laboratory fee.

DATA PROCESSING (DP) 129 (4)

DATA ENTRY CONCEPTS (2 LEC., 5 LAB.)

Prerequisite: Office Careers 172 or one year of typing in high school or equivalent. This course provides skills using buffered display equipment. Emphasis is on speed and accuracy. Topics include performing the basic functions record formatting with protected and variable fields, and using a variety of source documents. Program control, multiple programs, and program chaining are also covered. Laboratory fee.

DATA PROCESSING (DP) 133 (4)

BEGINNING PROGRAMMING (3 LEC., 4 LAB.)

Prerequisites: Computing Science 175 or the consent of the instructor. Concurrent enrollment in Data Processing 138 is advised. This course introduces programming skills using the COBOL language. Skills in problem analysis, flowcharting, coding, testing, and documentation are developed. Laboratory fee.

DATA PROCESSING (DP) 136 (4)

INTERMEDIATE PROGRAMMING (3 LEC., 4 LAB.)

Prerequisites: Data Processing 133 and Data Processing 138 or the consent of the instructor. Study of COBOL language continues. Included are levels of totals, group printing concepts, table build and search techniques, ISAM disk concepts, matching record, and file maintenance concepts using disk. Laboratory fee.

DATA PROCESSING (DP) 137 (3)

DATA PROCESSING MATHEMATICS (3 LEC.)

Prerequisites: One year of high school algebra or Developmental Math 091 or the consent of the instructor. This course introduces the principles of computer computation. Topics include the number system, fundamental processes, number bases, and the application of mathematics to typical business problems and procedures.

DATA PROCESSING (DP) 138 (3)

SYSTEMS ANALYSIS AND DATA PROCESSING LOGIC (3 LEC.)

Prerequisite: Computing Science 175 or the consent of the instructor. Concurrent enrollment in Data Processing 133 is advised. This course presents basic logic needed for problem solving with the computer. Topics include flowcharting standards, techniques for basic logic operations, table search and build techniques, types of report printing, conditional tests, multiple record types, and sequential file maintenance. System flowcharting is introduced.

DATA PROCESSING (DP) 139 (3)

TECHNICIAN (2 LEC., 4 LAB.)

Prerequisite: Credit or concurrent enrollment in Computing Science 175 or the consent of the instructor. The interrelationships among computer systems, hardware, software, and personnel are covered. The role of personnel in computer operations, data entry, scheduling, data control, and librarian functions is included. Other topics include the importance of job documentations, standards manuals, and error logs. The relationship between operating procedures and the operating system is described. Job control language and system commands are also stressed. The flow of data between the user and the data processing department, and the relationship between operations and the other functional areas within the data processing department are covered. Laboratory fee.

DATA PROCESSING (DP) 140 (4)

OPERATIONS-CONSOLE (3 LEC., 3 LAB.)

Prerequisites: Data Processing 137 or Mathematics 130, and Data Processing 139, or the consent of the instructor. Operating systems are presented. Emphasis is on operation of a single-partitioned and multiprogramming DOS environment. Opportunity is provided to analyze and respond to system messages in both environments. Laboratory fee.

DATA PROCESSING (DP) 142 (3)

RPG PROGRAMMING (2 LEC., 2 LAB.)

Prerequisite: Data Processing 133 or the consent of the instructor. This course introduces programming skills using the RPG II language. Emphasis is on language techniques and not on operation and functioning of the equipment. Programming problems emphasize card images and disk processing, and will include basic listings with levels of totals, multiscard records, exception reporting, look ahead feature, and multifile processing. Laboratory fee.

DATA PROCESSING (DP) 230 (4)

ADVANCED ASSEMBLY LANGUAGE CODING (3 LEC., 3 LAB.)

Prerequisite: Data Processing 231 or the consent of the instructor. The development of programming skills using the assembly language instruction set set of the system/360 is covered. Topics include indexing, indexed sequential file organization, table search methods, data and bit manipulation techniques, code translation, advanced problem analysis, and debugging techniques. Floating point operations are introduced. Laboratory fee.

DATA PROCESSING (DP) 231 (4)

ADVANCED PROGRAMMING (3 LEC., 4 LAB.)

Prerequisite: Data Processing 136 or the consent of the instructor. This course focuses on basic concepts and instructions in the IBM 360/370 Assembler language, using the standard instruction set emphasizing the decimal features, with a brief introduction to fixed point operations using registers. Selected macro instructions, table handling, editing printed output, and reading memory dumps are included. Laboratory fee.

DATA PROCESSING (DP) 232 (4)

APPLIED SYSTEMS (3 LEC., 4 LAB.)

Prerequisite: Data Processing 136 or the consent of the instructor. This course introduces and develops skills to analyze existing systems and to design new systems. Emphasis is on a case study involving all facets of system design from the original source of data to final reports. Flowcharts and documentation are included.

DATA PROCESSING (DP) 233 (4)

OPERATING SYSTEMS AND COMMUNICATIONS (3 LEC., 4 LAB.)

Prerequisite: Data Processing 133 or the consent of the instructor. Concepts and technical knowledge of an operating system, JCL, and utilities are presented. The internal functions of an operating system are analyzed. Training is given in the use of JCL and utilities. The emphasis of the operating system depends on the computer system used. Laboratory fee.

DATA PROCESSING (DP) 236 (4)

ADVANCED COBOL TECHNIQUES (3 LEC., 4 LAB.)

Prerequisites: Data Processing 133 and Data Processing 136 or the consent of the instructor. This course provides advanced programming techniques using structured programming with the COBOL language. Random and sequential updating of disk files, table handling, report writer, the internal sort verb, and calling and copying techniques are emphasized. Laboratory fee.

DATA PROCESSING (DP) 240 (4)

TELECOMMUNICATIONS I (3 LEC., 4 LAB.)

Prerequisite: A minimum of two semesters of a high level language and credit in Data Processing 138 or the consent of the instructor. Telecommunications concepts are introduced. Topics include configuration of a teleprocessing network on a third generation computer, vocabulary, modems, terminal configuration, polling simulation, and common carrier characteristics. An existing telecommunications system and a student conceived national data system are investigated, analyzed, and designed. Laboratory fee.

DATA PROCESSING (DP) 241 (4)

TELECOMMUNICATIONS II (3 LEC., 3 LAB.)

Prerequisite: Data Processing 240 or the consent of the instructor. This course is a continuation of Data Processing 240. Topics include basic telecommunications programming, terminal configurations, line configurations, synchronous transmission, asynchronous transmission, and polling techniques at the central unit. Laboratory fee.

DATA PROCESSING (DP) 242 (4)

COMPUTER HARDWARE AND DATA BASE SYSTEMS (3 LEC., 4 LAB.)

Prerequisites: Computing Science 175, one year of a high level language. Data Processing 138 or the consent of the instructor. The organization and architecture of large, medium, small, mini, and micro computers are compared. Topics include digital number systems, machine language and assemblers, on-line and off-line data base systems, and data management. Currently used data bases (IMS, TOTAL, ADABAS, etc.) and graphic systems are emphasized. Laboratory fee.

DATA PROCESSING (DP) 243 (3)

COMPUTER CENTER MANAGEMENT (3 LEC.)

Prerequisite: Computing Science 175, a minimum of one semester of high level language, or the consent of the instructor. The management of a computer center is examined. Topics include analyzing, planning, organizing and controlling installations. The organization, production orientation, control, and personnel of the data processing department are covered. The effects of these functions on information and real-time systems are explored. Methods for computer selection and evaluation are described.

DATA PROCESSING (DP) 244 (3)

BASIC PROGRAMMING (2 LEC., 2 LAB.)

Prerequisite: Computing Science 175 or the consent of the instructor. This course covers the fundamentals of the BASIC programming language. Students gain proficiency by writing and debugging programs using interactive microcomputers. Laboratory fee.

DATA PROCESSING**(DP) 701, 711, 801, 811 (1)**

(See Cooperative Work Experience)

DATA PROCESSING**(DP) 702, 712, 802, 812 (2)**

(See Cooperative Work Experience)

DATA PROCESSING**(DP) 703, 713, 803, 813 (3)**

(See Cooperative Work Experience)

DATA PROCESSING**(DP) 704, 714, 804, 814 (4)**

(See Cooperative Work Experience)

DENTAL ASSISTING (DA) 136

GENERAL DENTAL ANATOMY AND PHYSIOLOGY (3 LEC., 3 LAB)

The biology of the nine (9) body systems, embryology, and the development of the face and oral cavity are studied. Oral histology, eruption and exfoliation of the primary dentition and eruption of the secondary dentition morphology of the teeth, head, and neck anatomy are included. Laboratory fee.

DENTAL ASSISTING (DA) 140 (1)

INTRODUCTION TO THE DENTAL PROFESSION (1 LEC.)

This course is a study of dentistry as it has evolved into a profession. The growth, development, and educational background of the dental association and auxiliary associations are described. The way the dental assistant student acquires and retains certification is explained. Personal requirements, professional conduct, and interpersonal relationships of the dental team are included. The legal, ethical, moral, and professional responsibilities of the dentist and auxiliaries are identified. Terminology relating to this course is also included.

DENTAL ASSISTING (DA) 141 (4)

DENTAL ANATOMY AND PHYSIOLOGY (3 LEC., 3 LAB.)

This course covers the study of embryology and the development of the face and oral cavity. Oral histology, eruption and exfoliation of the primary dentition, and eruption of the secondary dentition are included. The morphology of the teeth and the anatomy and physiology of the head and neck are also covered. Terminology relating to this is included. Laboratory fee.

DENTAL ASSISTING (DA) 142 (3)

DENTAL ASSISTING I (2 LEC., 4 LAB.)

The function of the dental assistant in chairside assisting is studied. Topics include terminology, safety rules and regulations, care and preparation of equipment and operatories, and seating the patient. The identification and use of dental instruments, are covered, including use of high-velocity suction apparatus. Four-handed sit-down dentistry is also covered, including different methods of passing instruments. The application and removal of rubber dam, application of topical anesthetics, preparation of local anesthetics, and different methods of charting the oral cavity findings are also covered. Laboratory fee.

DENTAL ASSISTING (DA) 143 (2)

DENTAL MICROBIOLOGY AND PATHOLOGY (2 LEC., 1 LAB.)

This course focuses on microbiology relating to methods of sterilization and disinfectants used in caring for dental instruments, equipment, and operators. Oral pathology is studied, including signs and symptoms of diseases of the hard and soft dental tissues and of the oral cavity. Terminology relating to this course is covered. Laboratory fee.

DENTAL ASSISTING (DA) 144 (4)

DENTAL MATERIALS I (3 LEC., 3 LAB.)

Prerequisite: "C" average in Dental Assisting 140, 141, 142, and 143. The history, terminology, structure and properties of dental materials are studied. Dental laboratory equipment is presented, and the care and use of it explained. Safety rules and regulations used in the dental laboratory are identified. Weights and measurements and their uses in the dental laboratory are introduced. The techniques and skills of handling various materials are covered, including gypsum products, dental waxes, alginate impression materials, compound and shellac bases, dental cements, restorative materials, thermal basis, cavity liners, and abrasive and polishing agents, gold foils, nuva fill, and sealants are also included. Pouring casts and trimming and finishing study casts are covered. Laboratory fee.

DENTAL ASSISTING (DA) 145 (2)

DENTAL ROENTGENOLOGY I (2 LEC., 1 LAB.)

Prerequisite: "C" average in Dental Assisting 140, 141, 142, and 143. This course focuses on the history, terminology, and the theory of the roentgen ray. Topics include the care and safety measures of X-ray equipment, radiation, hazards, and safety precautions for the patient and operator. Other topics include the care and storage of film, types of dental films used, and film composition. Exposing, processing, and mounting X-rays are covered, including the use of the open cone bisecting angle technique. Preventing faulty roentgenograms is also covered. Laboratory fee.

DENTAL ASSISTING (DA) 146 (2)

DENTAL ASSISTING II (2 LEC., 1 LAB.)

Prerequisite: "C" average in Dental Assisting 140, 141, 142, and 143. The dental specialties are studied. Included are endodontics, oral surgery and general anesthetic, orthodontics, pedodontics, periodontics, and prosthodontics. Pathology and public health, preparation, and instrumentation are also covered. The vital signs of a patient are explained and practice sessions are held. Hospital dentistry is introduced. The use of hand instruments is covered, including removing cement from dental restorations and bands, removing ligature ties, sutures, socket dressing, periodontal packs, and temporary medicinal fillings. Terminology relating to this course is also included. Laboratory fee.

DENTAL ASSISTING (DA) 240 (2)

DENTAL MATERIALS II (1 LEC., 2 LAB.)

Prerequisite: "C" average in Dental Assisting 144, 145, and 146. This course is a continued study of dental materials. Students use all materials needed for everyday practice in the dental office. New materials are introduced, such as reversible hydrocolloids, asbestos and wax spacers, custom made trays, rubber base impression material, die stone, inlay wax, investment material, burnout, temporary acrylic jackets or crowns and temporary dentures. Spruing and casting procedures are included. Finishing castings and repairing prostheses are also covered. Terminology relating to this course is included. Laboratory fee.

DENTAL ASSISTING (DA) 241 (2)

DENTAL ROENTGENOLOGY II (1 LEC., 2 LAB.)

Prerequisite: "C" average in Dental Assisting 144, 145, and 146. The study of dental X-ray is continued. Long, open cone, and parallel techniques, are introduced. Occlusal films, extraoral films, and panoramic procedures are covered. Practice is provided in short and long cone techniques and in processing, mounting,

and filing dental films. Terminology relating to this course is included. Laboratory fee.

DENTAL ASSISTING (DA) 242 (3)

DENTAL OFFICE
ADMINISTRATION I (3 LEC.)

Prerequisite: "C" average in Dental Assisting 144, 145, and 146. Front office routines of the dental office are studied in detail. Topics include dental team responsibilities, office policies for employee and patient, telephone techniques, greeting people, patient information, credit ratings, and appointment control. Referrals, patient charts, check and receipt writing, deposit slips, petty cash, day sheets, recall system inventory and supplies, filing, prescriptions, staff schedules, accounts payable, and banking procedures are also covered. Terminology relating to this course is included.

DENTAL ASSISTING (DA) 243 (3)

DENTAL ASSISTING CLINIC
SEMINAR I (3 LEC.)

Prerequisite: "C" average in Dental Assisting 144, 145, and 146. Clinical experiences and problems encountered in the internship are shared and discussed. Counseling with individual students is provided.

DENTAL ASSISTING (DA) 245 (3)

DENTAL OFFICE
ADMINISTRATION II (3 LEC.)

Prerequisite: "C" average in Dental Assisting 240, 241, 242, 243, and 244. This course is a continued study of front office procedures. Topics include collection control, correspondence, office records, laws pertaining to collections and records, and a business summary. Dental payment plans, third party insurance, radiographs in dental care programs, case presentations, income tax records, and patient psychology are also covered. Terminology relating to this course is covered.



DENTAL ASSISTING (DA) 246 (3)

PREVENTATIVE DENTISTRY (3 LEC.)

Prerequisite: "C" average in Dental Assisting 240, 241, 242, 243, and 244. Preventive dentistry is presented. Topics include oral hygiene, use of the phase microscope in preparing dental plaque smears, learning and teaching a preventive program, and diet and nutrition. First aid, and cardio-pulmonary resuscitation emergencies are included. Pharmacology and drug and prescription laws applying to the dental office are covered. Terminology relating to this course is included.

DENTAL ASSISTING (DA) 249 (4)

DENTAL ASSISTING INTERNSHIP I (13 LAB.)

Prerequisite: "C" average in Dental Assisting 144, 145, and 146. Students receive practical assisting experience at chairside in dental clinics, dental schools, and hospital and health agencies in the community. Students rotate among clinics every 5 weeks.

DENTAL ASSISTING (DA) 250 (1)

DENTAL ASSISTING CLINIC SEMINAR II (3 LEC.)

Prerequisite: "C" average in Dental Assisting 240, 241, 242, 243, and 249. This course involves the sharing of clinical experience and the discussing of problems that have been encountered during the dental assisting internship in dental clinics, hospitals, and offices. Special counseling with individual students is provided.

DENTAL ASSISTING (DA) 252 (3)

DENTAL ASSISTING INTERNSHIP II (31 LAB.)

Prerequisite: "C" average in Dental Assisting 240, 241, 242, 243, and 249. In this course, students receive practical dental assisting experience at chairside and office procedures experience in private dental offices, dental clinics, dental schools, hospitals, and other health agencies in the community.

DESIGN (DES) 110 (3)

BASIC COLOR THEORY AND APPLICATION (2 LEC., 4 LAB.)

The principles of color theory are studied using a selected color system. The effect of light on color and the psychological impact of color are explored. Color pigment is mixed in opaque media. The content of the course is applied to the student's discipline. Laboratory fee.

DESIGN (DES) 128 (2)

INTRODUCTION TO MASS PRODUCED APPAREL (2 LEC.)

Mass production in the fashion industry is analyzed.

DESIGN (DES) 129 (1)

INDUSTRIAL GARMENT CONSTRUCTION (3 LAB.)

The equipment, techniques and skills used in making mass produced apparel are studied. Laboratory fee.

DESIGN (DES) 135 (3)

TEXTILES (2 LEC., 2 LAB.)

This course focuses on fibers, yarns, fabrics, and finishing processes. Included are the identification and analysis of all types of construction methods and their application in industry. The history of traditional textiles is described. Comparisons are made with contemporary developments. A guided design systems approach is used.

DESIGN (DES) 136 (3)

FASHION SKETCHING (2 LEC., 4 LAB.)

The structure of the fashion figure is explored. Simple methods for making quick sketches which communicate style information are emphasized.

DESIGN (DES) 140 (1)

DRAPING (2 LAB.)

Prerequisite: Pattern Design 153. Dress designs are creatively interpreted on individual dress forms. Sketches or abstract designs are translated to muslin. Laboratory fee.

DESIGN (DES) 141 (1)

GRADING (2 LAB.)

Prerequisite: Pattern Design 153. The standard production pattern is emphasized. Both large and small sizing is included. Laboratory fee.

DESIGN (DES) 229 (3)

ADVANCED CLOTHING CONSTRUCTION (2 LEC., 3 LAB.)

Prerequisite: Design 129. Advanced techniques of garment construction are studied. Total garments are completed. Laboratory fee.

DESIGN (DES) 234 (3)

HISTORY OF COSTUME (3 LEC.)

Prerequisite: Design 135. This course traces the development of garments from the earliest times through the 18th century. Emphasis is on the customs which affect styles.



DESIGN (DES) 235 (3)

HISTORY OF COSTUME (3 LEC.)

Prerequisite: Design 234 or the consent of the instructor. This course traces the development of garments from the 18th century to the present day. Emphasis is on the customs which affect styles.

DEVELOPMENTAL COMMUNICATIONS (DC) 095 (3)

COMMUNICATION SKILLS (3 LEC.)

This course focuses on strengthening language communications. Topics include grammar, paragraph structure, reading skills, and oral communication. Emphasis is on individual testing and needs.

DEVELOPMENTAL COMMUNICATIONS (DC) 120 (3)

COMMUNICATION SKILLS (2 LEC., 2 LAB.)

This course is for students with significant communication problems. It is organized around skill development, and students may enroll at any time (not just at the beginning of a semester) upon the referral of an instructor. Emphasis is on individual needs and personalized programs. Special attention is given to oral language. Contacts are made with other departments to provide other ways of learning for the students.

DEVELOPMENTAL LEARNING

(DL) 094 (1)

LEARNING SKILLS
IMPROVEMENT (2 LAB.)

Learning skills are strengthened. Emphasis is on individual needs and personalized programs. This course may be repeated for a maximum of three credits.

DEVELOPMENTAL MATHEMATICS

Developmental Mathematics Courses offer a review of mathematics skills. Developmental Mathematics 093 satisfies prerequisites for Mathematics 101, 104, 111, and 115. Developmental Mathematics 091 satisfies prerequisites for Mathematics 130, 139, and 195.

DEVELOPMENTAL MATHEMATICS (DM) 060 (1)

BASIC MATHEMATICS I (1 LEC.)

This course is designed to give an understanding of fundamental operations. Selected topics include whole numbers, decimals, and ratio and proportions.

DEVELOPMENTAL MATHEMATICS (DM) 061 (1)

BASIC MATHEMATICS II (1 LEC.)

This course is designed to give an understanding of fractions. Selected topics include primes, factors, least common multiples, percent, and basic operations with fractions.

DEVELOPMENTAL MATHEMATICS (DM) 062 (1)

PRE BUSINESS (1 LEC.)

This course is designed to introduce students to business mathematics. Selected topics include discounts and commissions, interest, metric and English measuring systems, area and volume.

DEVELOPMENTAL MATHEMATICS (DM) 063 (1)

PRE ALGEBRA (1 LEC.)

This course is designed to introduce students to the language of algebra with such topics as integers, metrics, equations, and properties of counting numbers.

DEVELOPMENTAL MATHEMATICS**(DM) 064 (1)**

NURSING (1 LEC.)

This course is designed to develop an understanding of the measurements and terminology in medicine and calculations used in problems dealing with solutions and dosages. It is designed primarily for students in the nursing program.

DEVELOPMENTAL MATHEMATICS**(DM) 070 (1)**

ELEMENTARY ALGEBRA I (1 LEC.)

Prerequisites: Developmental Mathematics 090, 063 or equivalent. This course is an introduction to algebra and includes selected topics such as basic principles and operations of sets, counting numbers and integers.

DEVELOPMENTAL MATHEMATICS**(DM) 071 (1)**

ELEMENTARY ALGEBRA II (1 LEC.)

Prerequisite: Developmental Mathematics 070 or equivalent. This course includes selected topics such as rational numbers, algebraic polynomials, factoring, and algebraic fractions.

DEVELOPMENTAL MATHEMATICS**(DM) 072 (1)**

ELEMENTARY ALGEBRA III (1 LEC.)

Prerequisite: Developmental Mathematics 071 or equivalent. This course includes selected topics such as fractional and quadratic equations, quadratic equations with irrational solutions, and systems of equations involving two variables.

DEVELOPMENTAL MATHEMATICS**(DM) 073 (1)**

INTRODUCTION TO GEOMETRY (1 LEC.)

This course introduces principles of geometry. Axioms, theorems, axiom systems, models of such systems, and methods of proof are stressed.

DEVELOPMENTAL MATHEMATICS**(DM) 080 (1)**

INTERMEDIATE ALGEBRA I (1 LEC.)

Prerequisites: Developmental Mathematics 072, 091 or equivalent. This course includes selected topics such as systems of rational numbers, real numbers, and complex numbers.

DEVELOPMENTAL MATHEMATICS**(DM) 081 (1)**

INTERMEDIATE ALGEBRA II (1 LEC.)

Prerequisite: Developmental Mathematics 080 or equivalent. This course includes selected topics such as sets, relations, functions, inequalities, and absolute values.

DEVELOPMENTAL MATHEMATICS**(DM) 082 (1)**

INTERMEDIATE ALGEBRA III (1 LEC.)

Prerequisite: Developmental Mathematics 081 or equivalent. This course includes selected topics such as graphing, exponents, and factoring.

DEVELOPMENTAL MATHEMATICS**(DM) 090 (3)**

PRE ALGEBRA MATHEMATICS (3 LEC.)

This course is designed to develop an understanding of addition, subtraction, multiplication, and division of whole numbers, fractions, decimals and percentages and to strengthen basic skills in mathematics. It is the most basic mathematics course and includes an introduction to algebra.

DEVELOPMENTAL MATHEMATICS**(DM) 091 (3)**

ELEMENTARY ALGEBRA (3 LEC.)

Prerequisite: Developmental Mathematics 090. This course is comparable to the first-year algebra course in high school. It includes special products and factoring, fractions, equations, graphs, functions, and an introduction to geometry.

DEVELOPMENTAL MATHEMATICS**(DM) 093 (3)**

INTERMEDIATE ALGEBRA (3 LEC.)

Prerequisite: One year of high school algebra or Developmental Mathematics 091. This course is comparable to the second-year algebra course in high school. It includes terminology of sets, properties of real numbers, fundamental operations of polynomials and fractions, products, factoring, radicals, and rational exponents. Also covered are solutions of linear, fractional, quadratic and systems of linear equations, and graphing.

DEVELOPMENTAL READING

Students can improve their performance in English courses by enrolling in Developmental Reading Courses. Developmental Reading 090 and 091 are valuable skill development courses for English 101. Reading 101 is especially helpful in English 102 and the sophomore-level literature courses. See the catalog descriptions in reading for full course content.

DEVELOPMENTAL READING**(DR) 090 (3)**TECHNIQUES OF
READING/LEARNING (3 LEC.)

Comprehension, vocabulary development, and study skills are the focus of this course. Emphasis is on learning how to learn. Included are reading and learning experiences to strengthen the total educational background of each student. Meeting individual needs is stressed.

DEVELOPMENTAL READING**(DR) 091 (3)**TECHNIQUES OF READING AND
LEARNING (3 LEC.)

This course is a continuation of developmental reading 090. Meeting individual needs is stressed.

DEVELOPMENTAL WRITING

Students can improve their writing skills by taking Developmental Writing. These courses are offered for one to three hours of credit. Emphasis is on organization skills and research paper styles, and individual writing weaknesses.

DEVELOPMENTAL WRITING**(DW) 090 (3)**

WRITING (3 LEC.)

Basic writing skills are developed. Topics include spelling, grammar, and vocabulary improvement. Principles of sentence and paragraph structure are also included. Organization and composition are covered. Emphasis is on individual needs and strengthening the student's skills.

DEVELOPMENTAL WRITING**(DW) 091 (3)**

WRITING (3 LEC.)

This course is a sequel to Writing 090. It focuses on composition. Included are skills of organization, transition, and revision. Emphasis is on individual needs and personalized assignments. Brief, simple forms as well as more complex critical and research writing may be included.

DEVELOPMENTAL WRITING**(DW) 092 (1)**

WRITING LAB (3 LAB.)

This course is a writing workshop. Students are given instruction and supervision in written assignments. The research paper and editing are both included.

DIESEL MECHANICS (DME) 101 (4)CATERPILLAR DIESEL ENGINE
(120 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Mathematics 195 or consent of instructor. The complete overhaul of a Caterpillar Diesel Engine is conducted. Included are the removal disassembly, servicing, and assembly of each major component. Laboratory fee.

DIESEL MECHANICS (DME) 102 (4)
CUMMINS DIESEL ENGINE
(120 CONTACT HOURS)

A Cummins Diesel Engine is completely overhauled. Included are the removal, disassembly, servicing, and assembly of each major component. Laboratory fee.

DIESEL MECHANICS (DME) 103 (4)
DETROIT DIESEL ENGINE
(120 CONTACT HOURS)

This course focuses on the complete overhaul of a Detroit Diesel Engine. Included are the removal, disassembly, servicing, and assembly of each major component. Laboratory fee.

DIESEL MECHANICS (DME) 121 (3)
STANDARD TRANSMISSIONS
(90 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Physics 131 or the consent of the instructor. Standard transmissions are examined. Included are the removal, disassembly, inspection, assembly, and installation of 5-speed and 10-speed standard transmissions. Laboratory fee.

DIESEL MECHANICS (DME) 122 (2)
HEAVY DUTY CLUTCHES AND
TORQUE CONVERTORS (60 CONTACT HOURS)

This course covers clutches and torque convertors. The removal, repair, and installation of heavy duty clutches are included. The theory of operation, removal, repair, and installation of torque convertors are also covered. Laboratory fee.

DIESEL MECHANICS (DME) 123 (2)
AIR BRAKE SYSTEMS (60 CONTACT HOURS)

This course focuses on air brake systems used in heavy trucks. The inspection, repair, and adjustment of these systems are covered. Laboratory fee.

DIESEL MECHANICS (DME) 124 (2)
DIFFERENTIALS AND DRIVE
LINES (60 CONTACT HOURS)

Differentials are examined. Included are removal, disassembly, repair, reassembly, and installation. Laboratory fee.

DIESEL MECHANICS (DME) 125 (2)
AUTOMATIC TRANSMISSIONS
(60 CONTACT HOURS)

Automatic transmissions are studied. Included are removal, inspection, repair, and assembly. Laboratory fee.

DIESEL MECHANICS (DME) 126 (2)
HEAVY TRUCK AIR
CONDITIONING (60 CONTACT HOURS)

This course is a study of the theory, principles, operating procedures, troubleshooting and component repair of the automotive air conditioning system found in the heavy trucking industry. Laboratory fee.

DIESEL MECHANICS (DME) 127 (2)
SHOP PRACTICES (60 CONTACT HOURS)

Shop practices is designed to acquaint the student with hand and power tools used in the repair of diesel engines and diesel powered equipment. The use of hand and power tools, precision measuring tools, pullers and cleaning equipment are taught. Laboratory fee.

DIESEL MECHANICS (DME) 137 (3)
FUNDAMENTALS OF OXYGEN/
ACETYLENE AND ARC
WELDING (90 CONTACT HOURS)

Two methods of welding are included in this course, oxyacetylene and arc. Topics include the source of heat, application of each method, supplies necessary for a high weld, safety practices, and metals and their properties. Laboratory fee.

DIESEL MECHANICS (DME) 141 (2)
CATERPILLAR DIESEL ENGINE TUNE-UP
AND FUEL SYSTEMS (60 CONTACT HOURS)

This course focuses on diagnosing, locating, and correcting troubles in Caterpillar Diesel Engines. Included are the removal, inspection, testing, adjustment and installation of fuel system components, such as pumps, injectors, filters, lines, and governors. Laboratory fee.



DIESEL MECHANICS (DME) 142 (2)
CUMMINS DIESEL ENGINE TUNE-UP
AND FUEL SYSTEM (60 CONTACT HOURS)

This course focuses on diagnosing, locating, and correcting troubles in Cummins Diesel Engines. Included are the removal, inspection, testing, calibrating, adjustment, and installation of fuel system components, such as pumps, injectors, filters, lines, and governors. Laboratory fee.

DIESEL MECHANICS (DME) 143 (2)
DETROIT DIESEL ENGINE TUNE-UP
AND FUEL SYSTEM (60 CONTACT HOURS)

This course focuses on diagnosing, locating, and correcting troubles in Detroit Diesel Engines. Included are the removal, inspection, testing, repair, adjustment, and installation of fuel system components, such as injectors, filters, lines and governors. Laboratory fee.

DIESEL MECHANICS (DME) 144 (1)
DIESEL ENGINE AIR
INDUCTION COOLING AND
LUBRICATION SYSTEMS (30 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Communications 131 or the consent of the instructor. The theory of operation of the diesel engine is studied. Included are engine air induction, cooling, and lubrication systems. Emphasis is on troubleshooting and servicing. Laboratory fee.

DIESEL MECHANICS (DME) 145 (1)
ELECTRICAL THEORY AND
BASIC CIRCUITRY (30 CONTACT HOURS)

The fundamentals of electricity and magnetism are introduced. Laboratory fee.

DIESEL MECHANICS (DME) 146 (1)
STARTING, CHARGING,
LIGHTING, AND ACCESSORY
CIRCUITRY (30 CONTACT HOURS)

Starting motors, alternators, regulators, switches, and wiring circuits are examined. Emphasis is on removal, maintenance, and repair. Laboratory fee.

DIESEL MECHANICS
(DME) 703, 713, 803, 813 (3)
 (See Cooperative Work Experience)

DIESEL MECHANICS
(DME) 704, 714, 804, 814 (4)
 (See Cooperative Work Experience)

DISTRIBUTION TECHNOLOGY**(DT) 130 (3)**INTRODUCTION TO
DISTRIBUTION (3 LEC.)

This course studies the place of wholesale distribution among producers, institutional and industrial customers, and ultimate consumers. The role of the wholesale distributor in the channels of distribution is examined, and wholesaling functions are surveyed. This course is also appropriate for existing new employees in entry-level positions with a demonstrated capacity for advancement.

DISTRIBUTION TECHNOLOGY**(DT) 133 (3)**

TRANSPORTATION MANAGEMENT (3 LEC.)

Students will study the role of the transportation function within the physical distribution system. Special emphasis will be placed upon modern planning and control techniques associated with the design and operation of efficient and cost effective transportation systems. Carrier services, pricing structures, documentation, liability, claims and regulation of transportation will also be included.

DISTRIBUTION TECHNOLOGY (DT)**134 (3)**

WHOLESALE MARKETING (3 LEC.)

Prerequisite: Management 206. This course concentrates upon wholesale marketing principles and procedures. The present and predicted wholesale marketing environment is presented through study of the wholesale functions of marketing and the personnel performing and managing the activities.

DISTRIBUTION TECHNOLOGY**(DT) 230 (3)**MATERIALS HANDLING AND
PHYSICAL DISTRIBUTION (3 LEC.)

The operation and management of handling and distributing materials in a warehouse are examined. Planning, organizing, staffing, equipment operating, and maintaining a warehouse are covered. Included are field trips to physical distribution facilities.

DISTRIBUTION TECHNOLOGY (DT)**231 (3)**PURCHASING, PRICING, AND INVENTORY
MANAGEMENT (3 LEC.)

Prerequisites: Mathematics 130 and Business 234. The planning and implementation of wholesale distribution strategies are introduced. Purchasing strategies, typical "buy plans" integrating sales forecasts, lead time and storage, and distribution capabilities are investigated. Alternate price and discounting tactics, inventory management systems (cardex, computer, etc.), inventory levels, and cost controls are evaluated.

DISTRIBUTION TECHNOLOGY (DT)**232 (3)**

WAREHOUSE OPERATIONS (3 LEC.)

The planning, operation, and management of personnel, facilities and materials used in the handling and distributing of goods in warehouses are examined. Warehouse layout, selection of fixtures and equipment, and the training of warehouse personnel are experienced through field visits and practical exercises.

DISTRIBUTION TECHNOLOGY**(DT) 803, 813 (3)**

(See Cooperative Work Experience)

DRAFTING (DFT) 135 (2)

REPRODUCTION PROCESSES (1 LEC., 3 LAB.)

Equipment and processes used to reproduce technical art are studied. Included are the graphic arts process camera, lithographic offset printing, diazo reproduction, blueprinting, photodrafting, microfilming, photocopying, silk screen printing, printed circuit board etching, thermography, typographics, xerography, engravings, and others. The rapidly expanding field of computergraphics is also covered. Lab work includes the preparation of flats for offset printing of brochures. Laboratory fee.

DRAFTING (DFT) 136 (3)

GEOLOGICAL AND LAND
DRAFTING (2 LEC., 4 LAB.)

Prerequisite: Drafting 183 or the equivalent and Mathematics 196. Equivalent is based on high school drafting courses or on student's work experience. Sample of drawings and/or high school transcript must be presented. This is a specialty course to prepare one to work in civil drafting. Various drawings are completed, such as relief maps, plan and profile drawings, roadways, pipelines, and petroleum and geophysical maps. Calculations are made from surveyor's notes to plot a traverse and contour lines and to determine area and volumes. A set of drawings is prepared for residential subdivision, a shopping center, or some other type of land development.

DRAFTING (DFT) 160 (2)

MANUFACTURING
FUNDAMENTALS (2 LEC.)

Manufacturing fundamentals and production methods are studied. Modern fabrication techniques and equipment used in industry are presented. The functions and role of drafting are described.

DRAFTING (DFT) 182 (2)

TECHNICIAN DRAFTING (1 LEC., 3 LAB.)

This course focuses on the reading and interpretation of engineering drawings. Topics include multiview drawings, pictorial drawings, dimensioning, measurement with scales, schematic diagrams, and printed circuit boards. Laboratory fee.

DRAFTING (DFT) 183 (4)

BASIC DRAFTING (2 LEC., 6 LAB.)

This course is for students who have had little or no previous experience in drafting. Skill in orthographic, axonometric, and oblique sketching and drawing is developed. Topics include lettering, applied geometry, fasteners, sectioning, tolerancing, and auxiliaries. Experience is provided in using handbooks and other resource materials and in developing design skills. U.S.A.S.I., government, and industrial standards are used. Emphasis is on both mechanical skills and graphic theory. Laboratory fee.

DRAFTING (DFT) 184 (3)

INTERMEDIATE DRAFTING (2 LEC., 4 LAB.)

Prerequisite: Drafting 183 or the equivalent. Equivalent is based on high school drafting courses or on student's work experience. Sample of drawings and/or high school transcript must be presented. Drafting problems, design function, and specialized drafting areas are examined. Included are the detailing and assembling of machine parts, gears, cams, jigs, fixtures, metals, and metal forming processes. Drawing room standards and reproducing drawings are studied. Detail and assembly drawings are made. Laboratory fee.

DRAFTING (DFT) 185 (4)

ARCHITECTURAL DRAFTING (2 LEC., 6 LAB.)

This course begins with architectural lettering, and drafting of construction details. Emphasis is on technique and use of appropriate material symbols and conventions. Working drawings are prepared, including plans, elevations, sections, and details. Drawings for buildings using steel, concrete, and timber structural components are covered. Reference materials are used to provide skills in locating data and in using handbooks.



DRAFTING (DFT) 230 (3)
STRUCTURAL DRAFTING (2 LEC., 4 LAB.)

Prerequisites: Drafting 184 and Mathematics 196. Stresses and thermal and elastic qualities of various materials are studied. Beams, columns, and other materials are included. Structural plans, details, and shop drawings of components are developed for buildings using steel, reinforced concrete, and timber structures. Emphasis is on drafting appropriate drawings for fabrication and erection of structural components.

DRAFTING (DFT) 231 (3)
ELECTRONIC DRAFTING (2 LEC., 4 LAB.)

Prerequisite: Drafting 183. This course focuses on drawings used in the electronics industry. Topics include block and logic diagrams, schematic diagrams, interconnecting wiring diagrams, printed circuit boards, integrated circuits, component packaging, chassis design and current practices.

DRAFTING (DFT) 232 (3)
TECHNICAL ILLUSTRATION (2 LEC., 4 LAB.)

Prerequisite: Drafting 183. The rendering of three-dimensional

drawings is covered. Orthographic views and engineer's sketches are developed into isometric, dimetric, perspective, and diagrammatic drawings of equipment and their environments. Technical sketching, and hand mechanical lettering, air brush retouching of photographs, handling of commercially prepared pressure sensitive materials, and layout of schematics, charts, and graphs are practiced. Laboratory fee.

DRAFTING (DFT) 233 (4)
MACHINE DESIGN (2 LEC., 6 LAB.) (128 CONTACT HOURS)

Prerequisites: Drafting 184, Physics 131, and credit or concurrent enrollment in Engineering 186 and Mathematics 196. The principles of physics, statics, strength of materials, and physical properties of materials are applied to the design of machine elements. Topics include function, environment, production, problems, and cost. Emphasis is on the practical application of design principles in graphic form.

DRAFTING (DFT) 234 (4)
ADVANCED TECHNICAL ILLUSTRATION (2 LEC., 6 LAB.)

Prerequisite: Drafting 232. An area of specialization is chosen and pursued in depth. Examples are pictorials for color separation printing, air brush renderings, letterforms for logos and hand lettering, complex exploded views in isometric, perspective renderings, design of commercial displays and art for slide presentations. Laboratory fee.

DRAFTING (DFT) 235 (3)
BUILDING EQUIPMENT
(MECHANICAL AND ELECTRICAL) (2 LEC., 4 LAB.)

Prerequisite: Drafting 183 or Drafting 185. Plans and details for mechanical equipment are drawn. Equipment includes air conditioning, plumbing, and electrical systems. Emphasis is on the use of appropriate symbols and conventions. Mechanical and electrical features are coordinated with structural and architectural components. Laboratory fee.

DRAFTING (DFT) 236 (3)

PIPING AND PRESSURE
VESSEL DESIGN (2 LEC., 4 LAB.)

Prerequisites: Drafting 183 and Mathematics 195 or the equivalent. This course presents the methods of piping of fluids for refineries, petrochemical plants, and industrial facilities. ASME codes are applied to the design of pressure vessels, pipe fitting, welded and seamless piping, pumps, and heat exchanges. Drawing techniques are emphasized in orthographic and isometric projections. Laboratory fee.

DRAFTING (DFT) 240 (3)

PRINTED CIRCUIT DESIGN (2 LEC., 4 LAB.)

Prerequisite: Drafting and Design Technology 231, concurrent enrollment in Drafting and Design Technology 231 or equivalent. This course develops skills in the design of double sided and multilayer printed circuit boards. Students design boards from schematics, parts lists, and manufacturing specifications. Some boards are designed for manual parts insertion and taped artworks. Others are designed for automatic parts insertion and digitized inputs for artworks. Laboratory fee.

DRAFTING (DFT) 241 (3)

INTEGRATED CIRCUIT DESIGN (2 LEC., 4 LAB.)

Prerequisites: Drafting and Design Technology 240, Electronics Technology 190, or equivalent. Must be taken concurrently with Electronics Technology 250. This course develops skills in the design of integrated circuits. Electronic theory and laboratory exercises in active devices are combined with drafting lectures and laboratory drafting to enable students to design simple integrated circuits from schematic diagram and given design rules. Laboratory fee.

DRAFTING (DFT) 242 (3)

ADVANCED INTEGRATED
CIRCUIT DESIGN (2 LEC., 4 LAB.)

Prerequisite: Drafting and Design Technology 241. This course develops skills in the design of complex integrated circuits. Students work from schematic diagrams and two sets of given rules. Work is done to meet industrial standards of current technologies. Laboratory fee.

DRAFTING (DFT) 243 (3)

ADVANCED PRINTED CIRCUIT DESIGN (2 LEC., 4 LAB.)

Prerequisite: Drafting 240. This course includes the design of double-sided or multilayer boards containing several types of electronic components, requiring selection of integrated circuit chips and combination of gates. Industry standards are followed in design development. Laboratory fee.

DRAFTING (DFT) 245 (3)

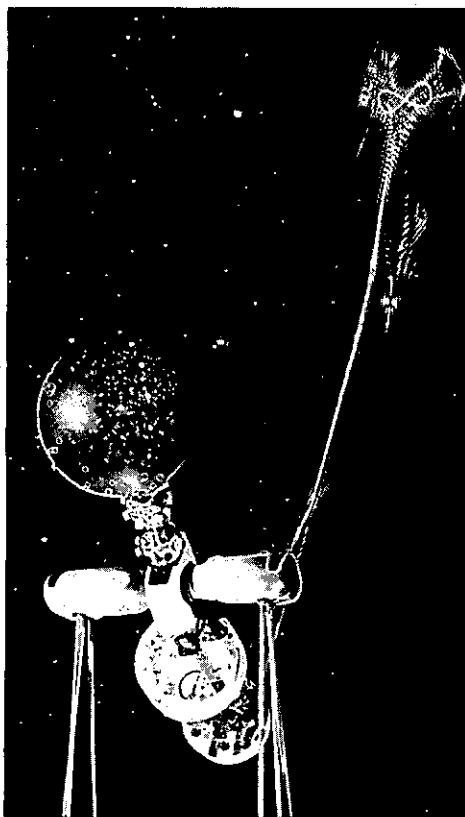
COMPUTER AIDED DESIGN (2 LEC., 4 LAB.)

Prerequisites: Drafting 183 or Engineering 105. Capabilities and limitations of the electronic computer as an aid to the designer are studied. Drafting procedures using an interactive system with computer graphics are practiced. Forms and uses of computer aided products are viewed in perspective with the overall design process. Laboratory fee.

DRAFTING (DFT) 247 (3)

APPLIED PRINTED CIRCUIT DESIGN (2 LEC., 4 LAB.)

Prerequisite: Drafting 240. Special applications of printed circuit design techniques and principles in particular systems of design are studied. Specialization may be focused by classification of the electronic circuits, of resources for design, and of processes for manufacture of the printed circuits. Laboratory fee.

**DRAFTING (DFT) 250 (3)**

SHEET METAL DESIGN (2 LEC., 4 LAB.)

Prerequisite: Drafting 183. This course includes the preparation of drawings for sheet metal developments. Topics include bend allowance, relief, standard bends for specific applications, cost factors to consider in manufacturing, metal specifications, finishing, coating, fasteners, and weldments. Laboratory fee.

DRAFTING (DFT) 251 (3)

INDUSTRIAL DESIGN (2 LEC., 4 LAB.)

Prerequisite: Drafting 250. This course includes the design of metal and plastic packages for electronic, optical, and mechanical components. Topics include standard boxes, panels, mounts, brackets, fasteners, grommets, and other standard parts used in the design of packages. Standard catalogs and manuals are used to design packages for specific situations. Laboratory fee.

EARTH SCIENCE (ES) 117 (4)

EARTH SCIENCE (3 LEC., 3 LAB.)

This course is for the non-science major. It covers the interaction of the earth sciences and the physical world. Geology, astronomy, meteorology, and space science are included. Selected principles and concepts of the applied sciences are explored. Laboratory fee. (This course is offered on campus and may be offered via television.)

ECOLOGY (ECY) 291 (3)PEOPLE AND THEIR
ENVIRONMENT II (3 LEC.)

Environmental awareness and knowledge are emphasized. Topics include pollution, erosion, land use, energy resource depletion, overpopulation, and the effects of unguided technological development. Proper planning of societal and individual action in order to protect the natural environment is stressed. (This course may be offered via television.)

ECONOMICS (ECO) 201 (3)

PRINCIPLES OF ECONOMICS I (3 LEC.)

Sophomore standing is recommended. The principles of macroeconomics are presented. Topics include economic organization, national income determination, money and banking, monetary and fiscal policy, economic fluctuations, and growth. (This course is offered on campus and may be offered via television.)

ECONOMICS (ECO) 202 (3)

PRINCIPLES OF ECONOMICS II (3 LEC.)

Prerequisite: Economics 201 or the consent of the instructor. The principles of microeconomics are presented. Topics include the theory of demand, supply, and price of factors. Income distribution and theory of the firm are also included. Emphasis is on international economics and contemporary economic problems.

**EDUCATIONAL
PARAPROFESSIONAL (EP) 129 (3)**
COMMUNICATION SKILLS FOR
EDUCATIONAL PARAPROFESSIONAL (3 LEC.)

This course surveys methods for developing the language skills of students. Topics include creative writing, story telling, appreciation of literature, tutoring, cursive and manuscript handwriting, and listening skills.

**EDUCATIONAL
PARAPROFESSIONAL (EP) 131 (3)**
INTRODUCTION TO
EDUCATIONAL PROCESSES I (3 LEC.)

The role of the educational paraprofessional is defined. The organization and administration of the public school system are described. Special attention is given to the development of effective interpersonal relationships. Through direct experiences with students on a one-to-one basis, the paraprofessional trainee observes and studies the developmental patterns of students. The principles of human growth and development are included.

**EDUCATIONAL
PARAPROFESSIONAL (EP) 133 (3)**
INTRODUCTION TO
EDUCATIONAL PROCESSES II (3 LEC.)

This course focuses on developing a wholesome learning environment in the classroom. The facilitation of learning in small groups is emphasized. Factors affecting the growth and development of students in a pluralistic society are covered. The responsibilities of the educational paraprofessional are covered.

**EDUCATIONAL PARAPROFESSIONAL
(EP) 134 (3)**
INTRODUCTION TO MEDIA (2 LEC., 2 LAB.)

Basic skills for preparing graphic and projected educational materials are developed. The operation of selected audiovisual equipment is also included.

**EDUCATIONAL
PARAPROFESSIONAL (EP) 135 (3)**
ARTS AND CRAFTS FOR
EDUCATIONAL
PARAPROFESSIONALS (3 LEC.)

Creative art materials and methods used in programs for children are presented. Opportunities are provided

for the use of these materials. Classroom displays, charts, poster art, and bulletin boards are included, emphasis is on creating an attractive environment in the classroom.

**EDUCATIONAL
PARAPROFESSIONAL (EP) 245 (1)**
DIVERSIFIED STUDIES (1 LEC.)

This course provides for specialized study by the educational paraprofessional. Possible areas for study are special education, bilingualism, child development, educational media, library, physical education, counseling, and health services. Other areas may be approved by the instructor.

**EDUCATIONAL
PARAPROFESSIONAL (EP) 246 (2)**
DIVERSIFIED STUDIES (2 LEC.)

This course provides for specialized study by the educational paraprofessional. Possible areas for study are special education, bilingualism, child development, educational media, library, physical education, counseling, and health services. Other areas may be approved by the instructor.

**EDUCATIONAL
PARAPROFESSIONAL (EP) 247 (3)**
DIVERSIFIED STUDIES (3 LEC.)

This course provides for specialized study by the educational paraprofessional. Possible areas for study are special education, bilingualism, child development, educational media, library, physical education, counseling, and health services. Other areas may be approved by the instructor.

**EDUCATIONAL PARAPROFESSIONAL
(EP) 249 (3)**
THE EXCEPTIONAL CHILD (3 LEC.)

This course is designed as a comprehensive survey of the field of exceptionality with emphasis on the educational, sociological, and psychological effects of handicapping conditions on children.

EDUCATIONAL PARAPROFESSIONAL (EP)

(See Cooperative Work Experience)

701, 711, 801, 811 (1)**702, 712, 802, 822 (2)****703, 713, 803, 813 (3)****704, 714, 804, 814 (4)****ELECTRIC POWER TECHNOLOGY (ELP) 244 (4)**

ADVANCED ELECTRIC POWER SYSTEMS (3 LEC., 3 LAB.)

Prerequisite: Electro-Mechanical Technology 233. Power distribution systems are studied. Generating equipment, transmission lines, plant distribution, and protective devices are included. The laboratory provides hands-on experience in the operation and testing of the various types of generation and power distribution equipment. Laboratory fee.

ELECTRICITY (ELE) 100 (1)

ELECTRICAL ORIENTATION (30 CONTACT HOURS)

This course introduces the electrical industry and technical program in electricity. Included are the tools and materials used in the trade.

ELECTRICITY (ELE) 101 (1)

DC CIRCUITS AND MEASUREMENTS (30 CONTACT HOURS)

Voltage, current, and resistance are calculated and measured in series, parallel, and combination circuits. The operation and use of test instruments are covered. Laboratory fee.

ELECTRICITY (ELE) 111 (1)

RESIDENTIAL CODES (30 CONTACT HOURS)

Codes for residential wiring are presented. Both the National Electric Code and local ordinances are included. Laboratory fee.

ELECTRICITY (ELE) 112 (4)

GENERAL WIRING PRACTICES (120 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Blueprint Reading 177. This course focuses on wiring practices for residences. Topics include selection, splicing, switches, receptacles, and lighting circuits. Laboratory fee.

ELECTRICITY (ELE) 113 (3)

APPLIANCE CIRCUITS (90 CONTACT HOURS)

This course focuses on wiring practices for appliance circuits, electric heating, central air conditioning, grounding practices, and service entrances. Laboratory fee.

ELECTRICITY (ELE) 114 (3)

LOW VOLTAGE CIRCUITS (30 CONTACT HOURS)

This course focuses on low voltage circuits for residences. Bells, chimes, and alarms included. Laboratory fee.

ELECTRICITY (ELE) 121 (1)

COMMERCIAL CODES (30 CONTACT HOURS)

Codes for commercial wiring are presented. Both the National Electric Code and local ordinances are included. Laboratory fee.

ELECTRICITY (ELE) 122 (4)

COMMERCIAL WIRING (120 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Blueprint Reading 177. Commercial wiring practices are studied. Included are materials, conduit work, wire pulling, and circuit layouts. Laboratory fee.

ELECTRICITY (ELE) 123 (3)

POWER CIRCUITS (90 CONTACT HOURS)

The study of commercial wiring entrance, breaker panels, commercial appliances, and problems encountered in electrical construction work. Laboratory fee.

ELECTRICITY (ELE) 202 (2)

BASIC AC CIRCUITS (60 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Mathematics 195. AC circuits are studied. Calculations and measurements are made for reactance, impedance, phase angle, voltage, current, and power. Laboratory fee.

ELECTRICITY (ELE) 203 (1)

THREE-PHASE CIRCUITS (30 CONTACT HOURS)

Three-phase wye and delta circuits are covered. Calculations and measurements are made. Laboratory fee.

ELECTRICITY (ELE) 231 (1)

MOTOR CODES (30 CONTACT HOURS)

Motor codes are studied. Both the National Electric Code and local ordinances are included. Laboratory fee.

ELECTRICITY (ELE) 232 (1)

DC AND SINGLE-PHASE MACHINES (30 CONTACT HOURS)

This course focuses on DC motors, generators, and single-phase motors. Included are the characteristics, connection, and testing of these machines. Laboratory fee.

ELECTRICITY (ELE) 233 (1)

THREE-PHASE MOTORS (30 CONTACT HOURS)

This course focuses on three-phase motors. Included are the characteristics, connection, and testing of these motors. Laboratory fee.

ELECTRICITY (ELE) 241 (1)

CONTROL CIRCUIT DIAGRAMS (30 CONTACT HOURS)

Control circuit diagrams are presented. Topics include in terminology, symbols, and development of these diagrams. Laboratory fee.

ELECTRICITY (ELE) 242 (1)

MAGNETIC STARTING AND OVERLOAD PROTECTION (30 CONTACT HOURS)

This course covers start-stop stations with overload protection. Both individual and multiple types are included. Laboratory fee.

ELECTRICITY (ELE) 243 (1)

JOGGING, REVERSING, AND SEQUENCING (30 CONTACT HOURS)

Connecting, testing, jogging, and reversing motor controls are studied. Sequencing circuits is also included. Laboratory fee.

ELECTRICITY (ELE) 244 (1)

SOLID STATE CONTROLS (30 CONTACT HOURS)

Transistor relay and SCR motor controllers are studied. Both connecting and testing are included. Laboratory fee.

**ELECTRICITY (ELE) 251 (1)**

TRANSFORMER TYPES AND TESTING (30 CONTACT HOURS)

This course focuses on transformers. Fundamentals, types, and testing procedures are all included. Laboratory fee.

ELECTRICITY (ELE) 252 (2)

DISTRIBUTION TRANSFORMERS (60 CONTACT HOURS)

This course focuses on single-phase and three-phase distribution transformer. Selection, connection, and testing are all included. Laboratory fee.

ELECTRICITY (ELE) 261 (2)

RESIDENTIAL PLANNING (60 CONTACT HOURS)

Planning the wiring job for residences is studied. Topics include the placing of receptacles, switches, lights and appliance. Service entrance, material estimating, and pricing are also covered. Laboratory fee.

ELECTRICITY (ELE) 262 (2)

COMMERCIAL PLANNING (60 CONTACT HOURS)

Planning the wiring job for a church, school, or other commercial building is studied. Blueprints and specification books are used to make plans. Laboratory fee.

ELECTRICITY**(ELE) 703, 713, 803, 813 (3)**

(See Cooperative Work Experience)

ELECTRICITY**(ELE) 704, 714, 804, 814 (4)**

(See Cooperative Work Experience)

ELECTRO-MECHANICAL TECHNOLOGY (EMT) 228 (4)

AMPLIFIER AND ANALOG CONTROL CIRCUITS (3 LEC., 3 LAB.)

Prerequisite: Electronics Technology 193. This course treats analog circuits including conventional amplifiers and operational amplifiers. The use of these circuits in controls, sensing, and testing is stressed. The laboratory emphasis is on application and characteristics of these circuits as applied to electromechanical controls. Reliance on preassembled or commercially available circuits is emphasized especially semiconductor and integrated circuits. Laboratory fee.

ELECTRO-MECHANICAL TECHNOLOGY (EMT) 232 (4)

APPLIED MECHANICS (3 LEC., 3 LAB)

Prerequisite: Mathematics 196 or equivalent. The theory and applications of mechanics are presented. Basic static and dynamic concepts are included. Topics include forces, vectors, equilibrium, moments, friction, moment of inertia, rectilinear and angular motion, work, energy and power. The construction, testing and analysis of linkage and drive elements in laboratory supports lecture material on related topics.

ELECTRO-MECHANICAL TECHNOLOGY (EMT) 233 (3)

ELECTRICAL MACHINERY (2 LEC., 3 LAB.)

Prerequisite: Electronics Technology 191 or concurrent enrollment in Electronics Technology 191. The theory and function of power electricity, including AC and DC machines. Electrical and mechanical aspects are stressed. The laboratory provides hands-on experience in operation of machinery, quantitative analysis of performance characteristics, electrical measurements on power circuits and demonstration of principles discussed in class. Safety practices are stressed. Laboratory fee.

ELECTRO-MECHANICAL TECHNOLOGY (EMT) 237 (3)

ELECTROMAGNETIC AND DIGITAL MACHINE CONTROL (2 LEC., 3 LAB.)

Prerequisite: Electronics Technology 191. This course emphasizes electro-mechanical and solid state industrial machine control systems. Control components, control and power circuit diagrams, manual and automatic AC and DC machine starters, manual and automatic AC and DC machine speed control, and solid state logic elements are studied. Problem identification, problem solving, and reporting techniques are emphasized. Laboratory fee.

ELECTRO-MECHANICAL TECHNOLOGY (EMT) 239 (4)

PRINCIPLES OF MICROPROCESSOR CONTROL (3 LEC., 3 LAB.)

Prerequisite: Electro-Mechanical Technology 242. The control of automated industrial systems with digital elements as subsystems is studied. Included are the functions of the various control elements and their interface with other components. The conversion of control information between analog and binary forms is examined. The use and implementation of logical decision elements are covered. Emphasis is on the operation and function of microprocessors in modern control systems. Laboratory fee.

ELECTRO-MECHANICAL TECHNOLOGY (EMT) 242 (4)

DIGITAL CONTROL CIRCUITS (3 LEC., 3 LAB.)

Prerequisite: Electronics Technology 193 or equivalent. This course covers number systems used in computer systems. Alphanumeric and interchange codes are included. Binary arithmetic, including octal, hexadecimal and BCD, is covered with logic functions and Boolean algebra presented at a conceptual level. Logic gates, flip-flops, registers, encoders, decoders, counters, timing circuits, ALU's and memory units are included. Lecture material is supported by laboratory work. Laboratory fee.

ELECTRONICS TECHNOLOGY (ET) 135 (6)

DC-AC THEORY AND CIRCUIT ANALYSIS (5 LEC., 3 LAB.)

Prerequisites: Credit or concurrent enrollment in Mathematics 195 or the equivalent. This is an accelerated course combining DC circuits (ET 190) and AC circuits (ET 191) in one semester for students with previous electronics experience or a good mathematics background. Topics include the analysis of resistive, capacitive, inductive, and combination circuits. Magnetism, resonance, schematic symbols, and sine wave analysis are also included. Series, parallel, and series-parallel circuits are covered. Laboratory fee.

ELECTRONICS TECHNOLOGY (ET) 190 (4)

DC CIRCUITS AND ELECTRICAL MEASUREMENTS (3 LEC., 3 LAB.) (96 CONTACT HOURS)

Prerequisite: Mathematics 195 or the equivalent recommended. The mathematical theory of direct current circuits is presented in combination with laboratory fundamentals. Emphasis is on elementary principles of magnetism, electric concepts and units, diagrams, and resistance. Electromagnetism, series and parallel circuits, simple meter circuits, conductors, and insulators are also stressed. Laboratory fee.



ELECTRONICS TECHNOLOGY (ET) 191 (4)

A.C. CIRCUITS (3 LEC., 3 LAB.)

Prerequisite: Electronics Technology 190 and credit or concurrent enrollment in Mathematics 195 or the equivalent. This course covers the fundamental theories of alternating current. The theories are applied in various circuits. Included are laboratory experiments on power factor, sine wave analysis, resonant circuits, capacitance, inductance, Q of coils, magnetism, and resistance. Laboratory fee.

ELECTRONICS TECHNOLOGY (ET) 192 (3)

DIGITAL COMPUTER PRINCIPLES (2 LEC., 2 LAB.)

Prerequisite: Electronics Technology 190. This course is a study of number systems and arithmetic in various bases. Included are truth tables, relay and diode logic analysis, logic symbols, and basic functions including NOT, AND, NAND, OR NOR, and EX OR. Logic manipulations include basic laws, minterm, maxterm, sum of products, and product of sums expression forms. Venn diagrams, Veitch and Karnaugh reduction techniques, and circuit synthesis are also covered using design examples. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 193 (4)**

ACTIVE DEVICES (3 LEC., 3 LAB., 96 CONTACT HOURS)

Prerequisites: Electronics Technology 190 and credit or concurrent enrollment in Electronics Technology 191. Semiconductors (active devices) are the focus of this course. Topics include composition, parameters, linear and non-linear characteristics, in circuit action, amplifiers, rectifiers, and switching. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 194 (3)**

INSTRUMENTATION (2 LEC., 3 LAB.)

Prerequisites: Electronics Technology 190 and credit or concurrent enrollment in Electronics Technology 191 and 193. Electrical devices for measurement and instrumentation are studied and applied to work situations. Included are basic AC and DC measurement meters, impedance bridges, oscilloscopes, signal generators, signal-tracers, and tube and transistor testers. The course concludes with a study of audio frequency test methods and equipment. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 231 (4)**

SPECIAL CIRCUITS WITH COMMUNICATIONS APPLICATIONS (3 LEC., 3 LAB.)

Prerequisites: Electronics Technology 193 and 194. Active devices are applied to circuitry common to most communications equipment. Both the theory of operation and practical applications of the circuits in laboratory experiments are included. Circuits including power supplies, voltage regulators, tuned and untuned amplifiers, filters, oscillators, modulators and detectors, with application to various types of intelligence transmission and reception are emphasized in the course. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 232 (4)**

ANALYSIS OF ELECTRONICS LOGIC AND SWITCHING CIRCUITS (3 LEC., 3 LAB.)

Prerequisites: Electronics Technology 193 and 194. The course presents circuitry common to electronic control systems and automatic measuring systems. Typical circuit functions covered include clamping, gating, switching, and counting. Circuits include voltage discriminators, multivibrators, dividers, counters, and gating circuits. Boolean algebra and binary numbers are reviewed. Emphasis is on semiconductor devices. Fluidic switching devices are introduced. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 234 (3)**

ELECTRONIC CIRCUITS AND SYSTEMS (6 LAB.)

Prerequisites: Completion of all Electronics Technology Courses up to and including Electronics Technology 231; and may take Electronics Technology 232 and Electronics Technology 231 concurrently with Electronics Technology 234. The design, layout construction, and calibration of an electronics project are covered. Students develop independent project and prepare term papers on functions of components, operating specifications, and schematics. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 235 (4)**

FUNDAMENTALS OF ELECTRICITY (3 LEC., 3 LAB.)

This course is an introduction to electricity for students in related programs. Topics include basic AC and DC theory, voltage, current, and resistance, and electrical wiring principles and schematics. Transformers, relays, timers, electrical measuring devices, and basic electrical calculations are also included. Laboratory fee.

ELECTRONICS TECHNOLOGY (ET) 237 (4)

MODULAR MEMORIES AND
MICROPROCESSORS (3 LEC., 3 LAB.)

Prerequisites: Electronics Technology 232. Read only memories (ROM's), random access memories (RAM's), and microprocessors are presented. Emphasis is on specifications, applications, and operation. Control buses data bus, addressing, coding, and programming of typical microprocessor units are included. Microprocessor system is constructed, tested, coded, and programmed. Laboratory fee.

ELECTRONICS TECHNOLOGY (ET) 238 (4)

LINEAR INTEGRATED
CIRCUITS (3 LEC., 3 LAB.)

Prerequisites: Electronics Technology 190, 191, and 193. Differential amplifiers, operational amplifiers, and integrated circuit timers are investigated. Topics include: comparators, detectors, inverting and non-inverting amplifiers, OP AMP adders, differentiating and integrating amplifiers, and instrumentation amplifiers. Digital to analog converters, analog to digital converters, special OP AMP applications, and integrated circuits timers are also included. Limitations and specifications of integrated circuits are covered. Laboratory fee.

ELECTRONICS TECHNOLOGY (ET) 239 (3)

MICROWAVE TECHNOLOGY (3 LEC.)

Prerequisites: Electronics Technology 194 and Electronics Technology 231. Microwave concepts such as propagation, transmission lines including waveguides, standing waves, impedance matching, basic antennas and various basic microwave measurements are covered. Microwave measurement techniques such as power and frequency meter measurements and calibration, VSWR determinations, klystron characteristics, and waveguide tuning will be demonstrated. A basic radar system is discussed as time permits.

ELECTRONICS TECHNOLOGY (ET) 240 (4)

ELECTRONICS THEORY AND APPLICATION
OF DIGITAL COMPUTERS (3 LEC., 3 LAB.)

Prerequisites: Mathematics 196 and Electronics Technology 193. The course presents the electronic switching circuits for digital computer systems. Logic symbology, gates, and related Boolean algebra are covered. Computer terminology and number systems are included. An introduction to BASIC language programming for electronic circuit analysis is also included. Laboratory experiments in addition to computer programming include basic logic gate analysis and test procedures. Laboratory fee.

ELECTRONICS TECHNOLOGY (ET) 250 (4)

PRINCIPLES OF ELECTRONIC
INTEGRATED CIRCUITS (3 LEC., 2 LAB.)

Prerequisites: Electronics Technology 190 and concurrent enrollment in Drafting and Design Technology 241. This is a survey course of solid state devices and their associated circuitry. This course is intended to teach the student fundamentals of common electronic circuits which contain integrated circuits and to teach elements of solid state devices from the principle of the PN junction through the function of integrated circuits. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 260 (4)**

SINUSOIDAL CIRCUITS (3 LEC., 3 LAB.)

Prerequisites: Electronics Technology 191 and 193. Power supply circuits are presented. Included are full wave rectification, filtering, and regulation. Amplifier circuits involving large and small signal analysis, coupling, classes of operation and feedback techniques are also covered. Semiconductor devices considered include the Zener diode, SCR, TRIAC, MOSFET, JFET, CMOS, and unijunction. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 261 (4)**

PULSE AND SWITCHING CIRCUITS (3 LEC., 3 LAB.)

Prerequisites: Electronics Technology 191 and 193. Thevenin's theorem and superposition are applied to AC and DC sources. Waveform analysis is studied including pulse characteristics and pulsetrain measurements of harmonic content. Other topics include RC and RL circuit response to step inputs, exponential forms, diode clipper and clamp circuits, and transistor action in digital circuits involving saturation and cutoff. Gate types of RTL, DTL, TTL, ECL, and MOS technologies are also included. The bistable, monostable, and astable types of multivibrator circuits are covered. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 263 (4)**

DIGITAL COMPUTER THEORY (3 LEC., 3 LAB.)

Prerequisite: Electronics Technology 192. This course focuses on basic computer circuits. Included are flip-flops, shift registers, counters (sequential and nonsequential), operational amplifiers, and A to D converters. Analysis of specific current integrated circuits is also included. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 264 (4)**

DIGITAL SYSTEMS (3 LEC., 3 LAB.)

Prerequisite: Electronics Technology 192. The three major component systems of a digital computer are studied. The arithmetic-logic section covers arithmetic in binary, hexadecimal, counting, and number representation within a machine. The memory studies center around the operation of core and semiconductor memory assemblies which include addressing and data buffering. The control section deals with state, distributor, and ROM type of control circuits. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 265 (3)**

DIGITAL RESEARCH (1 LEC., 5 LAB.)

Prerequisites: Electronics Technology 192 and concurrent enrollment in Electronics Technology 263 and 264. The design, layout, construction, and calibrating of a major electronic project are covered. The project uses digital circuits. Students develop independent projects and prepare term papers on functions of components, operating specifications, and schematics.

ELECTRONICS TECHNOLOGY**(ET) 266 (4)**

COMPUTER APPLICATIONS (3 LEC., 3 LAB.)

Prerequisite: Electronics Technology 192. Machine language and assembly language programming are the focus of this course. Emphasis is on problem solving for in-house computers. Hardware trouble-shooting techniques for both computer mainframe and input and output devices are covered. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 267 (4)**

MICROPROCESSORS (3 LEC., 3 LAB.)

Prerequisite: Electronics Technology 192. This course is a study of microcomputers. Topics include architecture, software, interfacing, microprocessors, and microcomputer systems. Emphasis is on practical applications using in-house microcomputers. Laboratory fee.

ELECTRONICS TECHNOLOGY**(ET) 268 (4)****ADVANCED MICROPROCESSORS (3 LEC., 3 LAB.)**

Prerequisite: Electronic Technology 267. The study of microprocessors is continued. Emphasis is on hardware troubleshooting, diagnostic programming, and peripheral interface and control concepts. Laboratory fee.

ELECTRONICS TECHNOLOGY**(See Cooperative Work Experience)****802 (2)****713, 803 (3)****804 (4)****ENGINEERING (EGR) 101 (2)****ENGINEERING ANALYSIS (2 LEC.)**

Prerequisite: Two years of high school algebra or Developmental Mathematics 093 or the consent of the instructor. This course surveys the field of engineering. Topics include the role of the engineer in society and branches and specialties in engineering. Engineering analysis and computer programming are introduced. Practice is provided in analyzing and solving engineering problems. Computational methods and devices with an introduction to computer programming are also covered.

ENGINEERING (EGR) 105 (3)**ENGINEERING DESIGN
GRAPHICS (2 LEC., 4 LAB.)**

Graphic fundamentals are presented for engineering communications and engineering design. Topics include standard engineering graphical techniques, auxiliaries, sections, graphical analysis, and pictorial and working drawings. Laboratory fee.

ENGINEERING (EGR) 106 (3)**DESCRIPTIVE GEOMETRY (2 LEC., 4 LAB.)**

Prerequisite: Drafting 183 or Engineering 105. This course provides training in the visualization of three-dimensional structures. Emphasis is on accurately representing these structures in drawings by analyzing the true relationship between points, lines, and planes. Included are the generation and classification of lines, surfaces,



intersections, developments, auxiliaries, and revolutions. Laboratory fee.

ENGINEERING (EGR) 107 (3)**ENGINEERING MECHANICS I (3 LEC.)**

Prerequisite: Credit or concurrent enrollment in mathematics 124. This course is a study of the statics of particles and rigid bodies with vector mathematics in three dimensional space. Topics include the equilibrium of forces and force systems, resultants, free body diagrams, friction, centroids and moments of inertia, virtual works, and potential energy. Distributed forces, centers of gravity, and analysis of structures, beams, and cables are also presented.

ENGINEERING (EGR) 108 (3)**COMPUTER METHODS IN
ENGINEERING (3 LEC.)**

Prerequisite: Credit or concurrent enrollment in Mathematics 126. Fundamental methods of numerical analysis with applications by computer programming are presented. Topics include computer programming, recursion formulas, successive approximations, error analysis, non-linear equations, and systems of linear equations and matrix methods. Probabilistic models, interpolation, determination of parameters, numerical integration, and solution of ordinary differential equations are also covered.

ENGINEERING (EGR) 186 (2)

MANUFACTURING PROCESSES (1 LEC., 2 LAB.)
(48 CONTACT HOURS)

This course introduces the student enrolled in technical programs to the many steps involved in manufacturing a product. This is accomplished by involving the class in producing a device with precision. The student gains practical experience with working drawings, a variety of machine tools and the assembly of components. The student is made aware of the factors involved in selecting materials and economical utilization of materials. Laboratory fee.

ENGINEERING (EGR) 187 (2)

MANUFACTURING PROCESSES (1 LEC., 2 LAB.)

Prerequisite: Engineering 186 or acceptable industrial experience. This course is a continuing study of metal working processes, chipless machining, threads, gears, jigs, fixtures, surface treatments, automation, and operations planning. Laboratory fee.

ENGINEERING (EGR) 188 (3)

STATICS (3 LEC.) (48 CONTACT HOURS)

Prerequisite: Credit or concurrent enrollment in Mathematics 196. This course is a study of force and force systems, resultants, friction, centroids, conditions of equilibrium, analysis of trusses, and frame structures. Both numerical and graphical methods are used.

ENGINEERING (EGR) 189 (3)

CHARACTERISTICS AND STRENGTHS OF MATERIALS (3 LEC.) (48 CONTACT HOURS)

Prerequisites: Engineering 188. The characteristics and strengths of materials are examined. Emphasis is on loads, stresses, and deformations within the elastic range.

ENGINEERING (EGR) 201 (3)

ENGINEERING MECHANICS II (3 LEC.)

Prerequisites: Engineering 107 and credit or concurrent enrollment in Mathematics 225. This is a study of dynamics. Particles and rigid bodies are examined as they interact with applied forces. Both constrained and general motions are included. Space, time, mass, velocity, acceleration, work and energy, impulse, and momentum are covered.

ENGINEERING (EGR) 202 (3)

ENGINEERING MECHANICS OF MATERIALS (3 LEC.)

Prerequisites: Engineering 107 and credit or concurrent enrollment in Mathematics 225. Simple structural elements are studied. Emphasis is on forces, deformation, and material properties. The concepts of stress, strain, and elastic properties are presented. Analysis of thin walled vessels, members loaded in tension, torsion, bending and shear, combined loadings, and stability conditions are included. Behavioral phenomena such as fracture, fatigue, and creep are introduced.

ENGINEERING (EGR) 203 (3)

ENGINEERING PRODUCTION (1 LEC., 5 LAB.)

Prerequisite: Engineering 105 or the consent of the instructor. The standard machining of metals is covered. Layout, turning, boring, shaping, drilling, threading, milling, and grinding are all included. The manufacturing of interchangeable parts, fixtures, and jigs with applications is studied. Laboratory fee.

ENGINEERING (EGR) 204 (3)

ELECTRICAL SYSTEMS ANALYSIS (3 LEC.)

Prerequisite: Credit or concurrent enrollment in Mathematics 225. Electrical science is introduced. Included are fundamental electrical systems and signals. Basic concepts of electricity and magnetism with mathematical representation and computation are also covered.

ENGINEERING (EGR) 205 (3)

PLANE SURVEYING (2 LEC., 4 LAB.)

Prerequisites: Mathematics 102 or 196 and Engineering 105 or Drafting 183.

This course focuses on plane surveying. Topics include surveying instruments, basic measuring procedures, vertical and horizontal control, error analysis, and computations. Traverse, triangulation, route alignments, centerlines, profiles, mapping, route surveying, and land surveying are also included. Laboratory fee.

ENGINEERING (EGR) 206 (1)ELECTRICAL ENGINEERING
LABORATORY (3 LAB.)

Prerequisite: Credit or concurrent enrollment in Engineering 204. Various instruments are studied and used. These include the cathode ray oscilloscope, ammeters, voltmeters, ohmmeters, power supplies, signal generators, and bridges. Basic network laws, steady state and transient responses, and diode characteristics and applications are demonstrated. Computer simulation is introduced. Laboratory fee.

ENGINEERING (EGR) 289 (3)

MECHANICS OF STRUCTURES (3 LEC.)

Prerequisite: Mathematics 195. This is a basic course in engineering mechanics for technology students. Topics include forces and force systems, equilibrium, moments, centroids, stresses and strains. Methods analysis and design of bolted and welded joints, trusses, beams, and columns are introduced.

ENGINEERING TECHNOLOGY (EGT) 124

INDUSTRIAL ORGANIZATIONS (2 LEC.)

This course presents an overall view of the manufacturing company. Topics include process planning, costs and budgets, contracts, marketing, economics, and personnel.

ENGINEERING TECHNOLOGY (EGT) 141 (4)BASIC HYDRAULICS AND
FLUID MECHANICS (3 LEC., 3 LAB.)

Principles of hydraulics and fluid mechanics are examined. Hydraulic pumps, motors, cylinders, and valves are studied. Emphasis is on the application of formulas related to the properties of fluids and the laws which govern fluid flow. Various hydraulic components are tested, and basic hydraulic circuits are set up and evaluated.

ENGINEERING TECHNOLOGY (EGT) 142 (3)INSTRUMENTATION AND
TESTING (2 LEC., 3 LAB.)

Prerequisite: Credit or concurrent enrollment in Electronics Technology 191. Industrial instrumentation and testing are introduced. The characteristics of various instruments are investigated. The static and dynamic characteristics of measuring devices used in such areas as heat flow, liquid flow, electronic control, pressure and related areas in instrumentation, control, and materials handling are studied. Laboratory fee.

ENGINEERING TECHNOLOGY (EGT) 143 (4)

TECHNICAL PROGRAMMING (3 LEC., 3 LAB.)

Prerequisite: Mathematics 195 or the consent of the instructor. This course introduces the engineering technician to the world of technology. Skills are developed using hand calculators and computers to solve engineering problems. Basic computer programming techniques are introduced in the microcomputer laboratory using high-level languages such as BASIC. Laboratory fee.

ENGINEERING TECHNOLOGY (EGT) 240 (3)

ELECTRONIC CONTROL SYSTEMS (2 LEC., 3 LAB.)

Electro-mechanical and electro-hydraulic control systems are explored. The response and stability characteristics of feedback control systems, electro-mechanical and electro-hydraulic control systems are set up and evaluated. The analog computer is used to analyze these systems. Laboratory fee.

ENGINEERING TECHNOLOGY (EGT) 803 (3)

(See Cooperative Work Experience)

ENGINEERING TECHNOLOGY (EGT) 804 (4)

(See Cooperative Work Experience)

ENGLISH

(Also see Developmental Reading and Developmental Writing.) Additional instruction in writing and reading is available through the Learning Skills Center.

ENGLISH IN THE SOPHOMORE YEAR

English 201, 202, 203, 204, 205, 206, 215 and 216 are independent units of three credit hours each, from which any combination of two will be selected to satisfy degree requirements in sophomore English. Student should consult catalog of the senior college he expects to attend for requirements in his major before choosing English courses.

ENGLISH (ENG) 101 (3)

COMPOSITION AND EXPOSITORY READING (3 LEC.)

The development of skills is the focus of this course. Skills in writing and in the critical analysis of prose are included. (This course is offered on campus and may be offered via television.)

ENGLISH (ENG) 102 (3)

COMPOSITION AND LITERATURE (3 LEC.)

Prerequisite: English 101. This course continues the development of skills in writing. Emphasis is on analysis of literary readings, expository writing, and investigative methods of research. (This course is offered on campus and may be offered via television.)

ENGLISH (ENG) 201 (3)

BRITISH LITERATURE (3 LEC.)

Prerequisite: English 102. Significant works of British literature are studied. The Old English Period through the 18th century is covered.

ENGLISH (ENG) 202 (3)

BRITISH LITERATURE (3 LEC.)

Prerequisite: English 102. Significant works of British literature are studied. The Romantic Period to the present is covered.

ENGLISH (ENG) 203 (3)

WORLD LITERATURE (3 LEC.)

Prerequisite: English 102. Significant works of continental Europe are studied. The Greek Classical Period through the Renaissance is covered.

ENGLISH (ENG) 204 (3)

WORLD LITERATURE (3 LEC.)

Prerequisite: English 102. Significant works of continental Europe, England, and America are studied. The time period since the Renaissance is covered.

ENGLISH (ENG) 205 (3)

AMERICAN LITERATURE (3 LEC.)

Prerequisite: English 102. Significant works of American writers before Walt Whitman are studied. Emphasis is on the context of the writers' times.

ENGLISH (ENG) 206 (3)

AMERICAN LITERATURE (3 LEC.)

Prerequisite: English 102. Significant works of American writers from Walt Whitman to the present are studied.

ENGLISH (ENG) 209 (3)

CREATIVE WRITING (3 LEC.)

Prerequisite: English 102. The writing of fiction is the focus of this course. Included are the short story, poetry, and short drama.

ENGLISH (ENG) 210 (3)

TECHNICAL WRITING (3 LEC.)

Prerequisite: English 101 and 102 or Communications 131 and 132. The technical style of writing is introduced. Emphasis is on the writing of technical papers, reports, proposals, progress reports, and descriptions.

ENGLISH (ENG) 215 (3)

STUDIES IN LITERATURE (3 LEC.)

Prerequisite: English 102. Selections in literature are read, analyzed, and discussed. Selections are organized by genre, period, or geographical region. Course titles and descriptions are available each semester prior to registration. This course may be repeated for credit.

ENGLISH (ENG) 216 (3)

STUDIES IN LITERATURE (3 LEC.)

Prerequisite: English 102. Selections in literature are read, analyzed, and discussed. Selections are organized by theme, interdisciplinary content or major author. Course titles and descriptions are available each semester prior to registration. This course may be repeated for credit.

FIRE PROTECTION (FPT) 131 (3)

INTRODUCTION TO FIRE PROTECTION (3 LEC.)

The history and philosophy of fire protection are studied. Statistics on fire losses are reviewed and agencies involved in fire protection are introduced. Other topics include legislative developments, career orientation, recruitment and training for fire departments, position classification and pay plans, and employee organizations. Current and future problems are also reviewed.

FIRE PROTECTION (FPT) 132 (3)

FIRE PREVENTION THEORY & APPLICATION (3 LEC.)

Fire prevention administration is studied. Both principles and procedures are covered. Other topics include inspections, organization, public cooperation and image, recognition of fire hazards, insurance problems, and legal aspects. Local,

state, and national codes on fire prevention are reviewed. Relationships between building inspection agencies and fire prevention organizations are described. Engineering is presented as a solution to fire hazards.

FIRE PROTECTION (FPT) 135 (3)

INTRODUCTION TO FIRE ADMINISTRATION (3 LEC.)

This course focuses on the organization and management of a fire department. Topics include budgeting, maintenance of records and reports, and management of fire department officers. Personnel administration, distribution of equipment and personnel, and relations with various government agencies are also included. Fire service leadership is viewed from the company officer's position.

FIRE PROTECTION (FPT) 136 (3)

FIRE INVESTIGATION AND ARSON (3 LEC.)

The detection and investigation of arson are studied. Topics include investigation techniques, case histories, gathering and preserving evidence, and preparing for a court case. Also included is a selected discussion of laws, decisions, and opinions. Kinds of arsonists, interrogation procedures, and cooperation between fire fighters and arson investigators are also covered.

FIRE PROTECTION (FPT) 139 (4)

FIRE OPERATIONS STRATEGY (3 LEC., 1 LAB.)

This course examines the nature of fire and the process of determining requirements to fight a fire. The effective use of personnel and equipment are covered. Emphasis is on pre-planning, study of conflagration problems, problem-solving, decision making, and attack tactics and strategy. The use of mutual aid and large scale command problems are also included.

FIRE PROTECTION (FPT) 231 (3)

FIRE PROTECTION THROUGH
BUILDING CONSTRUCTION (3 LEC.)

The fire resistance of building construction is considered. Included are building materials, assemblies and exposures. Both local and national laws and guidelines are reviewed. Model building codes and the life safety code are also studied.

FIRE PROTECTION (FPT) 232 (3)

PROTECTION SYSTEMS IN
INDUSTRY (3 LEC.)

Safeguards for business and industrial organizations are presented. Topics include plant lay-out, fire prevention programs, extinguishing factors and techniques, hazards, and prevention methods. The organization and development of an industrial fire brigade are described. Gaining cooperation between the public and private fire department organization is also covered.

FIRE PROTECTION (FPT) 233 (3)

FIRE PROTECTION SYSTEMS (3 LEC.)

This course examines fire protection systems. Topics include standards for water supply, special hazards protection systems, automatic sprinklers and special extinguishing systems, and automatic signaling and detection systems. Rating organizations and underwriting agencies are also described.

FIRE PROTECTION (FPT) 234 (3)

INDUSTRIAL FIRE
PROTECTION II (3 LEC.)

Prerequisite: Fire Protection 232. The study of industrial fire protection is continued. Fire and safety organizations in industry are described, and relations between private and public fire protection organizations are examined. Current trends, deficiencies, and possible solutions for industrial fire problems are discussed. The role of insurance and other special organizations is covered. Other topics cover industrial processes, equipment, facilities, and work practices. Both hazards and techniques to control

hazards are included. Field trips to selected plants and demonstrations of new techniques, equipment, and innovations are also included.

FIRE PROTECTION (FPT) 235 (3)

FIRE ADMINISTRATION II (3 LEC.)

Prerequisite: Fire Protection 135. Various aspects of the operation of a fire department are covered. Topics include insurance rates and ratings, budgets, training, city water requirements, and fire alarm and communication systems. The importance of public relations, report writing, and record keeping are stressed. Measurement of results, use of records to improve procedures, legal aspects of fire prevention and fire protection, and the design and construction of fire department buildings are also covered.

FIRE PROTECTION (FPT) 236 (3)

LEGAL ASPECTS OF FIRE
PROTECTION (3 LEC.)

This course focuses on legal rights and duties. Liability of the fire department is included. Other topics include civil and criminal law, the Texas and federal judicial structure, and cities' liability for acts of the fire department and fire prevention bureaus.

FIRE PROTECTION (FPT) 237 (3)

HAZARDOUS MATERIALS II (3 LEC.)

Prerequisite: Chemistry 170. Hazardous materials are studied. Included are the storage, handling, laws, standards, and fire fighting techniques associated with hazardous materials. The materials include chemicals, gases, flammable liquids, corrosives, poisons, explosives, rocket propellants and exotic fuel, and radioactive substances. The formation of toxic fumes and health hazards is also stressed. Ignition and combustion characteristics of gases, liquids, and solids are covered. Special attention is given to radiological instruments, human exposure to radiation, decontamination procedures, common uses of radioactive materials, and operational procedures.

FIRE PROTECTION (FPT) 238 (3)**FIRE SAFETY EDUCATION (3 LEC.)**

Physical, chemical, and electrical hazards are surveyed and related to loss of property and life. Codes, laws, problems, and cases are studied. The physical and psychological aspects of casualties are examined. Safe storage, transportation, and handling techniques are stressed to eliminate or control potential risks.

FIRE PROTECTION (FPT) 239 (3)**FIRE SERVICE COMMUNICATIONS (3 LEC.)**

This course presents various communication and fire alarm systems. The installation, operation, and testing of the most common systems are included. Receiving, dispatching, and radio communication procedures are also included. Other topics cover 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, and technological advances.

FIRE PROTECTION (FPT) 240 (3)**FIRE INSURANCE FUNDAMENTALS (3 LEC.)**

The relationships among 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, the I.S.O. grading schedule, and other topics are stressed. Also covered are the relationship of insurance to modern business, principles of property and casualty insurance contracts, and the corporate structure of insurance companies.

FIRE PROTECTION (FPT) 241 (3)**ADVANCED FIRE LOSS STATISTICAL SYSTEMS (3 LEC.)**

This course is a study of computerized systems used for storing and retrieving fire loss statistics. Techniques for programming records and reports are covered. New systems of microfilming, including the modern technology of COM (computer output microfilm) and microfiche, are presented. Standards for uniform coding for fire protection are reviewed.

FIRE PROTECTION (FPT) 242 (3)**URBAN FIRE PROBLEM ANALYSIS (3 LEC.)**

The urban fire problem is explored. Problems from lack of zoning and other land use laws are described. Research techniques and systems engineering are used to analyze water supply and fire alarm methods. Socio-economic and management factors are related to city planning. Environment problems are studied.

FIRE PROTECTION (FPT) 243 (3)**TECHNICAL WRITING FOR FIREFIGHTERS (3 LEC.)**

Prerequisite: English. This course focuses on advanced writing in technical, scientific, and business fields. Included are reports, proposals, papers, and correspondence. Emphasis is on collecting, organizing, and presenting materials.

FLUID POWER TECHNOLOGY**(FLP) 222 (3) FUNDAMENTALS OF PNEUMATICS (2 LEC., 3 LAB.)**

Pneumatic power units, pneumatic controls, and pneumatic cylinders are studied. Both construction and operation are covered. Pneumatic circuits, power operated holding devices, safety circuits, and remote controlled circuits are presented. Manual, mechanical, pilot, and solenoid operated circuits are all included. Laboratory fee.

FLUID POWER TECHNOLOGY (FLP) 225 (4)

ADVANCED FLUID POWER
SYSTEMS (3 LEC., 3 LAB.)

This course examines fluid power systems. Included is the design of hydraulic and pneumatic systems. Circuit calculations are made for force, torque, power, speed, fluid pressure, flow rate, and velocity. Emphasis is on the selection of pumps, cylinders, valves, motors, compressors, filters, and other fluid power components. The set-up, operation, and testing of various fluid power circuits are covered. Laboratory fee.

FOOD SERVICE (FS) 119 (3)

FOOD SERVICE EQUIPMENT (3 LEC.)

This course covers food service equipment. Specifications, uses, cleaning, and preventive maintenance are emphasized. Equipment for preparation, cooking, refrigeration, storage, and clean-up is included. The relation of air conditioning, electricity, gas, and plumbing to food service facilities is examined. Layout analysis, design, and effective use of equipment and space are also covered.

FOOD SERVICE (FS) 120 (3)

BASIC FOOD PREPARATION (2 LEC., 4 LAB.)

Quality food preparation and cookery are studied. Emphasis is on the importance of the person to be served, and the provision of nutritionally adequate meals. Food preparation techniques, selection of equipment, and the effective use of time are included. Laboratory fee.

FOOD SERVICE (FS) 122 (3)

ADVANCED FOOD PREPARATION (2 LEC., 4 LAB.)

Prerequisite: Food Service 120. This course is a continuation of Food Service 120. Procedures for large quantities and management for food preparation are introduced. Topics include basic cookery, safety and sanitation factors, and selection of equipment. Emphasis on high preparation techniques for high quality. Laboratory fee.

FOOD SERVICE (FS) 124 (3)

FOOD SERVICE SANITATION
AND SAFETY (3 LEC.)

The principles of microbiology are studied and applied to the need for personal cleanliness. The cause, control, and investigation of illness caused by food contamination are explored. Other topics include sanitary practices, dishwashing procedures, the use of cleaning materials, garbage and refuse disposal, general safety precautions, and elementary first aid.

FOOD SERVICE (FS) 132 (3)

FOOD PURCHASING, HANDLING
AND STORAGE (3 LEC.)

This course focuses on policies and procedures for purchasing food in quantity. Storage requirements, procedures, and controls are included. The availability of food supplies, analysis of food quality, and specification writing are also covered.

FOOD SERVICE (FS) 135 (3)

NUTRITION AND MENU
PLANNING (3 LEC.)

Food nutrients and their importance in maintaining health are surveyed. The digestive and absorptive characteristics of nutrients are included. The nutritional needs of all age groups are studied and applied to the planning of meals for business and institutions. Psychological needs, type of operation, and available equipment and personnel are all considered.

FOOD SERVICE (FS) 136 (3)

SUPERVISORY TECHNIQUES
FOR FOOD SERVICE (3 LEC.)

Selecting, training, and supervising personnel for food service are studied. Personnel policies, job descriptions, teaching methods, schedule preparation, and work improvement are included.

FOOD SERVICE (FS) 138 (3)

FOOD SERVICE COST CONTROL (3 LEC.)

Prerequisites: Food Service 132 and Math 130. The principles and procedures of the control of food cost are presented. Emphasis is on applying the principles and procedures to any food service operation.

FOOD SERVICE (FS) 140 (3)ELEMENTARY BAKERY
TRAINING (2 LEC., 4 LAB.)

This course covers the work of the baker. Doughs, breads, pies, and cookies are analyzed and produced in quantity. Also covered are all types of fillings, butter creams, puddings, cakes, cake decorations and frostings. The use of proper flours and the handling of the pastry bag are stressed. Laboratory fee.

FOOD SERVICE (FS) 201 (1)SPECIAL TOPICS IN FOOD
SERVICE (1 LEC.)

Prerequisite: The consent of the instructor. Students participate in identifying, defining, and analyzing current topics of interest in food service. The course emphasizes present industry needs and problems, and students are guided to offer realistic and workable solutions which include the total knowledge of food service processes. This course may be repeated for credit.

FOOD SERVICE (FS) 202 (2)SPECIAL TOPICS IN FOOD
SERVICE (2 LEC.)

Prerequisite: The consent of the instructor. Students participate in identifying, defining, and analyzing current topics of interest in food service. The course emphasizes present industry needs and problems, and students are guided to offer realistic and workable solutions which include the total knowledge of food service processes. This course may be repeated for credit.

FOOD SERVICE (FS) 203 (3)SPECIAL TOPICS IN FOOD
SERVICE (3 LEC.)

Prerequisite: The consent of the instructor. Students participate in identifying, defining, and analyzing current topics of interest in food service. The course emphasizes present industry needs and problems, and students are guided to offer realistic and workable solutions which include the total knowledge of food service processes. This course may be repeated for credit.

FOOD SERVICE (FS) 220 (4)QUANTITY FOOD PREPARATION
AND SERVICE (3 LEC., 5 LAB.)

Prerequisite: Food Service 122. A lecture-laboratory course offering field training study of quantity food procedures and techniques with emphasis on retention of nutritive value of foods. Kitchen organization and planning of quantity production, use of large and small institutional equipment, food control and the associated supervisory problems as related to institutional and commercial food service. Includes study and use of convenience foods. Laboratory fee required.

FOOD SERVICE (FS) 222 (4)ADVANCED QUANTITY FOOD
PREPARATION AND SERVICE (3 LEC., 5 LAB.)

Prerequisite: Food Service 220. This course emphasizes the planning and management of quantity food production. Training in the field is provided. Practice is given in producing entire meals, including evaluation and controls. Quality food standards of various cost levels are studied. The planning, layout, and maintenance of equipment are also covered. Laboratory fee.



FOOD SERVICE (FS) 233 (3)
FOOD MARKETING (3 LEC.)

The distribution of the finished product is introduced. Emphasis is on the consumer. Included are the activities involved in developing markets, customers, and distribution services.

FOOD SERVICE (FS) 237 (2)
ORGANIZATION AND
MANAGEMENT (3 LEC.)

The organizational structure of various types of group care institutions is studied. Administration, tools of management, budget, and cost analysis are emphasized.

FOOD SERVICE (FS) 238 (3)
GARDE-MANGER TRAINING (2 LEC., 4 LAB.)

Prerequisite: Food Service 122. This course covers the preparation of the cold buffet. Included are salads, sandwiches, ice carvings, lard sculptures, chaud froids hors d'oeuvres, pates, cold fish, poultry, meats, and game. Also included is the proper set-up of the garde-manger station. Laboratory fee.

FOOD SERVICE (FS) 239 (3)
SAUCIER TRAINING (2 LEC., 4 LAB.)

Prerequisite: Food Service 122. This course covers the preparation of basic soups, sauces; vegetables, and garnitures. All meats, fish, poultry, and game are also covered. The proper set-up of the saucier station is also included. Laboratory fee.

FOOD SERVICE (FS) 242 (4)
COMMUNITY NUTRITION (3 LEC., 3 LAB.)

Prerequisite: Food Service 135. Nutrition knowledge is applied to the care for people. How people eat and why they eat are studied. Other topics include the racial and cultural aspects of food and nutrition, the socio-economic and psychological aspects of providing nutrition throughout the life cycle, and techniques of evaluating nutrition care. Laboratory fee.

FOOD SERVICE (FS) 243 (4)
CLINICAL NUTRITION (3 LEC., 3 LAB.)

Prerequisite: Food Service 135. This course focuses on changes in nutrition necessary in illness and for special problems. Included are changes for individuals with cardiovascular disease, diabetes, weight control, malnutrition, and other health problems. Laboratory fee.

FOOD SERVICE (FS) 244 (4)
CHILD NUTRITION (3 LEC., 3 LAB.)

Prerequisite: Food Service 135. The nutrition of children is studied. The time period begins with birth and extends through childhood and adolescence. Emphasis is on the contribution of feeding programs in child care centers and schools. Laboratory fee.

FOOD SERVICE (FS) 245 (3)
ADVANCED PASTRY SHOP
TRAINING (2 LEC., 4 LAB.)

Prerequisite: Food Service 140. This course covers the operation of the pastry shop. Topics include French pastry, hot and cold desserts, pastillage, ice creams, and ices, sugar fantasies, chocolate work, and decorations with cornet. Emphasis is on advance techniques in continental pastries. Laboratory fee.

FOOD SERVICE (FS) 247 (3)

BEVERAGE OPERATIONS AND SERVICE (3 LEC.)

This course deals with beverage service in the commercial sector. Topics include basic bar operations, sales control, beverage service, and profits. A detailed analysis is made of the organization of a beverage bar, wine cellar, or catered beverage service.

FOOD SERVICE (FS) 804, 814 (4)

(See Cooperative Work Experience)

FRENCH (FR) 101 (4)

BEGINNING FRENCH (3 LEC., 2 LAB.)

The essentials of grammar and easy idiomatic prose are studied. Emphasis is on pronunciation, comprehension, and oral expression. Laboratory fee.

FRENCH (FR) 102 (4)

BEGINNING FRENCH (3 LEC., 2 LAB.)

Prerequisite: French 101 or the equivalent. This course is a continuation of French 101. Emphasis is on idiomatic language and complicated syntax. Laboratory fee.

FRENCH (FR) 201 (3)

INTERMEDIATE FRENCH (3 LEC.)

Prerequisite: French 102 or the equivalent. Reading, composition, and intense oral practice are covered in this course. Grammar is reviewed.

FRENCH (FR) 202 (3)

INTERMEDIATE FRENCH (3 LEC.)

Prerequisite: French 201 or the equivalent. This course is a continuation of French 201. Contemporary literature and composition are studied.

FRENCH (FR) 203 (3)

INTRODUCTION TO FRENCH LITERATURE (3 LEC.)

Prerequisite: French 202 or the consent of the instructor. This course is an introduction to French literature. It includes readings in French literature, history, culture, art, and civilization.

FRENCH (FR) 204 (3)

INTRODUCTION TO FRENCH LITERATURE (3 LEC.)

Prerequisite: French 202 or the consent of the instructor. This course is a continuation of French 203. It includes readings in French literature, history, culture, art, and civilization.

GEOGRAPHY (GPY) 101 (3)

PHYSICAL GEOGRAPHY (3 LEC.)

The physical composition of the earth is surveyed. Topics include weather, climate, topography, plant and animal life, land, and the sea. Emphasis is on the earth in space, use of maps and charts, and place geography.

GEOGRAPHY (GPY) 102 (3)

ECONOMIC GEOGRAPHY (3 LEC.)

The relation of humans to their environment is studied. Included is the use of natural resources. Problems of production, manufacturing, and distributing goods are explored. Primitive subsistence and commercialism are considered.

GEOGRAPHY (GPY) 103 (3)

CULTURAL GEOGRAPHY (3 LEC.)

This course focuses on the development of regional variations of culture. Topics include the distribution of races, religions, and languages. Aspects of material culture are also included. Emphasis is on origins and diffusion.

GEOLOGY (GEO) 101 (4)

PHYSICAL GEOLOGY (3 LEC., 3 LAB.)

This course is for science and non-science majors. It is a study of earth materials and processes. Included is an introduction to geochemistry, geophysics, the earth's interior, and magnetism. The earth's setting in space, minerals, rocks, structures, and geologic processes are also included. Laboratory fee.

GEOLOGY (GEO) 102 (4)

HISTORICAL GEOLOGY (3 LEC., 3 LAB.)

This course is for science and non-science majors. It is a study of earth materials and processes within a developmental time perspective. Fossils, geologic maps, and field studies are used to interpret geologic history. Laboratory fee.

GEOLOGY (GEO) 103 (3)

INTRODUCTION TO OCEANOGRAPHY (2 LEC., 2 LAB.)

The physical and chemical characteristics of ocean water, its circulation, relationship with the atmosphere, and the effect on the adjacent land is investigated. The geological development of the ocean basins and the sediment in them is also considered. Laboratory fee.

GEOLOGY (GEO) 201 (4)

INTRODUCTION TO ROCK AND MINERAL IDENTIFICATION (3 LEC., 3 LAB.)

Prerequisites: Geology 101 and Geology 102. This course introduces crystallography, geochemistry, descriptive mineralogy, petrology, and phase equilibria. Crystal models and hand specimens are studied as an aid to rock and mineral identification. Laboratory fee.

GEOLOGY (GEO) 202 (3)

INTRODUCTION TO ROCK AND MINERAL IDENTIFICATION (1 LEC., 3 LAB.)

Prerequisites: Geology 101 and Geology 102. This course introduces crystallography, geochemistry, descriptive mineralogy, petrology, and phase equilibria. Crystal models and hand specimens are studied as an aid to rock and mineral identification. Laboratory fee.

GEOLOGY (GEO) 205 (4)

FIELD GEOLOGY (3 LEC., 3 LAB.)

Prerequisite: Geology 101 and/or Geology 102 or concurrent enrollment in Geology 101 or 102. Geological features, landforms, rocks, minerals, and fossils are surveyed. Map reading and interpretation are also included. Emphasis is on the identification, classification, and collection of specimens in the field. This course may be repeated for credit.

GERMAN (GER) 101 (4)

BEGINNING GERMAN (3 LEC., 2 LAB.)

The essentials of grammar and easy idiomatic prose are studied. Emphasis is on pronunciation, comprehension, and oral expression. Laboratory fee.

GERMAN (GER) 102 (4)

BEGINNING GERMAN (3 LEC., 2 LAB.)

Prerequisite: German 101 or the equivalent. This course is a continuation of German 101. Emphasis is on idiomatic language and complicated syntax. Laboratory fee.

GERMAN (GER) 201 (3)

INTERMEDIATE GERMAN (3 LEC.)

Prerequisite: German 102 or the equivalent or the consent of the instructor. Reading, composition, and intense oral practice are covered. Grammar is reviewed.

GERMAN (GER) 202 (3)

INTERMEDIATE GERMAN (3 LEC.)

Prerequisite: German 201 or the equivalent. This course is a continuation of German 201. Contemporary literature and composition are studied.

GOVERNMENT (GVT) 201 (3)

AMERICAN GOVERNMENT (3 LEC.)

Prerequisite: Sophomore standing recommended. This course is an introduction to the study of political science. Topics include the origin and development of constitutional democracy (United States and Texas), federalism and intergovernmental relations, local government, parties, politics, and political behavior. The course satisfies requirements for Texas State Teacher's Certification. (This course is offered on campus and may be offered via television.)

GOVERNMENT (GVT) 202 (3)

AMERICAN GOVERNMENT (3 LEC.)

Prerequisite: Sophomore standing recommended. The three branches of the United States and Texas government are studied. Topics include the legislative process, the executive and bureaucratic structure, the judicial process, civil rights and liberties, and domestic policies. Other topics include foreign relations and national defense. This course satisfies requirements for Texas State Teacher's Certification. (This course is offered on campus and may be offered via television.)

GOVERNMENT (GVT) 205 (3)

STUDIES IN GOVERNMENT (3 LEC.)

Prerequisite: Sophomore standing and 6 hours of history or government. Selected topics in government are presented. The course may be repeated once for credit when different topics are presented.

GOVERNMENT (GVT) 231 (3)

MUNICIPAL AND COUNTY GOVERNMENT (3 LEC.)

The structure of municipal and county government is examined. Topics include organs of government, administration, court systems, taxation, utilities and public works, education, welfare, and other public services. Presentations are given by local officials. Surveys of area problems are stressed.

GRAPHIC ARTS (GA) 131 (3)

GRAPHIC PROCESSES (2 LEC., 4 LAB.)

This course focuses on industrial requirements of employees in graphic arts. Habits and abilities are included. An overview of equipment is provided and its use demonstrated. Laboratory fee.

GRAPHIC ARTS (GA) 134 (3)

BASIC CAMERA OPERATIONS (2 LEC., 4 LAB.)

Prerequisite: Graphic Arts 131. The operations and mechanics of the photo-lithographic camera are described. Included are fundamentals of halftone photography, lithographic negative stripping, and plate making. Laboratory fee.

GRAPHIC ARTS (GA) 136 (3)

COPY PREPARATION (2 LEC., 4 LAB.)

Prerequisite: Concurrent enrollment in Graphic Arts 131. The basic operations of the varityper and headliner are studied. Letters, memos, manuals, tables, graphs, charts, reports, and booklets are produced. The drafting table and modern drafting tools are used. Steps from setting bold heading to finishing rough copy and preparing for the photographic master are included. Laboratory fee.

GRAPHIC ARTS (GA) 140 (3)

OFFSET PRINTING I (2 LEC., 4 LAB.)

Prerequisite: Credit or concurrent enrollment in Graphic Arts 131. The principles of offset lithography are covered. Included is operation of the small offset lithographic press. Laboratory fee.

GRAPHIC ARTS (GA) 206 (3)

GRAPHIC PROJECTS (2 LEC., 4 LAB.)

Prerequisite: Concurrent enrollment or 16 hours of credit in Graphic Arts. This course provides problem analysis and project development. It gives the student the opportunity of producing a complete printed product. Laboratory fee.

GRAPHIC ARTS (GA) 240 (3)

OFFSET PRINTING II (2 LEC., 4 LAB.)

Prerequisite: Graphic Arts 140. Continuing development of the student in offset lithography is offered. Capabilities and limitations of presses are explored. Printed products are planned and produced. Emphasis is on standard production requirements and maintenance of equipment. Laboratory fee.

GRAPHIC ARTS (GA) 714, 814 (4)

(See Cooperative Work Experience)

HISTORY (HST) 101 (3)

HISTORY OF THE UNITED STATES (3 LEC.)

The history of the United States is presented, beginning with the European background and first discoveries. The pattern of exploration, settlement, and development of institutions is followed throughout the colonial period and the early national experience to 1877. (This course is offered on campus and may be offered via television.)

HISTORY (HST) 102 (3)

HISTORY OF THE UNITED STATES (3 LEC.)

The history of the United States is surveyed from the reconstruction era to the present day. The study includes social, economic, and political aspects of American life. The development of the United States as a world power is followed. (This course is offered on campus and may be offered via television.)

HISTORY (HST) 105 (3)

WESTERN CIVILIZATION (3 LEC.)

The civilization in the West from ancient time through the Enlightenment is surveyed. Topics include the Mediterranean world, including Greece and Rome, the Middle Ages, and the beginnings of modern history. Particular emphasis is on the Renaissance, Reformation, the rise of the national state, the development of parliamentary government, and the influences of European colonization.

HISTORY (HST) 106 (3)

WESTERN CIVILIZATION (3 LEC.)

This course is a continuation of History 105. It follows the development of civilization from the enlightenment to current times. Topics include the Age of Revolution, the beginning of industrialism, 19th century, and the social, economic, and political factors of recent world history.

HISTORY (HST) 110 (3)

THE HERITAGE OF MEXICO (3 LEC.)

This course (cross-listed as Anthropology 110) is taught in two parts each



semester. The first part of the course deals with the archaeology of Mexico beginning with the first humans to enter the North American continent and culminating with the arrival of the Spanish in 1519 A.D. Emphasis is on archaic cultures, the Maya, the Toltec, and the Aztec empires. The second part of the course deals with Mexican history and modern relations between the United States and Mexico. The student may register for either History 110 or Anthropology 110, but may receive credit for only one of the two.

HISTORY (HST) 112 (3)

LATIN AMERICAN HISTORY (3 LEC.)

This course presents developments and personalities which have influenced Latin American history. Topics include Indian cultures, the Conquistadors, Spanish administration, the wars of independence, and relations with the United States. A brief survey of contemporary problems concludes the course.

HISTORY (HST) 120 (3)

AFRO-AMERICAN HISTORY (3 LEC.)

The role of the Black in American history is studied. The slave trade and slavery in the United States are reviewed. Contributions of black Americans in the U.S. are described. Emphasis is on the political, economic, and sociological factors of the 20th century.

HISTORY (HST) 204 (3)

AMERICAN MINORITIES (3 LEC.)

Prerequisites: Sociology 101 or 6 hours of U.S. history recommended.

Students may register for either

History 204 or Sociology 204 but may receive credit for only one of the two.

The principal minority groups in American society are the focus of this course. The sociological significance and historic contributions of the groups are presented. Emphasis is on current problems of intergroup relations, social movements, and related social changes.

HISTORY (HST) 205 (3)

STUDIES IN U.S. HISTORY (3 LEC.)

Prerequisite: Sophomore standing and 6 hours of American history. Selected topics in the history of the United States are presented. The course may be repeated once for credit when different topics are presented.

HOROLOGY (HOR) 139 (8)

ANTIQUE CLOCK THEORY AND REPAIR (2 LEC., 23 LAB.) (275 CONTACT HOURS)

The history, design, and repair of clocks are covered. French, German, English, and Early American clocks are included, and both weight-driven and spring-driven clocks are studied. Types of clock movements to be reconditioned include grandfather, wall, shelf, and Westminster chime. Emphasis is on cleaning, rebushing plates, repivoting wheels, and adjusting chime and strike trains for count wheel and rack-and-snail types. The use and care of specialized hand tools and equipment are also covered. Laboratory fee.

HOROLOGY (HOR) 140 (8)

MODERN CLOCK THEORY AND REPAIR (2 LEC., 23 LAB.) (275 CONTACT HOURS)

This course presents design factors and repair techniques of American, German, and Swiss clocks. Included are clocks with weight, spring, motor, and battery power in the 1-day, 8-day, and 400-day, and continuous synchronous electric variations. Repair and adjustment of anniversary,



cuckoo, travel, alarm, timers, electric, cordless, and atmos clocks are included. Laboratory fee.

HOROLOGY (HOR) 141 (8)

WATCH CLEANING AND ASSEMBLY (2 LEC., 23 LAB.) (275 CONTACT HOURS)

Hand cleaning and ultrasonic machine cleaning of watch movements are covered. Included are the removal of rust and scale, inspection, and lubrication of subassemblies. Pocket watches and gent's wrist and ladies' baguette sizes are included. Emphasis is on the use and care of precision hand tools, personal work habits, and attitudes. The polishing case, crystal, and band is also stressed. Timing record analysis is introduced. Laboratory fee.

HOROLOGY (HOR) 142 (8)

WATCH PART REPLACEMENT (2 LEC., 23 LAB.) (275 CONTACT HOURS)

The precise selection and replacement of damaged watch parts are the focus of this course. Detailed procedures are covered for changing balance staffs, stems, crown, gaskets, hands, roller jewels, balance and plate jewels, pallet jewels, and mainsprings. Emphasis is on nomenclature, movement identification, and metric measurement. The use and care of many special tools are introduced, with particular emphasis on the staking tool. Laboratory fee.

HOROLOGY (HOR) 143 (8)

ADVANCED WATCHMAKING I (2 LEC., 23 LAB.)
(275 CONTACT HOURS)

This course emphasizes the jeweled lever escapement principles, hair-spring manipulations, and position adjusting. Electronic timing machine records are analyzed to find causes of error and to make corrections. Self-winding devices and calendar watch features are thoroughly presented. Laboratory fee.

HOROLOGY (HOR) 144 (8)

ADVANCED WATCHMAKING II (2 LEC., 23 LAB.)
(275 CONTACT HOURS)

The repair and adjustment of complicated watches are presented, including the stopwatch and wrist chronograph. Also covered are electric and electronic movements with tuning fork and quartz crystal resonators and electronic modules. Customer and business relations are practiced through estimating repairs, ordering parts, and participation in local and national craft organizations. Laboratory fee.

HORTICULTURE TECHNOLOGY

(HLN) 131 (4)

HORTICULTURE SCIENCE (3 LEC., 3 LAB.)

This course covers the science and practices of ornamental horticulture. Stress is on the culture and growth of plants, landscaping, plant production, and nursery propagation. Laboratory fee.

HORTICULTURE TECHNOLOGY (HLN) 132 (2)

LANDSCAPE TREES (1 LEC., 3 LAB.)

The identification and classification of landscape trees are studied. Characteristics and landscape uses are included. Laboratory fee.

HORTICULTURE TECHNOLOGY (HLN) 133 (2)

LANDSCAPE SHRUBS, VINES, AND GROUND COVER (1 LEC., 3 LAB.)

The identification and classification of landscape shrubs, vines, and ground covers are studied. Characteristics and landscape uses are included. Laboratory fee.

HORTICULTURE TECHNOLOGY

(HLN) 140 (3)

HERBACEOUS AND EXOTIC PLANTS (2 LEC., 3 LAB.)

The identification, culture, and use of ornamental herbaceous plants are studied. Plants for homes, gardens, and conservatories are included. Laboratory fee.

HORTICULTURE TECHNOLOGY

(HLN) 141 (4)

FLORAL DESIGN (2 LEC., 6 LAB.)

This course presents the principles of floral art, flowers, and other design materials. Special and unusual floral designs are included. Laboratory fee.

HORTICULTURE TECHNOLOGY

(HLN) 145 (3)

LANDSCAPE DEVELOPMENT I (1 LEC., 6 LAB.)

Prerequisite: Horticulture Technology 131 or the consent of the instructor.

This course covers the planning and scheduling of landscape operations, the application of pesticides, the study of pests and diseases in the landscape, maintenance of landscaping tools and equipment, installation of irrigation systems, contracts and construction specifications, and related government regulations. Laboratory fee.

HORTICULTURE TECHNOLOGY

(HLN) 146 (3)

FUNDAMENTALS OF LANDSCAPE PLANNING (1 LEC., 6 LAB.)

Concepts and practices used in preparing landscape plans and in constructing and improving landscapes are covered. Laboratory fee.

HORTICULTURE TECHNOLOGY

(HLN) 147 (3)

LANDSCAPE DEVELOPMENT II (1 LEC., 6 LAB.)

Prerequisite: Horticulture Technology 131 or the consent of the instructor.

This course trains the student in the use and maintenance of landscape plants, tree surgery and repair, pruning and training plants in the landscape, and the installation and maintenance of turf grasses in the landscape. Laboratory fee.

HORTICULTURE TECHNOLOGY**(HLN) 226 (3)**

GREENHOUSE HORTICULTURE (2 LEC., 3 LAB.)

Prerequisite: Horticulture Technology 131 and either Chemistry 115 or Physical Science 118. The construction and operation of ornamental horticulture production structures are studied. Included are greenhouses, plastic houses, lath houses, hotbeds, and coldframes. Emphasis is on environmental control and efficiency in production operations. Laboratory fee.

HORTICULTURE TECHNOLOGY**(HLN) 231 (4)**

LANDSCAPE DESIGN (2 LEC., 6 LAB.)

Prerequisite: Horticulture Technology 132, 133, and 146; Mathematics 195 or the equivalent is desirable. This course introduces the basic principles of landscape design for residences. Plant selection is included. Laboratory fee.

HORTICULTURE TECHNOLOGY**(HLN) 232 (4)**

LANDSCAPE PLANNING AND MANAGEMENT (2 LEC., 6 LAB.)

Prerequisite: Horticulture Technology 145 and 231. Landscape business operations and landscape principles are studied in depth. Topics include the landscape horticulture industry, management practices, marketing methods, and advanced skills in landscape planning. Laboratory fee.

HORTICULTURE TECHNOLOGY**(HLN) 233 (3)**

NURSERY OPERATIONS (2 LEC., 3 LAB.)

Prerequisite: Horticulture Technology 131 and either Chemistry 115 or Physical Science 118. In this course emphasis is placed on nursery site selection and layout, plant growth and plant protection, and production in field nurseries and container nurseries. Laboratory fee.

HORTICULTURE TECHNOLOGY (HLN)**234 (3)**

ORNAMENTAL CROP PRODUCTION (2 LEC., 3 LAB.)

Prerequisites: Horticulture Technology 235; Horticulture Technology 226 or 233. Advanced methods of crop production in the nursery and greenhouse are presented. Topics include container nursery production, turf grass production, cut flower and pot plant production, and the field propagation and production of nursery stock. Laboratory fee.

HORTICULTURE TECHNOLOGY (HLN)**235 (2)**

PROPOGATION OF WOODY ORNAMENTAL PLANTS (1 LEC., 3 LAB.)

Prerequisites: Horticulture Technology 131 and Horticulture Technology 140. This course covers all phases of propagation of woody ornamental plants including cutting and seed propagation and grafting, budding, and layering. It also includes the management of propagation facilities. Laboratory fee.

HORTICULTURE TECHNOLOGY**(HLN) 236 (4)**

FLORIST MANAGEMENT (2 LEC., 6 LAB.)

Prerequisite: Horticulture Technology 141. Operations and design skills in the retail florist business are studied. Topics include the florist industry, management practices, marketing methods, and advanced techniques in floral art. Laboratory fee.

HORTICULTURE TECHNOLOGY (HLN)**245 (4)**

PROBLEMS AND PRACTICES IN INDUSTRY (2 LEC., 6 LAB.)

The student researches current regional problems and practices in industry, prepares reports and makes presentations. The student visits on-site with specialists, observes operations, studies problems, performs innovative procedures and participates in new production and marketing techniques. Laboratory fee.

HORTICULTURE TECHNOLOGY (HLN)**704 (4)**

(See Cooperative Work Experience)

HOTEL-MOTEL OPERATIONS**(HMO) 110 (3)**PRINCIPLES OF HOTEL
ADMINISTRATION (3 LEC.)

The physical aspects of hotel-motel operations are analyzed. Included are procedures for emergencies, check cashing, use of credit cards, and collection of accounts receivable. Emphasis is also given to guest relations, guest room facilities, protection of the property, and the development of the properties' growth.

HOTEL-MOTEL OPERATIONS**(HMO) 112 (3)**

HOTEL-MOTEL HOUSEKEEPING (3 LEC.)

This course focuses on the methods, procedures, and policies of housekeeping in a hotel or motel. Topics include departmental organization, employee supervision, work organization and assignments, materials and equipment, and room design and layout.

HOTEL-MOTEL OPERATIONS**(HMO) 114 (3)**

FRONT OFFICE PROCEDURES (2 LEC., 4 LAB.)

The everyday procedures of the front desk are covered. The use of the guest registration card and other forms are included. Also included are the operation of the room rack, selling of rooms, reservations and inquiries, and general problems. Methods of handling accounts in hotels of various sizes are presented. The operation of NCR 4200 is covered, and its uses are thoroughly analyzed.

HOTEL-MOTEL OPERATIONS**(HMO) 116 (3)**HOTEL-MOTEL MAINTENANCE
AND ENGINEERING (3 LEC.)

This course examines the maintenance and engineering departments. Preventive programs and maintenance procedures are covered.

HOTEL—MOTEL OPERATIONS (HMO)**201 (1)**SPECIAL TOPICS IN HOTEL—MOTEL
OPERATIONS (1 LEC.)

Prerequisite: The consent of the instructor. Students participate in identifying, defining and analyzing current topics of interest in the operation of a lodging property. The course emphasizes present industry needs and problems and students are guided to other realistic and workable solutions which include the total knowledge of food service processes. This course may be repeated for credit.

HOTEL—MOTEL OPERATIONS (HMO)**202 (2)**SPECIAL TOPICS IN HOTEL—MOTEL
OPERATIONS (2 LEC.)

Prerequisite: The consent of instructor. Students participate in identifying, defining and analyzing current topics of interest in the operation of a lodging property. The course emphasizes present industry needs and problems and students are guided to other realistic and workable solutions which include the total knowledge of food service processes. This course may be repeated for credit.

HOTEL-MOTEL OPERATIONS (HMO)**203 (3)**SPECIAL TOPICS IN HOTEL—MOTEL
OPERATIONS (3 LEC.)

Prerequisite: The consent of the instructor. Students participating in identifying, defining and analyzing current topics of interest in the operation of a lodging property. The course emphasizes present industry needs and problems and students are guided to other realistic and workable solutions which include the total knowledge of food service processes. This course may be repeated for credit.

HOTEL-MOTEL OPERATIONS**(HMO) 210 (3)**HOTEL-MOTEL SALES
DEVELOPMENT (3 LEC.)

The techniques of developing a marketing plan for any size operation are studied. Included is the development of the departments of the hotel into a coordinated team. Emphasis is on the organization and functioning of a sales department, sales tools, techniques, advertising, and types of markets.

HOTEL-MOTEL OPERATIONS**(HMO) 212 (3)**

HOTEL-MOTEL ACCOUNTING (3 LEC.)

The principles of hotel and motel accounting are presented. Topics include the meaning and purposes of accounting, journalizing, periodic adjustments, and formal statements. Emphasis is on the analysis of financial statements for making decisions in the operation of hotels and motels.

HOTEL-MOTEL OPERATIONS**(HMO) 214 (3)**

HOTEL-MOTEL LAW (3 LEC.)

This course covers the legal responsibilities and rights of the innkeeper. The consequences caused by failure in those responsibilities are illustrated. Topics include court attitudes toward an innkeeper where negligence and liability are involved.

HOTEL-MOTEL OPERATIONS**(HMO) 216 (3)**HOTEL-MOTEL PROPERTY
MANAGEMENT (3 LEC.)

All phases of property management are studied. Emphasis is on the guest's first impressions. Staffing, training, capital investments, cost analysis, rentals, and renovation of all types and sizes of properties are included.

HOTEL/MOTEL OPERATIONS**(HMO) 804, 814 (4)**

(See Cooperative Work Experience)

HUMAN DEVELOPMENT**(HD) 100 (1)**

EDUCATIONAL ALTERNATIVES (1 LEC.)

The learning environment is introduced. Career, personal study skills, educational planning, and skills for living are all included. Emphasis is on exploring career and educational alternatives and learning a systematic approach to decision-making. A wide range of learning alternatives is covered, and opportunity is provided to participate in personal skills seminars.

HUMAN DEVELOPMENT (HD)**102 (1)**

SPECIAL TOPICS IN HUMAN DEVELOPMENT (1 LEC.)

This is a course intended to help the student succeed in college. Topics such as stress management, communications training for the handicapped; career exploration techniques, or educational concerns of adult students may be included. This course may be repeated for credit.

HUMAN DEVELOPMENT**(HD) 104 (3)**EDUCATIONAL AND CAREER
PLANNING (3 LEC.)

This course is designed to teach students the on-going process of decision making as it relates to career/life and educational planning. Students identify the unique aspects of themselves (interests, skills, values). They investigate possible work environments and develop a plan for personal satisfaction. Job search and survival skills are also considered.

HUMAN DEVELOPMENT (HD)**105 (3)**BASIC PROCESSES OF INTERPERSONAL
RELATIONSHIPS (3 LEC.)

This course is designed to help the student increase self-awareness and to learn to relate more effectively to others. Students are made aware of their feelings, values, attitudes and behaviors. The course content focuses on developing communication skills such as assertiveness, verbal and non-verbal behavior, listening, and conflict resolution.

HUMAN DEVELOPMENT (HD)**106 (3)****PERSONAL AND SOCIAL GROWTH (3 LEC.)**

This course focuses on the interaction between the individual and society. Societal influences, adjustment to social change, personal roles, and problem-solving are stressed. Components of a healthy personality, alternative behaviors, and lifestyles that demonstrate a responsibility to self and society are studied.

HUMAN DEVELOPMENT (HD)**107 (3)****DEVELOPING LEADERSHIP BEHAVIOR (3 LEC.)**

The basic purpose of this course is to help the student develop leadership and human relation skills. Topics include individual and group productivity, value systems, appropriate communication skills, and positive attitudes in a group environment. The concepts of leadership are explored through both theory and practice. These leadership activities can be applied to the student's personal, business, and professional interactions.

HUMAN DEVELOPMENT (HD)**110 (1)****ASSESSMENT OF PRIOR LEARNING (1 LEC.)**

Prerequisite: Limited to students in Technical/Occupational programs. The consent of the instructor is required. This course is designed to assist students in documenting prior learning for the purpose of applying for college credit. Students develop a portfolio which includes a statement of educational/career goals, related non-collegiate experiences which have contributed to college-level learning, and documentation of such experiences. This course may be repeated for credit.

HUMAN SERVICES (HS) 131 (3)**ORIENTATION TO HUMAN SERVICES (3 LEC.)**

This course introduces the field of human services. Students explore their interest and potential for working in a social service agency. Contacts with community social service agencies are made.

HUMAN SERVICES (HS) 230 (3)**NURSING HOME ACTIVITY DIRECTOR TRAINING (2 LEC., 4 LAB.)**

The role of the nursing home activity director is the focus of this course. Both the roles of the nursing home and of the activities program are covered. Topics include the nursing home's historical development and relationship to the community, need and resource assessment, specialized knowledge about the aged resident, and interviewing skills. Program planning, working in groups, programming activities, developing an activities department, and therapeutic techniques in the nursing home are also included.

HUMAN SERVICES (HS) 233 (3)**COUNSELING FOR THE PARAPROFESSIONAL (3 LEC.)**

Prerequisite: Permission of the coordinator of the Human Services Program, or concurrent enrollment in Human Services 242. The principles and practices of interviewing and counseling are introduced. The effectiveness of these techniques are explored for counselor aides, mental health or social worker associates, and other "new careers" in people-to-people services.

HUMAN SERVICES (HS) 235 (3)**INTRODUCTION TO MENTAL HEALTH (3 LEC.)**

Prerequisite: Psychology 105 or consent of the coordinator of the Human Services Program. Concurrent enrollment in Human Services 240-field work. This course focuses on the field of mental health. Topics include history, terms, concepts, and ethics. Behavior and environmental factors promoting mental health are analyzed. Skills for identifying symptoms of maladjustment are developed. Ways to provide for emotional outlets and emotional control are considered.

HUMAN SERVICES (HS) 244 (3)**SOCIAL WORK PROBLEMS AND PRACTICES (3 LEC.)**

Prerequisite: Concurrent enrollment in Human Services 803. Social work experiences are discussed and problems analyzed with other students in the Human Services Program, meeting three hours per week with the

HUMAN SERVICES (HS) 245 (3)

SOCIAL WORK PROBLEMS AND PRACTICES (3 LEC.)

Prerequisite: Concurrent enrollment in Human Services 813. Social work experiences are discussed and problems analyzed with other students in the human services program meeting three hours per week with the program coordinator.

HUMAN SERVICES (HS) 703, 713 (3)

(See Cooperative Work Experience)

HUMAN SERVICES (HS) 704, 714, (3)

(See Cooperative Work Experience)

HUMAN SERVICES (HS) 802, 812, (4)

(See Cooperative Work Experience)

HUMAN SERVICES (HS) 803 (3)

(See Cooperative Work Experience) Prerequisite: Concurrent enrollment in Human Services 244.

HUMAN SERVICES (HS) 813 (3)

(See Cooperative Work Experience) Prerequisite: Concurrent enrollment in Human Services 245.

HUMAN SERVICES (HS) 804, 814, (4)

(See Cooperative Work Experience)

HUMANITIES (HUM) 101 (3)

INTRODUCTION TO THE HUMANITIES (3 LEC.)

Related examples of humans' creative achievements are examined.

Emphasis is on understanding the nature of humans and the values of human life. (This course is offered on campus and may be offered via television. Laboratory fee required for television course.)

HUMANITIES (HUM) 102 (3)

ADVANCED HUMANITIES (3 LEC.)

Prerequisite: Humanities 101 and/or the consent of the instructor. Human value choices are presented through the context of the humanities.

Universal concerns are explored, such as a person's relationship to self and to others and the search for meaning. The human as a loving, believing and hating being is also studied. Emphasis is on the human as seen by artists, playwrights, filmmakers, musicians, dancers, philosophers, and theologians. The commonality of human experience across cultures and the premises for value choices are also stressed.

INTERIOR DESIGN (INT) 120 (3)

BASIC PLANNING (2 LEC., 4 LAB.)

Prerequisites: Interior Design major and concurrent enrollment in Interior Design 121. This course focuses on basic drawing and the use of drafting instruments. Included are the drawing of two and three-dimensional forms, floor plans, interior elevations, sections, and furniture. The reading of architectural drawings, producing good quality lettering and line work, use of architectural symbols, and printing are emphasized. Laboratory fee.

INTERIOR DESIGN (INT) 121 (3)

BASIC COLOR THEORY FOR INTERIOR DESIGN (2 LEC., 4 LAB.)

Prerequisites: Interior Design major and concurrent enrollment in Interior Design 120. Color theory and systems are studied. Mixing techniques for transparent and opaque pigments are covered. The use of values, tints, and intensities is practiced. Basic color schemes and color psychology are studied and applied to interior design projects.

INTERIOR DESIGN (INT) 123 (3)

ADVANCED PLANNING AND PERSPECTIVE (2 LEC., 4 LAB.)

Prerequisites: Interior Design 120 and Interior Design 121 and concurrent enrollment in Interior Design 124 and 225. The student studies methods and principles of one and two point perspective. Basic interior design principles are investigated and applied to furniture layouts and space distribution. Advanced plans and elevations are incorporated into portfolio presentations.

INTERIOR DESIGN (INT) 124 (3)

COLOR AND LIGHTING (2 LEC., 4 LAB.)

Prerequisites: Interior Design 120 and 121 and concurrent enrollment in Interior Design 123 and 225. The interrelationship of color and lighting is applied to total space concepts. Qualitative and quantitative aspects of lighting are assessed in relation to color schemes. A study is made of lighting fixtures. Electrical plans and specifications are correlated with projects in interior Design 225.

INTERIOR DESIGN (INT) 144 (1)

PHILOSOPHY OF DESIGN (1 LEC.)

Prerequisites: Current enrollment in the Interior Design Program or the consent of the instructor. The course includes readings and discussion of selected topics influencing design practice including the works of major designers and architects of the 20th Century, materials and methods of construction, and organization and structure of the design profession, including professional organizations.

INTERIOR DESIGN (INT) 222 (5)

HISTORY OF INTERIOR ARTS I (5 LEC.)

Prerequisites: Interior Design 123, 124, 225, and concurrent enrollment in Interior Design 226, 233, and 235. The evolution of the interior arts and related architectural developments are surveyed. The Antiquities, Gothic, Renaissance, and French styles are studied.

INTERIOR DESIGN (INT) 223 (5)

HISTORY OF INTERIOR ARTS II (5 LEC.)

Prerequisites: Interior Design 222, 226, 233 and 235 and concurrent enrollment in Interior Design 224 or architecture 245. The study of the history of interior arts is continued. The English, American, and Oriental styles are studied.

INTERIOR DESIGN (INT) 224 (3)

INTERIOR GRAPHICS AND ILLUSTRATION (2 LEC., 4 LAB.)

Prerequisites: Interior Design 222, 226, 233 and 235 and concurrent enrollment in Interior Design 223. Design projects based on traditional styles are developed. Both formal and informal presentations are made. Projects include working drawings. Laboratory fee.

INTERIOR DESIGN (INT) 225 (3)

ARCHITECTURAL DRAWINGS I (2 LEC., 4 LAB.)

Prerequisites: Interior Design 120 and 121 and concurrent enrollment in Interior Design 123 and 124. Wood frame construction is studied. Introduction is made to construction drawings. A basic residential floor plan, from which working drawings are prepared, is given to the student. The working drawings include floor plans, sections, elevations, schedules, and details. Lettering, line quality, and dimensioning are emphasized. Laboratory fee.

INTERIOR DESIGN (INT) 226 (3)

ARCHITECTURAL DRAWING II (2 LEC., 4 LAB.)

Prerequisites: Interior Design 123, 124, and 225, and concurrent enrollment in Interior Design 222, 223 and 235. Three-dimensional objects are rendered from interior and architectural forms. Renderings are completed in several media.

INTERIOR DESIGN (INT) 233 (3)

FABRICATIONS I (2 LEC., 4 LAB)

Prerequisites: Interior Design 123, 124, and 225, and concurrent enrollment in Interior Design 222, 226 and 235. This course provides the student with a practical working knowledge of crafts and techniques involved in construction and installations. The student is required to study and implement good design principles using the materials studied in the course. Laboratory fee.

INTERIOR DESIGN (INT) 235 (3)

INNER SPACE COMPOSITION AND PRESENTATION (2 LEC., 4 LAB.)

Prerequisites: Interior Design 123, 124, and 225, and concurrent enrollment in Interior Design 222, 226, 233. All elementary principles of interior design are used for problem solving assignments. Emphasis is on quick sketch solutions by informal presentation. Laboratory fee.

INTERIOR DESIGN (INT) 237 (4)

ADVANCED PRINCIPLES OF INTERIOR DESIGN (3 LEC., 3 LAB)

Prerequisites: Interior Design 223, 224, 233 and 240, and concurrent enrollment in Interior Design 345 and 811. This course focuses on the organization of all aspects of interior space and its relationship to exterior space. Color and design of all materials are coordinated.

Professional problem-solving and formal presentation for contemporary design are stressed. Emphasis is on contemporary residential interior projects. Laboratory fee.

INTERIOR DESIGN (INT) 238 (4)

PROFESSIONAL PRACTICE: INTERIORS (3 LEC., 3 LAB)

Prerequisites: Interior Design 237, 345, and 811, and concurrent enrollment in Interior Design 239 and 343. This course is the study of designer and client relations and standard interior design practice and procedures. Topics include the analysis of the client's needs by interview and survey, the calculation of the proper design and presentation for the individual client, and the application of client psychology principles. The use of source catalogs, showrooms, local crafts and workrooms is also included. Cost estimates, contracts, studio organization, professional ethics, and the coordination of orders, fabrics, and installations are also included.

INTERIOR DESIGN (INT) 239 (4)

PRINCIPLES OF COMMERCIAL INTERIOR DESIGN (3 LEC., 3 LAB)

Prerequisites: Interior Design 237, 345, and 811, and the concurrent enrollment in Interior Design 238 and 343. This course is a continuation of Interior Design 237. Emphasis is on the study of commercial interiors. The latest trends and materials are surveyed and used. Barrier-free interior design for the handicapped is included.

INTERIOR DESIGN (INT) 240 (1)

DESIGN SOURCES (1 LEC.)

Prerequisites: Interior Design 123 and 124. This is a study (seminar) course designed to allow students to do in-depth research of existing sources of materials, furnishings, accessories, fabricators, and workrooms that is necessary to implement design projects.

INTERIOR DESIGN (INT) 341 (1)

SPECIAL PROJECT (1 LEC.)

This course may be taken as an alternative to interior design 811 with the consent of the Interior Design faculty. A design problem is assigned to each student. All work is accomplished outside of class, with complete presentation of the problem and its solution due at the end of the semester. Analysis, Plan, illustration, and presentation are included. The scope of the problem is directed and controlled by the instructor.

INTERIOR DESIGN (INT) 343 (2)

RESEARCH AND PRESENTATION (2 LEC.)

Prerequisites: Interior Design 237, 345, and 341 or 811, and concurrent enrollment in Interior Design 238 and 239. This is an independent study course to allow the student to improve upon areas of individual weakness. A research problem is studied in depth and solved through the development of the complete design process. All steps are included from the survey to the defense of the final presentation.

INTERIOR DESIGN (INT) 345 (5)

HISTORY OF MODERN DESIGN (5 LEC.)

Prerequisites: Interior Design 223, 224, and concurrent enrollment in Interior Design 237 and 801. This course surveys the evolution of modern (contemporary) design from the Industrial revolution to the present. Focus is made on the influences of technological advances, art movements, and the changes in society's attitudes on the development of contemporary design. Special attention is given to significant designers, architects, furniture designers, and their effect on the modern movement. Research projects are required.

INTERIOR DESIGN (INT) 801, 811 (1)

(See Cooperative Work Experience)

INTERIOR DESIGN (INT) 802, 812 (2)

(See Cooperative Work Experience)

JOURNALISM (JN) 101 (3)

INTRODUCTION TO MASS COMMUNICATIONS (3 LEC.)

This course surveys the field of mass communications. Emphasis is on the role of mass media in modern society.

**JOURNALISM (JN) 102 (3)**

NEWS GATHERING AND WRITING (2 LEC., 3 LAB)

Prerequisite: Typing ability. This course teaches what is news, news gathering techniques, and how to write the straight news story. Students write for the campus newspaper as part of the class. This is the basic course usually required for all future study in newspaper and magazine writing, advertising, broadcast journalism and public relations.

JOURNALISM (JN) 103 (3)

NEWS GATHERING AND WRITING (2 LEC., 3 LAB.)

Prerequisite: Journalism 102. This is a continuation of Journalism 102 and is designed to sharpen the skills learned in that course. Students study more complex types of stories, such as features, profiles, follow-up stories, and sidebars. All students write for the campus newspaper as part of the class.

JOURNALISM (JN) 104 (1)

STUDENT PUBLICATIONS (3 LAB.)

Prerequisite: The consent of the instructor. This course may not be taken for credit concurrently with Journalism 102 or 103. Individual staff assignments are made for the student newspaper. Assignments may be made in writing, advertising, photography, cartooning, or editing. Students are required to work at prescribed periods under supervision and must attend staff meetings.

JOURNALISM (JN) 105 (1)

STUDENT PUBLICATIONS (3 LAB.)

Prerequisite: The consent of the instructor. This course may not be taken for credit concurrently with Journalism 102 or 103. This course is a continuation of Journalism 104.

JOURNALISM (JN) 106 (1)

STUDENT PUBLICATIONS (3 LAB.)

Prerequisite: The consent of the instructor. This course may not be taken for credit concurrently with Journalism 102 or 103. The course is a continuation of Journalism 105.

JOURNALISM (JN) 201 (3)

FEATURE WRITING (3 LEC.)

Prerequisite: Six hours of journalism or the consent of the instructor. This course covers research, interviewing techniques, and the development of feature stories for use in newspapers and magazines.

JOURNALISM (JN) 204 (3)

NEWS EDITING AND COPY READING (3 LEC.)

Prerequisite: Journalism 102. This course focuses on editing news for newspaper, radio, and television. Emphasis is on writing headlines and laying out pages.

LEGAL ASSISTANT (LA) 131 (3)

INTRODUCTION TO LEGAL TECHNOLOGY (3 LEC.)

Prerequisite: Concurrent enrollment in Legal Assistant 135. Legal technology is introduced. Topics include the legal technician concept, the legal profession and unauthorized practice, legal ethics and the "new profession" concept. The history and areas of American Law, are also included. Legal research, bibliography, legal drafting, and writing are also covered.

LEGAL ASSISTANT (LA) 133 (3)

LAW OF REAL PROPERTY AND REAL ESTATE TRANSACTION (3 LEC.)

Prerequisites: Legal Assistant 131 and 135 and English 101. The law of real property and common real estate transactions are studied. Topics include contracts, leases, and deeds of trust. Problems involved in the drafting of these instruments are examined. The system of recording and the search of public documents are also covered.

LEGAL ASSISTANT (LA) 134 (3)

PRINCIPLES OF FAMILY LAW (3 LEC.)

Prerequisites: Legal Assistant 131 and 135 and English 101. Family law is surveyed. Divorce, separation, custody, legitimacy, adoption, change of name, guardianship, support, domestic relations court procedures, and separation agreements are studied.

LEGAL ASSISTANT (LA) 135 (3)

TEXAS LEGAL SYSTEMS (3 LEC.)

Prerequisite: Concurrent enrollment in Legal Assistant 131. The court system of Texas is studied. Legal practices related to the courts and principles of court administration are examined. The federal court system is reviewed.

LEGAL ASSISTANT (LA) 139 (2)

LEGAL RESEARCH AND DRAFTING (1 LEC., 2 LAB.)

Prerequisite: Legal Assistant 131 and 135 and English 101. This course familiarizes the beginning legal assistant student with the use of a law library and the various research materials and tools contained in a standard law library and provides the student with a more comprehensive vocabulary of legal terminology. Research techniques for case reporters, federal and state statutes and constitutions, secondary research materials and Shepard's Citators are studied. Basic citation form for all resource materials is discussed. Students are given opportunities to research rudimentary legal problems and to write short memoranda. Laboratory fee.

LEGAL ASSISTANT (LA) 225 (3)

BUSINESS ORGANIZATIONS (3 LEC.)

Prerequisites: Legal Assistant 131 and 135 and English 101. This course is a study of the practical aspects of the law of business organizations, including a "how-to-do-it" approach, with explanation of the legal principles which must be observed in counseling and enterprise. This course covers the common law principles of proprietorships and reviews the Uniform Partnership Act, the Uniform Limited Partnership Act, and the Model Business Corporation Act (as they have been used and adopted in Texas law).

LEGAL ASSISTANT (LA) 227 (3)

CIVIL LITIGATION (3 LEC.)

Prerequisites: Legal Assistant 131 and 135, English 101 or the consent of the instructor. This course is an overview of civil litigation in both state and federal court with particular emphasis on the areas in which a legal assistant can assist the trial attorney. Particular attention is paid to preparation for litigation (interviewing client and witnesses, reviewing public information), discovery proceedings (interrogatories, requests for admissions, depositions and document production) pretrial proceedings (motions to dismiss, motions for summary judgment, pretrial orders), and trial (witnesses and exhibits). Attention is also devoted to practical techniques required to cope with protracted or complex litigation, including organization of pleadings, documents and depositions; preparation of summaries, chronologies and indices; and maintaining a complex file in an orderly manner. Mention is made of the legal theories involved in complex litigation (e.g., products liability, civil rights, securities and antitrust). Principal emphasis is on procedural techniques rather than substantive areas of law.

LEGAL ASSISTANT (LA) 231 (3)

WILLS, TRUSTS, AND PROBATE ADMINISTRATION (3 LEC.)

Prerequisites: Legal Assistant 133 and 135 or the consent of the instructor. The forms and principles of law for wills and trusts are covered. The organization and jurisdiction of the Texas Probate Court are studied. The administration of estates under Texas Probate Law is analyzed, and estate and inheritance taxes are reviewed.

LEGAL ASSISTANT (LA) 232 (3)

TORT AND INSURANCE LAW AND CLAIMS INVESTIGATION (3 LEC.)

Prerequisites: Legal Assistant 131 and 135, and English 101 or the consent of the instructor. The law of torts and insurance is the focus of this course. The techniques of investigation involved in tort and insurance claims are considered, and the various forms of pleadings for making the claims are studied.

LEGAL ASSISTANT (LA) 233 (3)

INCOME TAXATION AND LEGAL ACCOUNTING (3 LEC.)

Prerequisites: Legal Assistant 131 and 135 and Business 202 or the consent of the instructor. This course is a study of federal, state and local income taxation. Individuals and tax-paying entities such as estates, trusts and corporations are all included. Emphasis is on the preparation of basic tax returns and other tax-related documents. Accounting related to legal problems is also introduced.

LEGAL ASSISTANT (LA) 234 (3)

PERSONAL PROPERTY, SALES AND CREDIT TRANSACTIONS (3 LEC.)

Prerequisites: Legal Assistant 131 and 135 and English 101 or the consent of the instructor. The law of personal property and contracts is presented. Included are the special forms related to the law of sales and credit transactions and special drafting problems of various instruments and legal research projects. The uniform commercial code and its effect are also included.

LEGAL ASSISTANT (LA) 235 (4)

TECHNIQUES OF LEGAL PRACTICE AND PROCEDURES (3 LEC., 3 LAB.)

Prerequisites: Legal Assistant 131, 133, 135, and 231 and English 101. This course provides training in the preparation of legal documents. Topics include the statute of limitations, client interviews and interview forms, complaints, interrogatories, depositions, answers, motions, and orders to show cause. Also included are third-party practice, orders, medical records, judgments, pre-trials, settlements, and releases. Laboratory fee.

LEGAL ASSISTANT (LA) 236 (2)

LEGAL OFFICE MANAGEMENT (2 LEC.)

Prerequisites: Legal Assistant 231 and 233 and Business 202. All aspects of law office management are covered. Topics include ethics, office organization, bookkeeping and accounting, fees and billing procedures, scheduling and calendaring, and legal research. Management of personnel, proofreading, investigations, file preparation, legal drafting, and procedures for specialized areas of law are also included. Trust accounts, law office forms, check list and files, and disbursement on behalf of clients are covered.

LEGAL ASSISTANT (LA) 248 (3)

CONSTITUTIONAL AND CRIMINAL LAW (3 LEC.)

Prerequisites: Legal Assistant 131 and 135 and English 101. This course covers freedom of communication and religion, individual privacy, private property and contractual rights, and criminal justice. Also studied are procedural due process and discrimination, rights and privileges of citizenship, states powers and limitations, theories of federal government and its powers, congressional powers, the presidency, and the courts system and judicial review of constitutional issues.

LEGAL ASSISTANT (LA) 251 (3)

COMPLEX LITIGATION AND THE ANTITRUST AND SECURITIES LAWS (3 LEC.)

Prerequisite: Legal Assistant 227. This course is a study coordinated with other legal technology courses at an advanced level. It includes specialized study and training in the preparation for and procedures of complex litigation, including discovery and pretrial procedures, and specialized study of the basic legal concepts of antitrust and securities law, as well as the practical application of those concepts as the predominant topics of complex litigation.

LEGAL ASSISTANT (LA) 255 (3)

OIL AND GAS LAW (3 LEC.)

Prerequisites: Legal Assistant 133 or the consent of the instructor. Oil and gas law's history, terminology and principle instruments are examined. Litigation of oil and gas matters, title determination, division of interests, and major regulatory agencies are also discussed.

LEGAL ASSISTANT

(LA) 803, 813 (3)

(See Cooperative Work Experience)

LEGAL ASSISTANT

(LA) 804, 814 (4)

(See Cooperative Work Experience)

LIBRARY SKILLS (LS) 101 (3)

INTRODUCTION TO LIBRARY RESEARCH (3 LEC.)

In this course the student explores the various types of print and non-print sources of information and learns to document research. Emphasis is on practical skills with a great deal of hands-on experience. The course skills consist of lectures as well as the following learning experiences: (1) examination of the specific materials covered in the lecture, (2) completion of appropriate exercises

MACHINE PARTS INSPECTION (MPI) 122 (3)

INDUSTRIAL QUALITY CONTROL AND PROCEDURES (3 LEC.)

Prerequisite: The consent of the instructor. An overview of the history of industrial practices, present trends and opportunities in the field of quality control are explored. Emphasis is on stimulating interest in the quality control field, and information is provided to help prepare the student for possible future employment.

MACHINE PARTS INSPECTION (MPI) 124 (5)

BASIC INSPECTION FUNDAMENTALS (1 LEC., 8 LAB.)

Prerequisite: The consent of the instructor. The basics of inspection fundamentals are stressed and include terminology, use of basic measuring instruments, and measuring techniques. The student gains a respect for the complex nature of industrial quality control techniques in practice today. The laboratory experiences bring together theory and practical applications appropriate to prepare for the entrance into productive industrial experiences. The use and care of measuring instruments becomes a familiar daily task through laboratory exercises.

MACHINE PARTS INSPECTION (MPI) 135 (5)

INTERMEDIATE INSPECTION CONCEPTS (1 LEC., 8 LAB.)

Prerequisite: Machine Parts Inspection 124 or the consent of the instructor. The more complicated aspects of industrial inspection are emphasized as the basics are reviewed and applied through the laboratory experiences. Inspection bookkeeping is introduced as a more specific part of the curriculum, and more complex measuring and holding devices are explored. Accuracy and reliability are stressed as more amplification is introduced in each measuring technique. Optical and pneumatic comparators are introduced, and light wave systems are discussed.



MACHINE PARTS INSPECTION (MPI) 138 (3)

GEOMETRIC TOLERANCING AND TRUE POSITIONING (2 LEC., 2 LAB.)

Prerequisite: The consent of the instructor. This basic course is designed to prepare students entering the manufacturing industries for the complex techniques and practices using geometric symbols related to engineering, production, and quality control operations. The advantages of a system of geometric symbols which provides dimensioning and tolerancing with respect to actual function and relationship of part features are stressed. Practical application connects this complex theory with the practical world of automated, computerized industry today.

MACHINE PARTS INSPECTION (MPI) 220 (3)

INTRODUCTION TO MATERIALS AND PROCESSES (3 LEC.)

Prerequisite: Machine Parts Inspection 122 and Quality Control Technology 122 or the consent of the instructor. Information concerning properties of materials inherent and acquired in industry today is presented, including basic information to help prepare a student for making decisions concerning future training in specialized fields. The areas covered include metals, woods, plastics and natural products and their relationship to industry in the natural state, during processing, and the final usage.

MACHINE PARTS INSPECTION (MPI)**223 (5)**

ADVANCED INSPECTION CONCEPTS (1 LEC., 8 LAB.)

Prerequisite: Machine Parts Inspection 124 and 135 or the consent of the instructor. Reviews of all inspection techniques are covered before embarking on the study of the most complex equipment and techniques. Coordinate measuring instruments, optical flats, X-ray inspection and electronic comparators are studied. Calibration of all types of measuring and inspection equipment is studied under classroom and laboratory — field trip — on the job conditions. The most complex systems and techniques are encountered and explored.

MACHINE PARTS INSPECTION (MPI)**227 (3)**

NON-DESTRUCTIVE TESTING (3 LEC.)

Prerequisite: Machine Parts Inspection 121, 220 and Quality Control Technology 122 or the consent of the instructor. An in-depth study is made of ultrasonic, radiographic, and magnetic particle techniques relating to industrial testing. An overview of all the related areas of non-destructive testing is included in the program.

MACHINE PARTS INSPECTION (MPI)**230 (3)**

INTRODUCTION TO STATISTICAL QUALITY CONTROL TECHNIQUES (3 LEC.)

Prerequisite: The consent of the instructor. This course provides a review of the basic application of statistical methods in a simplified form. Concepts of tolerances, acceptance sampling, standard sampling plans, control chart, and analysis of process variation are introduced. Only basic arithmetic is required.

MACHINE PARTS INSPECTION (MPI)**237 (3)**

GAGE CONTROL STANDARDIZATION AND PRECISION MEASUREMENT (2 LEC., 4 LAB.)

Prerequisite: The consent of the instructor. Inventory and gage security and calibration are stressed with emphasis on a general knowledge of all inspection equipment and a practical use of all items. Statistical treatment of data is introduced.

MACHINE PARTS INSPECTION (MPI)**803 and 813 (3)**

(See Cooperative Work Experience)

MACHINE SHOP (MS) 133 (5)

BASIC LATHE (1 LEC., 8 LAB.)

Practical experience is provided in the use of hand tools, layout, and hand threading. Various types of drill press work and engine lathe operations are introduced. Emphasis is on safety measures. The types and uses of machine oils, greases, coolants, and cutting oils are also included. Laboratory fee.

MACHINE SHOP (MS) 134 (5)

BASIC MILLING MACHINE (1 LEC., 8 LAB.)

This course focuses on hand threading. Drill press work and milling machine operations are presented. Machine parts, cutters, and arbors are covered. Emphasis is on safety measures. The types and uses of machine oils, greases, coolants, and cutting oils are also included. Laboratory fee.

MACHINE SHOP (MS) 135 (5)

INTERMEDIATE LATHE (1 LEC., 8 LAB.)

Prerequisite: Machine Shop 133. This course is the intermediate study of the engine lathe. Workpieces are more complicated and tolerances more exacting. Various machines and work-holding methods are used. Precision layout and measuring tools are introduced. Additional work in determining cutting speeds and feeds is also included. Laboratory fee.

MACHINE SHOP (MS) 136 (5)

INTERMEDIATE MILLING
MACHINE (1 LEC., 8 LAB.)

Prerequisite: Machine Shop 134. This course is the intermediate study of the milling machine. Workpieces are more complicated and tolerances more exacting. Various machines and workholding methods are used. Precision layout and measuring tools are introduced. Additional work in determining cutting speeds and feeds is also included. Laboratory fee.

MACHINE SHOP (MS) 151 (3)

BASIC MACHINE OPERATION
FOR WELD TOOLING (1 LEC., 4 LAB.)

Simple weld tooling is studied. Shop safety is stressed. Actual weld fixture components and weld fixtures are made using engine lathes, the milling machine, and drill presses. Laboratory fee.

MACHINE SHOP (MS) 233 (5)

ADVANCED LATHE (1 LEC., 8 LAB.)

This course is the advanced study of the engine lathe. Skill is developed in making open setups and in locating holes by means of layout and triangulation. Various attachments and accessories are used. Surface grinding and grinding wheel safety are introduced. Laboratory fee.

MACHINE SHOP (MS) 234 (5)

ADVANCED MILLING MACHINE (1 LEC., 8 LAB.)

This course is the advanced study of the milling machine. Skill is developed in making open setups and in locating of holes by means of layout and triangulation. Various attachments and accessories are used. Surface grinding and grinding wheel safety are introduced. Laboratory fee.

MACHINE SHOP (MS) 235 (5)

APPLIED LATHE (1 LEC., 8 LAB.)

Students are encouraged to take Machine Shop 236 concurrently with Machine Shop 235. In this course the student must independently carry out assignments on the lathe. Emphasis is on the interchangeability of workpieces, fits, and finishes. Initiative and ingenuity are encouraged. Tool and cutter grinding is introduced. Laboratory fee.

MACHINE SHOP (MS) 236 (5)

APPLIED MILLING MACHINE (1 LEC., 8 LAB.)

The student is encouraged to take Machine Shop 235 concurrently with Machine Shop 236. In this course the student must independently carry out assignments on the milling machine. Emphasis is on the interchangeability of workpieces, fits, and finishes. Initiative and ingenuity are encouraged. Tool and cutter grinding is introduced. Laboratory fee.

MACHINE SHOP (MS) 702 (2)

(See Cooperative Work Experience)

MACHINE SHOP (MS) 704 (4)

(See Cooperative Work Experience)

MAJOR APPLIANCE REPAIR**(MAR) 201 (1)**

MOTORS AND MOTOR CIRCUITS
(30 CONTACT HOURS)

This course focuses on motors and motor circuits used in domestic refrigeration systems. Identification, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 202 (1)**

DEFROST CIRCUITS AND
COMPONENTS (30 CONTACT HOURS)

This course focuses on manual defrost, off-cycle defrost, semi-automatic defrost and frost-free defrost systems. Identification, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 203 (2)**

SEALED SYSTEM REPAIR AND COMPRESSOR REPLACEMENT (60 CONTACT HOURS)

This course focuses on the detection and repair of leaks and on the replacement of compressors. Evacuation, charging, and performance evaluation of sealed systems are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 204 (1)**

DOMESTIC ICE MAKERS (30 CONTACT HOURS)

This course focuses on flex tray and rigid mold domestic ice makers. Diagnosis, repair, and adjustment are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 205 (1)**

TROUBLESHOOTING AND DIAGNOSIS, DOMESTIC REFRIGERATORS AND FREEZERS (30 CONTACT HOURS)

This course focuses on troubleshooting techniques for domestic refrigeration systems. The diagnosis of problems is included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR)**206 (3)**

DOMESTIC REFRIGERATORS ELECTRICAL SYSTEMS (90 CONTACT HOURS)

Prerequisite: Air Conditioning 150. This course includes a study of motors and motor circuits, manual defrost, and off-cycle defrost. Other topics are semi-automatic defrost and frost free defrost systems, rigid mold and flex tray ice makers used in domestic refrigeration systems. Identification, diagnosis and repair are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR)**207 (3)**

DOMESTIC REFRIGERATORS SEALED-SYSTEMS (90 CONTACT HOURS)

Prerequisites: Air Conditioning 150 and Air Conditioning 160. This course focuses on the detection and repair of leaks and on the replacement of compressors. Trouble-shooting and diagnosis of domestic refrigeration systems are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR)**208 (3)**

DOMESTIC DISHWASHERS (90 CONTACT HOURS)

Prerequisite: Air Conditioning 150.

This course examines motors, water valves, heaters, timers, pumps, water seals and water/detergent relationships. Diagnosis, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR)**209 (3)**

DOMESTIC DISPOSERS AND TRASH COMPACTORS (90 CONTACT HOURS)

Prerequisite: Air Conditioning 150.

This course examines the electrical and mechanical parts of domestic disposers and trash compactors. Diagnosis, service, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 211 (1)**

ELECTRICAL SYSTEMS—DISHWASHERS (30 CONTACT HOURS)

This course examines motors, water valves, heaters, timers, and dispensing electrical circuits. Diagnosis, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 212 (1)**

MECHANICAL SYSTEMS AND WASHABILITY (30 CONTACT HOURS)

This course examines water valve assemblies, pumps, water seals, and water/detergent relationships (washability). Adjustment, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 213 (2)**

DISPOSERS AND TRASH COMPACTORS (60 CONTACT HOURS)

This course examines the electrical and mechanical parts of domestic disposers and trash compactors. Diagnosis, service, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 214 (2)

TROUBLESHOOTING AND DIAGNOSIS—
DISHWASHERS, DISPOSERS, AND TRASH
COMPACTORS (60 CONTACT HOURS)

This course examines troubleshooting techniques for domestic dishwashers, disposers, and trash compactors. The diagnosis of problems is included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 215 (3)

DOMESTIC LAUNDRY EQUIPMENT—WASHERS
(90 CONTACT HOURS)

Prerequisite: Air Conditioning 150.
This course includes the study of the electrical systems, water system, and drive systems of the automatic washer. Diagnosis, repair, and adjustments are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 216 (3)

DOMESTIC LAUNDRY EQUIPMENT—DRYERS
(90 CONTACT HOURS)

Prerequisite: Air Conditioning 150.
This course is the specific study of dryer motors and motor circuits, heating elements, gas valve circuits, timers. Blowers, belts and pulleys, bearings, and drum assemblies are also included. Diagnosis, adjustment, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 217 (3)

DOMESTIC ELECTRIC COOKING EQUIPMENT
(90 CONTACT HOURS)

Prerequisite: Air Conditioning 150.
This course covers heating elements, switches, thermostats, timers, hydraulic controls, cooktops, oven circuits and principles of self-cleaning ovens. Diagnosis, wiring, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 218 (3)

DOMESTIC GAS AND MICROWAVE COOKING
EQUIPMENT (90 CONTACT HOURS)

Prerequisite: Air Conditioning 150.
This course covers manual, hydraulic, electrical controls and burner adjustment of gas ranges and ovens. The principles of microwave cooking, magnetron, and microwave circuitry are included. Diagnosis, service and repair are also included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 221 (1)

ELECTRICAL SYSTEMS AND MOTORS—
WASHERS (30 CONTACT HOURS)

This course is the specific study of washer motors and motor circuits, water valve circuits, timers, and dispensing circuits for bleach, softener, and detergent. Both diagnosis and repair are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 222 (1)

WATER SYSTEMS—
WASHERS (30 CONTACT HOURS)

This course is the specific study of washer water valve, pump, and inlet and drain assemblies. Diagnosis, repair, and adjustment are included. Laboratory fee.

MAJOR APPLIANCE REPAIR (MAR) 223 (1)

DRIVE SYSTEMS—
WASHERS (30 CONTACT HOURS)

This course is the specific study of washer clutch and belt assemblies, transmissions, drive shafts, and inner and outer tub assemblies. Diagnosis, adjustment, repair, and replacement are included.

MAJOR APPLIANCE REPAIR (MAR) 224 (1)

ELECTRICAL SYSTEMS AND MOTORS—
DRYERS (30 CONTACT HOURS)

This course is the specific study of dryer motors and motor circuits, heating elements, gas valve circuits, and timers. Diagnosis and repair are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 225 (1)**MECHANICAL SYSTEMS—
DRYERS (30 CONTACT HOURS)

This course is the specific study of dryer blowers, venting assemblies, belts and pulleys, bearings, and drum assemblies. Diagnosis, adjustment, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 226 (1)**TROUBLESHOOTING AND DIAGNOSIS—
WASHERS AND DRYERS (30 CONTACT HOURS)

This course is the specific study of troubleshooting techniques for domestic washers and dryers. The diagnosis of problems is included. Laboratory fee:

MAJOR APPLIANCE REPAIR**(MAR) 231 (1)**GAS COOKING EQUIPMENT
(30 CONTACT HOURS)

This course covers manual, hydraulic, and electrical controls of gas ranges and ovens. Burner adjustment is also covered. Diagnosis, service, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 232 (2)**ELECTRIC COOKING
EQUIPMENT (60 CONTACT HOURS)

This course covers heating elements, switches, thermostats, timers, cook tops and oven circuits of electric ranges and ovens. Diagnosis, wiring, repair, and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 233 (1)**

SELF-CLEANING OVENS (30 CONTACT HOURS)

This course covers electronic and hydraulic controls and principles of self-cleaning ovens. Diagnosis, service, repair and replacement are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 234 (1)**

MICROWAVE OVENS (30 CONTACT HOURS)

This course covers the principles of microwave cooking. Diagnosis and troubleshooting of magnetrons and associated microwave circuitry are included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 235 (1)**TROUBLESHOOTING AND DIAGNOSIS—
DOMESTIC COOKING EQUIPMENT
(30 CONTACT HOURS)

This course covers troubleshooting techniques for domestic cooking equipment. The diagnosis of problems is included. Laboratory fee.

MAJOR APPLIANCE REPAIR**(MAR) 240 (3)**PROFESSIONAL SERVICE
SKILLS (48 CONTACT HOURS)

Professional skills for the service industry are emphasized. Topics include invoices, service records, maintenance agreements, customer relations, inventory, salaries, working conditions, and advancement opportunities.

MANAGEMENT (MGT) 136**(3)**

PRINCIPLES OF MANAGEMENT (3 LEC.)

The process of management is studied. The functions of planning, organizing, leading, and controlling are included. Particular emphasis is on policy formulation, decision-making processes, operating problems, communications theory, and motivation techniques.

MANAGEMENT (MGT) 137**(3)**PRINCIPLES OF RETAILING
(48 CONTACT HOURS)

The operation of the retail system of distribution is examined. Topics include consumer demand, requirements, computer use, store location and layout, and credit policies. Interrelationships are emphasized.

MANAGEMENT (MGT) 150 (4)

MANAGEMENT TRAINING (20 LAB.)

Prerequisite: Concurrent enrollment in approved Management Program.

This course provides for supervised employment in the student's chosen field. It gives practical experience to students preparing for careers in business management.

MANAGEMENT (MGT) 151 (4)

MANAGEMENT TRAINING (20 LAB.)

Prerequisite: Concurrent enrollment in approved Management Program.

This course is a continuation of Management 150. It provides for supervised employment in the student's chosen field.

MANAGEMENT (MGT) 153 (3)

SMALL BUSINESS MANAGEMENT (48 CONTACT HOURS)

The student will be studying the fundamental approaches to planning, establishing and operating a small business. The day-to-day operation of the business and reporting procedures will be studied as well as exploring the concepts of general management.

MANAGEMENT (MGT) 154 (2)

MANAGEMENT SEMINAR: ROLE OF SUPERVISION (32 CONTACT HOURS)

Prerequisites: Concurrent enrollment in Management 150 and preliminary interview by Management faculty. This is for students majoring in Management. Emphasis is on the development of management skills, goal-setting, planning, leadership, communication, and motivation as applied to the student's work experience.

MANAGEMENT (MGT) 155 (2)

MANAGEMENT SEMINAR: PERSONNEL MANAGEMENT (2 LEC.)

Prerequisites: Management 150 and 154 and concurrent enrollment in Management 151. The principles, policies, and practices of the personnel function as applied to the student's work experiences are studied.

MANAGEMENT (MGT) 157 (3)

SMALL BUSINESS BOOKKEEPING AND ACCOUNTING PRACTICES (3 LEC.)

This course focuses on basic bookkeeping and accounting techniques for the small business. The techniques are applied to the analysis and preparation of basic financial statements.

MANAGEMENT (MGT) 160 (3)

PRINCIPLES OF PURCHASING (3 LEC.)

An introduction to the purchasing function is provided. The course covers purchasing tasks and responsibilities, analytical techniques in buying, organizational interrelationships and coordination, measurement and control, and legal implications. Special emphasis is placed on the five tenets of buying: quality, quantity, time, price, and source.

MANAGEMENT (MGT) 171 (3)

INTRODUCTION TO SUPERVISION (3 LEC.)

Prerequisite: Enrollment in Technical/Occupational program or the consent of the instructor. This course is a study of today's supervisors and their problems. The practical concepts of modern-day, first-line supervision are described. Emphasis is on the supervisor's major functions, such as facilitating relations with others, motivating, communicating, handling grievances, recruiting, counseling, and cost accounting.

MANAGEMENT (MGT) 206 (3)

PRINCIPLES OF MARKETING (3 LEC.)

The scope and structure of marketing are examined. Marketing functions, consumer behavior, market research, sales forecasting, and relevant state and federal laws are analyzed.

MANAGEMENT (MGT) 210 (3)

SMALL BUSINESS
CAPITALIZATION,
ACQUISITION AND FINANCE (3 LEC.)

The student studies alternative strategies of financial planning, capitalization, profits, acquisition, ratio analysis, and other related financial operations required of small business owners. The preparation and presentation of a loan proposal are included.

MANAGEMENT (MGT) 211 (3)

SMALL BUSINESS OPERATIONS (3 LEC.)

Problems of daily operations of small business are introduced. Topics include compliance with regulations, personnel administration, accounts receivable management, and business insurance.

MANAGEMENT (MGT) 212 (1)

SPECIAL PROBLEMS IN
BUSINESS (1 LEC.)

Each student will participate in the definition and analysis of current business problems. Special emphasis will be placed upon relevant problems and pragmatic solutions that integrate total knowledge of the business process in American society. This course may be repeated for credit up to a maximum of three hours credit.

MANAGEMENT (MGT) 220 (3)

MATERIALS MANAGEMENT (3 LEC.)

A study of the materials management concept, which includes the separate functions of purchasing, transportation, production, inventory control, warehousing, and trafficking is provided. Special emphasis is given to cost effectiveness, the materials cycle, contribution to organizational objectives, performance measurement, inventory cost trade-offs, and forecasting.

MANAGEMENT (MGT) 224 (3)

QUALITY ASSURANCE (3 LEC.)

A study of the techniques, concepts, and systems utilized in controlling quality is included. Special emphasis is placed on sampling techniques (methodology and results), acceptance/rejection procedures, procurement quality assurance, tooling inspection,



and quality program planning and maintenance.

MANAGEMENT (MGT) 230 (3)

SALESMANSHIP (3 LEC.)

The selling of goods and ideas is the focus of this course. Buying motives, sales psychology, customer approach, and sales techniques are studied.

MANAGEMENT (MGT) 233 (3)

ADVERTISING AND SALES
PROMOTION (3 LEC.)

This course introduces the principles, practices, and media of persuasive communication. Topics include buyer behavior, use of advertising media, and methods of stimulating salespeople and retailers. The management of promotion programs is covered, including goals, strategies, evaluation, and control of promotional activities.

MANAGEMENT (MGT) 242 (3)

PERSONNEL ADMINISTRATION (3 LEC.)

This course presents the fundamentals, theories, principles, and practices of people management. Emphasis is on people and their employment. Topics include recruitment, selection, training, job development, interactions with others, labor/management relations, and government regulations. The managerial functions of planning, organizing, staffing, directing, and controlling are also covered.

MANAGEMENT (MGT) 250 (4)

MANAGEMENT TRAINING (20 LAB.)

Prerequisites: Management 150 and Management 151; concurrent enrollment in Management 254. This course consists of supervised employment in the student's chosen field. It is intended to provide increased supervisory responsibility for students preparing for careers in business management.

MANAGEMENT (MGT) 251 (4)

MANAGEMENT TRAINING (20 LAB.)

Prerequisites: Management 150 and 151; concurrent enrollment in Management 255. This course continues Management 250. It is intended to provide supervised employment in the student's chosen field.

MANAGEMENT (MGT) 254 (2)MANAGEMENT SEMINAR:
ORGANIZATIONAL
DEVELOPMENT (2 LEC.)

Prerequisites: Management 151 and Management 155; concurrent enrollment in Management 250. Organizational objectives and management of human resources are studied. The various approaches to organizational theory are applied to the student's work experience.

MANAGEMENT (MGT) 255 (2)MANAGEMENT SEMINAR:
BUSINESS STRATEGY, THE
DECISION PROCESS AND
PROBLEM SOLVING (2 LEC.)

Prerequisites: Management 250 and Management 254; concurrent enrollment in Management 251. Business strategy and the decision-making process are applied to the first-line supervisor and middle-management positions. Emphasis is on applying the student's course knowledge to work experience.

MANAGEMENT (MGT) 280 (3)

INDUSTRIAL MANAGEMENT (3 LEC.)

Prerequisite: Management 136. This course is an overview of the relationship of industrial functions. The philosophy and practices of management are included. Topics cover plant location and layout, process design, equipment selection, and methods analysis. Work measurement, materials control, production planning and control, quality control, cost control, and industrial relations are also presented.

MATHEMATICS

(See also Developmental Mathematics. Supplementary instruction in mathematics is available through the Learning Resources Center.)

MATHEMATICS (MTH) 101 (3)

COLLEGE ALGEBRA (3 LEC.)

Prerequisite: Two years of high school algebra or Developmental Mathematics 093. This course is a study of functions and relations, absolute values, variation, quadratic equations, complex numbers, functions of two variables, systems of equations and inequalities, elementary aspects of the theory of equations, progressions, the binomial theorem, and algebraic proof.

MATHEMATICS (MTH) 102 (3)

PLANE TRIGONOMETRY (3 LEC.)

Prerequisite: Mathematics 101 or equivalent. This course is a study of angular measure, functions of angles, identities, solution of triangles, equations, inverse trigonometric functions, logarithms, and complex numbers.

MATHEMATICS (MTH) 104 (5)

ELEMENTARY FUNCTIONS AND
COORDINATE GEOMETRY I (5 LEC.)

Prerequisites: Two years of high school algebra or Developmental Mathematics 093. This course includes the concept of function, polynomials of one or more variables, arithmetic and geometric sequences, combinations and the binomial theorem, rational functions, exponential functions, logarithmic functions, trigonometric functions, complex numbers, vectors, functions of two variables and analytical geometry which includes conics, transformation of coordinates, polar coordinates, parametric equations and three dimensional space.

MATHEMATICS (MTH) 105 (5)

ELEMENTARY FUNCTIONS AND
COORDINATE GEOMETRY II (5 LEC.)

Prerequisite: Mathematics 104. This course is a continuing study of the topics of Mathematics 104.

MATHEMATICS (MTH) 106 (5)

ELEMENTARY FUNCTIONS AND
COORDINATE GEOMETRY III (5 LEC.)

Prerequisites: Two years of high school algebra and one semester of trigonometry. This course is a study of the algebra of functions. It includes polynomial, rational, exponential, logarithmic and trigonometric functions, functions of two variables, complex numbers, vectors and analytic geometry which includes conics, transformation of coordinates, polar coordinates, and parametric equations.

MATHEMATICS (MTH) 111 (3)

MATHEMATICS FOR BUSINESS
AND ECONOMICS I (3 LEC.)

Prerequisite: Two years of high school algebra or Developmental Mathematics 093. This course includes equations, inequalities, matrices, linear programming, and linear, quadratic, polynomial, rational, exponential, and logarithmic functions. Applications to business and economics problems are emphasized.

MATHEMATICS (MTH) 112 (3)

MATHEMATICS FOR BUSINESS
AND ECONOMICS II (3 LEC.)

Prerequisite: Mathematics 111. This course includes sequences and limits, differential calculus, integral calculus, and appropriate applications.

MATHEMATICS (MTH) 115 (3)

COLLEGE MATHEMATICS I (3 LEC.)

Prerequisites: One year of high school algebra and one year of high school geometry or two years of high school algebra or Developmental Mathematics 093. Designed for liberal arts students, this course includes the study of logic, mathematical patterns, mathematical recreations, systems of numeration, mathematical systems, sets and statements and sets of numbers. Historical aspects of selected topics are emphasized.

MATHEMATICS (MTH) 116 (3)

COLLEGE MATHEMATICS II (3 LEC.)

Prerequisite: One year of high school algebra and one year of high school geometry or two years of high school algebra or Developmental Mathematics 093. Designed for liberal arts students, this course includes the study of algebra, linear programming, permutations, combinations, probability and geometry. Historical aspects of selected topics are emphasized.

MATHEMATICS (MTH) 117 (3)

FUNDAMENTAL CONCEPTS OF
MATHEMATICS FOR
ELEMENTARY TEACHERS (3 LEC.)

This course includes the structure of the real number system, geometry, and mathematical analysis. Emphasis is on the development of mathematical reasoning needed for elementary teachers.

MATHEMATICS 121 (3)

ANALYTIC GEOMETRY (3 LEC.)

Prerequisite: Mathematics 102 or equivalent. This course is a study of the real numbers, distance, the straight line, conics, transformation of coordinates, polar coordinates, parametric equations, and three-dimensional space.

MATHEMATICS (MTH) 124 (5)

CALCULUS I (5 LEC.)

Prerequisite: Mathematics 105 or 106 or 121 or the equivalent. This course is a study of limits, continuity, derivatives, and integrals of algebraic and transcendental functions, with applications.

MATHEMATICS (MTH) 130 (3)

BUSINESS MATHEMATICS (3 LEC.)

Prerequisite: One year of high school algebra or Developmental Mathematics 091 or the equivalent. This course is intended primarily for students in specialized occupational programs. It is a study of simple and compound interest, bank discount, payrolls, taxes, insurance, mark up and mark down, corporate securities, depreciation, and purchase discounts.

MATHEMATICS (MTH) 139 (3)

APPLIED MATHEMATICS (3 LEC.)

Prerequisite: One year of high school algebra or Developmental Mathematics 091 or equivalent. An effort will be made to tailor this course to fit the needs of the students enrolled in each semester. The course is a study of commercial, technical, and other applied uses of mathematics.

MATHEMATICS (MTH) 195 (3)

TECHNICAL MATHEMATICS (3 LEC.)

Prerequisite: One year of high school algebra or Development Mathematics 091 or the equivalent. This course is designed for technical students. It covers a general review of arithmetic, the basic concepts and fundamental facts of plane and solid geometry, computational techniques and devices, units and dimensions, the terminology and concepts of elementary algebra, functions, coordinate systems, simultaneous equations, and stated problems.

MATHEMATICS (MTH) 196 (3)

TECHNICAL MATHEMATICS (3 LEC.)

Prerequisite: Mathematics 195. This course is designed for technical students. It includes a study of topics in algebra, an introduction to logarithms, and an introduction to trigonometry, trigonometric functions and the solution of triangles.

MATHEMATICS (MTH) 202 (3)

INTRODUCTORY STATISTICS (3 LEC.)

Prerequisite: Two years of high school algebra or consent of instructor. This course is a study of collection and tabulation of data, bar charts, graphs, sampling, measures of central tendency and variability, correlation, index numbers, statistical distributions, probability, and application to various fields.

MATHEMATICS (MTH) 221 (3)

LINEAR ALGEBRA (3 LEC.)

Prerequisite: Mathematics 124 or equivalent. This course is a study of matrices, linear equations, dot products, cross products, geometrical vectors, determinants, n-dimensional space, and linear transformation.

MATHEMATICS (MTH) 225 (4)

CALCULUS II (4 LEC.)

Prerequisite: Mathematics 124 or the equivalent. This course is a study of techniques of integration, polar coordinates, parametric equations, topics in vector calculus, sequences, series, indeterminate forms, and partial differentiation with applications.

MATHEMATICS (MTH) 226 (3)

CALCULUS III (3 LEC.)

Prerequisite: Mathematics 225 or the equivalent. This course is a study of topics in vector calculus, functions of several variables, and multiple integrals, with applications.

MATHEMATICS (MTH) 230 (3)

DIFFERENTIAL EQUATIONS (3 LEC.)

Prerequisite: Mathematics 225 or the consent of the instructor. This course is a study of ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, boundary value problems, and applications.

MEDICAL ASSISTING TECHNOLOGY (MA) 150 (1)

ORIENTATION TO MEDICAL OFFICE CAREERS (1 LEC.)

Prerequisite: Admission to the Medical Assisting Technology Program or Medical Transcription Program. This course introduces the medical office and the roles of the medical assistant and medical transcriptionist. The professional and interpersonal relationships of the medical office worker with office personnel, the patient, the physician, and others are studied. The history of medicine is introduced, including the great men and women of medicine and their discoveries.

MEDICAL ASSISTING TECHNOLOGY (MA) 151 (4)

MEDICAL TERMINOLOGY (4 LEC.)

Prerequisite: Admission to the Medical Assisting Technology Program or Medical Transcription Program with concurrent enrollment in Biology 123 or the consent of the instructor. This course is a study of the basic structure of medical words. Included are prefixes, suffixes, roots, combining forms and plurals. Emphasis is on pronunciation, spelling, and definition. Exercises in the use of the medical dictionary are also included.

MEDICAL ASSISTING TECHNOLOGY (MA) 152 (2)

MEDICAL LAW AND ETHICS (2 LEC.)

Prerequisite: Admission to the Medical Assisting Technology Program or Medical Transcription Program. The principles of medical ethics and ethical behavior of the physician and patient are introduced. Topics include contracts, professional liability, malpractice, and the medical practice acts. The legal relationship of the medical assistant-transcriptionist is examined in regard to the physician's legal responsibilities.

MEDICAL ASSISTING TECHNOLOGY (MA) 153 (3)

MEDICAL OFFICE MICROBIOLOGY AND STERILIZATION PROCEDURES (2 LEC., 2 LAB.)

Prerequisite: Admission to the Medical Assisting Technology Program. This course is a study of fundamental microbiology and methods of sanitation, asepsis, and sterilization. The operation of sterilization equipment, application of the principles of asepsis in handwashing, dressings, and creating and maintaining a sterile field are included. The proper disposal of contaminated materials is demonstrated.

MEDICAL ASSISTING TECHNOLOGY (MA) 160 (4)

MEDICAL TRANSCRIPTION (2 LEC., 6 LAB.)

Prerequisite: Admission to the Medical Assisting Technology Program or Medical Transcription Program. Completion of Medical Assisting 151 and Business 174 or the equivalent with a GPA of 2.0 or better or the consent of the instructor. Medical transcription is presented. Speed and accuracy in typing, use of transcribing equipment, and medical-surgical terminology are all included. Practice in completing medical forms, transcribing medical-surgical reports, and handling medical correspondence is emphasized.

**MEDICAL ASSISTING
TECHNOLOGY (MA) 161 (3)**

MEDICAL OFFICE —
ADMINISTRATIVE AND
MANAGEMENT PROCEDURES (3 LEC.)

Prerequisite: Admission to the Medical Assisting Technology Program or Medical Transcription Program. This course covers the principles of medical office communications. Medical recordkeeping, types of records, reports, and computerized and statistical procedures are introduced. The function of the hospital medical record department in relation to the medical office is also introduced. The fundamentals of a medical office, care of equipment, ordering of office supplies, and office house-keeping are covered.

**MEDICAL ASSISTING
TECHNOLOGY (MA) 162 (3)**

MEDICAL OFFICE BOOKKEEPING AND
INSURANCE PROCEDURES (3 LEC.)

Prerequisite: Admission to the Medical Assisting Technology Program. The fundamentals of medical office bookkeeping and financial record-keeping are studied. The pegboard system is covered and computerized accounting is introduced. Appraisal of health insurance plans is covered, including a study of benefits and claims procedures with an emphasis on the completion of claim forms.

**MEDICAL ASSISTING
TECHNOLOGY (MA) 163 (3)**

MEDICAL OFFICE CLINICAL MEDICAL
ASSISTING PROCEDURES (2 LEC., 2 LAB.)

Prerequisite: Admission to the Medical Assisting Technology Program. The role of the clinical medical assistant is introduced in lectures and in laboratory experiences. Topics include techniques in the examining room, patient handling and preparation, taking and recording vital signs, and assisting the physician with examination, treatments, minor surgery, and office emergencies. The ordering, storing and inventory of medical supplies and care of equipment are also included.

**MEDICAL ASSISTING
TECHNOLOGY (MA) 164 (3)**

MEDICAL OFFICE PHARMACOLOGY AND
DRUG ADMINISTRATION (2 LEC., 2 LAB.)

Prerequisite: Admission to the Medical Assisting Technology Program. This course enables students to identify basic drugs, their use and effect on the body, and the calculation of dosage and solutions. The definition and use of correct abbreviations and terminology are covered. Ways to identify medications regulated by the Bureau of Narcotics and Dangerous Drugs are included and the records required on them are explained. Also included are the ordering, storage inventory, and disposal of drugs. Methods of drug administration are identified, including techniques of giving injections and selecting of sites. Laboratory fee.

**MEDICAL ASSISTING
TECHNOLOGY (MA) 170 (3)**

MEDICAL OFFICE X-RAY
ORIENTATION AND ELECTROMEDICAL
INSTRUMENTATION (5 LEC., 5 LAB.)

Prerequisite: Admission to the Medical Assisting Technology Program. This course prepares students to communicate instructions to the patient for proper preparation for X-ray examinations. The identification of safety hazards and precautions related to X-ray equipment is included. The handling and storage of X-rays are demonstrated. Methods of electrocardiography are explained, including operation of the machine, specific techniques and mounting the tracing. The operation and care of other electromedical instruments, ultrasound, and ultraviolet light are also covered. Laboratory fee.

MEDICAL ASSISTING TECHNOLOGY (MA) 171 (3)

MEDICAL OFFICE LABORATORY
PROCEDURES (5 LEC., 5 LAB.)

Prerequisite: Admission to the Medical Assisting Technology Program. The purpose, techniques, and recording of basic laboratory procedures commonly performed in a physician's office are covered in lectures and laboratory sessions. Included are urinalysis, blood counts, gram stains, sedimentation rates, and pregnancy tests. The collection, preparation, and labeling of specimens are also covered. Clinical laboratory reports are explained. The assistance of patients by giving the proper instructions for their preparation for clinical lab tests is described. Laboratory fee.

MEDICAL ASSISTING TECHNOLOGY (MA) 172 (6)

MEDICAL ASSISTING
EXTERNSHIP (2 LEC., 38 LAB.)

Prerequisite: Completion of all Medical Assisting Technology courses with an overall GPA of 2.0 or above. This course provides supervised work experience in a private medical office, clinic or hospital. Classroom reports and critique are also included. The student is assigned regular duties and is responsible to the supervisor in charge. The work is coordinated by a member of the Medical Assisting faculty. A minimum of 180 hours is required in the clinical setting for externship.

MEDICAL LAB TECHNOLOGY (MLT) 133 (4)

HEMATOLOGY (3 LEC., 4 LAB.)

Prerequisite: Acceptance into the Medical Laboratory Technician Program with an ACT composite score of 18 and concurrent enrollment in Medical Laboratory Technology 135. The theory and basic techniques used in the hematological examination of blood are presented. Laboratory fee.

MEDICAL LAB TECHNOLOGY (MLT) 135 (3)

URINALYSIS (2 LEC., 4 LAB.)

Prerequisite: Acceptance into the Medical Laboratory Technician Program with an ACT composite score of 18 and a math score of 18 and concurrent enrollment in Medical Laboratory Technology 133. This course is an orientation to the medical laboratory and a study of the theory and laboratory procedures used in the analysis of urine. Laboratory fee.

MEDICAL LAB TECHNOLOGY (MLT) 138 (4)

IMMUNOLOGY (3 LEC., 4 LAB.)

Prerequisite: "C" average in Medical Laboratory Technology 133 and 135. The theory and principles of immunology are presented. Laboratory procedures used in the serological and immunohematological examination of blood and serum are considered. Laboratory fee.

MEDICAL LAB TECHNOLOGY (MLT) 139 (8)

CLINICAL PRACTICE I (35 LAB.)

Prerequisite: "C" average in Medical Laboratory Technology 138 and an overall "C" average in non-technical course work. This course provides supervised clinical practice in hematology, serology, blood banking, and urinalysis. The student is assigned to a clinical laboratory.

MEDICAL LAB TECHNOLOGY (MLT) 229 (4)

MEDICAL MICROBIOLOGY I (3 LEC., 4 LAB.)

Prerequisite: Completion of the first year of the Medical Laboratory Technician Program. The fundamentals of microbial life are studied. Methods and procedures used in diagnostic microbiology are covered. Included are the principles of aseptic technique, susceptibility testing of bacteria, quantification of bacteria in body fluids, and the isolation and identification of selected bacteria. The normal body flora are discussed, and the relationship of these bacteria to disease in humans is emphasized.

MEDICAL LAB TECHNOLOGY**(MLT) 231 (4)**

CLINICAL CHEMISTRY (3 LEC., 4 LAB.)

Prerequisite: "C" average in Medical Laboratory Technology 229 and completion of Chemistry 203. This course focuses on the theory and procedures used in the clinical chemistry laboratory. Both manual and automated methods are presented in lectures and laboratory assignments. Laboratory fee.

MEDICAL LAB TECHNOLOGY**(MLT) 236 (4)**

MEDICAL MICROBIOLOGY II (3 LEC., 4 LAB.)

Prerequisite: Medical Lab Technology 229. This course is a continuation of Medical Lab Technology 229. It includes the study of the isolation and identification procedures for selected bacteria, fungi and parasites.

MEDICAL LAB TECHNOLOGY**(MLT) 238 (8)**

CLINICAL PRACTICE II (35 LAB.)

Prerequisite: "C" average in Medical Laboratory Technology 229 and 231 with an overall "C" average in non-technical course work. This course provides supervised experience in diagnostic microbiology and clinical chemistry. The student is assigned to a clinical laboratory.

MOTORCYCLE MECHANICS (MM)**104 (3)**

MOTORCYCLE SERVICE PRINCIPLES (90 CONTACT HRS.)

This course includes the principles of operation and failure analysis of two and four cycle engines. The principles of basic electricity as applied to motorcycles are also covered. Laboratory fee.

MOTORCYCLE MECHANICS (MM)**105 (3)**

MOTORCYCLE TUNE-UP (90 CONTACT HRS.)

This course covers the tune-up procedures for two and four cycle motorcycles, including ignition service, carburetion theory and service, and complete adjustment procedures. Laboratory fee.

MOTORCYCLE MECHANICS (MM)**106 (3)**

MOTORCYCLE TWO STROKE ENGINE/TRANSMISSION (90 CONTACT HRS.)

This course includes overhaul procedures for two stroke motorcycle engines and transmissions. Laboratory fee.

MOTORCYCLE MECHANICS (MM)**107 (3)**

MOTORCYCLE FOUR STROKE ENGINE/TRANSMISSION (90 CONTACT HRS.)

This course includes overhaul procedures for four stroke motorcycle engines and transmissions. Laboratory fee.

MOTORCYCLE MECHANICS (MM)**108 (3)**

MOTORCYCLE ELECTRICAL SYSTEMS (90 CONTACT HRS.)

This course includes motorcycle ignition and charging systems. Also included are the theory of operation and troubleshooting procedures for motorcycle ignition, charging systems, and accessories. Laboratory fee.

MOTORCYCLE MECHANICS (MM)**109 (3)**

MOTORCYCLE CHASSIS AND DRIVE SYSTEMS (90 CONTACT HRS.)

Included in this course is the theory of operation and service procedures for motorcycle front and rear suspensions, wheel and brake systems, and final drives. Laboratory fee.

MOTORCYCLE MECHANICS (MM)**703 (3)**

(See Cooperative Work Experience)

MOTORCYCLE MECHANICS (MM)**704 (4)**

(See Cooperative Work Experience)

MUSIC (MUS) 101 (4)

FRESHMAN THEORY (3 LEC., 3 LAB.)

Musicianship skills are developed. Emphasis is on tonal and rhythmic perception and articulation. The essential elements of music are presented, and sight-singing, keyboard, and notation are introduced.

MUSIC (MUS) 102 (4)

FRESHMAN THEORY (3 LEC., 3 LAB.)

Prerequisite: Music 101 or the consent of the instructor. This course introduces part-writing and harmonization with triads and their inversions. Also included are the classification of chords, seventh chords, sight-singing, dictation, and keyboard harmony.

MUSIC (MUS) 103 (1)

GUITAR ENSEMBLE (3 LAB.)

Music composed and arranged for a guitar ensemble is performed. Works for a guitar and a different instrument or for guitar and a voice are also included. This course may be repeated for credit.

MUSIC (MUS) 104 (3)

MUSIC APPRECIATION (3 LEC.)

The basic elements of music are surveyed and examined in the music literature of western civilization, particularly from the Baroque Period to the present. Cultural influences on the music of each era are observed.

MUSIC (MUS) 105 (1)

ITALIAN DICTION (2 LAB.)

The phonetic sounds of the Italian language are studied. Included is selected vocabulary. This course is primarily for voice majors.

MUSIC (MUS) 106 (1)

FRENCH DICTION (2 LAB.)

The phonetic sounds of the French language are studied. Included is selected vocabulary. This course is primarily for voice majors.

MUSIC (MUS) 107 (1)

GERMAN DICTION (2 LAB.)

The phonetic sounds of the German language are studied. Included is selected vocabulary. This course is primarily for voice majors.

MUSIC (MUS) 110 (3)

MUSIC LITERATURE (3 LEC.)

The music of recognized composers in the major periods of music history is examined. Topics include the charac-

teristics of sound, elements of music, performance media, and musical texture. Emphasis is on the music of the late Gothic, Renaissance and Baroque eras.

MUSIC (MUS) 111 (3)

MUSIC LITERATURE (3 LEC.)

Prerequisite: Music 110. This course is a continuation of Music 110. The compositional procedures and forms used by composers are studied. Emphasis is on the Classical, Romantic, and Modern periods.

MUSIC (MUS) 112 (3)

GUITAR LITERATURE AND MATERIALS (3 LEC.)

The body of music for the guitar is surveyed. Emphasis is on the repertoire of instruments in the guitar family, such as the lute. Transcription and arranging are studied as well as the selection of a program for public performance.

MUSIC (MUS) 113 (3)

FOUNDATIONS OF MUSIC I (3 LEC.)

This course focuses on participation and skills for satisfactory performance in singing, playing an instrument, listening, and creating rhythmic responses. The ability to manage notation (music reading) is developed.

MUSIC (MUS) 114 (3)

FOUNDATIONS IN MUSIC II (3 LEC.)

Prerequisite: Music 113. This course prepares students with limited music training for Music 101 and increases their general music understanding. Emphasis is on rhythmic and melodic training, chord functions, melody, textures, and basic analysis of music.

MUSIC (MUS) 115 (2)

JAZZ IMPROVISATION (1 LEC., 2 LAB.)

The art of improvisation is introduced. Basic materials, aural training, analysis, and common styles are presented. This course may be repeated for credit.

MUSIC (MUS) 117 (1)

PIANO CLASS I (2 LAB.)

This course is primarily for students with no knowledge of piano skills. It



develops basic musicianship and piano skills. This course may be repeated for credit.

MUSIC (MUS) 118 (1)

PIANO CLASS II (2 LAB.)

The study of piano is continued. Included are techniques, skills, harmonization, transposition, improvisation, accompanying, sight-reading, and performing various styles of repertoire. This course may be repeated for credit.

MUSIC (MUS) 119 (1)

GUITAR CLASS I (2 LAB.)

This course is primarily for students with limited knowledge in reading music or playing the guitar. It develops basic guitar skills. This course may be repeated for credit.

MUSIC (MUS) 120 (1)

GUITAR CLASS II (2 LAB.)

Prerequisite Music 119 or the equivalent. This course is a continuation of Music 119. Emphasis is on classical guitar techniques and music reading skills. This course may be repeated for credit.

MUSIC (MUS) 121-143 (1)

APPLIED MUSIC-MINOR (1 LEC.)

This course is open to students enrolled in music theory, ensembles, and other music major and minor courses. It provides private instruction in the student's secondary area and consists of a one-half hour lesson a week. Fee required. Private music may be repeated for credit.

MUSIC (MUS) 150 (1)

CHORUS (3 LAB.)

Prerequisite: Consent of instructor. A wide variety of music representing the literature of the great eras of music history is studied and performed. This course may be repeated for credit.

MUSIC (MUS) 151 (1)

VOICE CLASS I (2 LAB.)

This course is for non-voice majors. It presents the principles of breathing, voice production, tone control, enunciation, and phrasing in two group lessons a week. This course may be repeated for credit.

MUSIC (MUS) 152 (1)

VOICE CLASS II (2 LAB.)

This course is a continuation of Music 151. It is open to all non-voice majors. Emphasis is on solo singing, appearance in studio recital, stage deportment, and personality development. Two group lessons are given a week. This course may be repeated for credit.

MUSIC (MUS) 155 (1)

VOCAL ENSEMBLE (3 LAB.)

A group of mixed voices concentrates on excellence of performance. Membership is open to any student by audition. The director selects those who possess special interest and skill in the performance of advanced choral literature. This course may be repeated for credit.

MUSIC (MUS) 156 (1)

MADRIGAL SINGERS (3 LAB.)

A group of vocalists read and perform literature for small ensembles. Membership is by audition with the appropriate director. This course may be repeated for credit.

MUSIC (MUS) 160 (1)

BAND (3 LAB.)

Prerequisite: The consent of the instructor is required for non-wind instrument majors. The band studies and performs a wide variety of music in all areas of band literature. This course may be repeated for credit.

MUSIC (MUS) 170 (1)

ORCHESTRA (3 LAB.)

Experience is provided in performing and reading orchestral literature and in participating in the college orchestra. This course may be repeated for credit.

MUSIC (MUS) 171 (1)

WOODWIND ENSEMBLE (3 LAB.)

A group of woodwind instrumentalists read and perform literature for small ensembles. Membership is by audition with the appropriate director. This course may be repeated for credit.

MUSIC (MUS) 172 (1)

BRASS ENSEMBLE (3 LAB.)

A group of brass instrumentalists read and perform literature for small ensembles. Membership is by audition with the appropriate director. This course may be repeated for credit.

MUSIC (MUS) 173 (1)

PERCUSSION ENSEMBLE (3 LAB.)

A group of percussion instrumentalists read and perform literature for small ensembles. Membership is by audition with the appropriate director. This course may be repeated for credit.

MUSIC (MUS) 174 (1)

KEYBOARD ENSEMBLE (3 LAB.)

A group of keyboard instrumentalists read and perform literature for small ensembles. Membership is by audition with the appropriate director. This course may be repeated for credit.

MUSIC (MUS) 175 (1)

STRING ENSEMBLE (3 LAB.)

A group of string instrumentalists read and perform literature for small ensembles. Membership is by audition with the appropriate director. This course may be repeated for credit.

MUSIC (MUS) 176 (1)

SYMPHONIC WIND ENSEMBLE (3 LAB.)

In the symphonic wind ensemble students study and perform stylistic literature of all periods. This course may be repeated for credit.

MUSIC (MUS) 177 (1)

CHAMBER ENSEMBLE (3 LAB.)

A group of chamber instrumentalists or vocalists read and perform literature for small ensembles. Membership is by audition with the appropriate director. This course may be repeated for credit.

MUSIC (MUS) 181 (1)

LAB BAND (3 LAB.)

Prerequisite: The consent of the instructor. In the Lab Band students study and perform all forms of commercial music, such as jazz, pop, avant-garde, and soul. Student arranging, composing, and conducting is encouraged. This course may be repeated for credit.

MUSIC (MUS) 185 (1)

STAGE BAND (3 LAB.)

Prerequisite: The consent of the instructor. In the Stage Band students study and perform a wide variety of music. Emphasis is on the jazz-oriented, big-band styles of the 1960's. This may be repeated for credit.

MUSIC (MUS) 190 (2)

SURVEY OF RECORDING (2 LEC.)

This descriptive course includes an introduction to audio recording. This introduction includes the nature of sound, operation of recording equipment, session procedures, studio techniques, simultaneous recording, and multi-track recording.

MUSIC (MUS) 191 (1)

SURVEY OF RECORDING LABORATORY (48 CONTACT HRS.)

Prerequisite: Successful completion of or concurrent enrollment in Music 190. This course parallels Music 190 and provides students with laboratory experiments in the operation of recording equipment, session procedures, and audio techniques. The course also includes acoustic and electronic theory. Laboratory fee.

MUSIC (MUS) 192 (3)

MUSIC IN AMERICA (3 LEC.)

American music and musicians from early times to the present are surveyed. Various styles and periods are covered. Religious, folk, jazz, rock, musical theatre, and contemporary developments are included.

MUSIC (MUS) 193 (3)

IMPROVISATION (3 LEC.)

The creation of spontaneous melodic and harmonic ideas and the translation of these ideas into notation are emphasized. Using scales and modes, the instrumentalist improvises on his/her major instrument. The vocalist uses scat singing techniques. Analysis of transcribed solos and student transcriptions are included.

MUSIC (MUS) 194 (3)

JAZZ WORKSHOP (3 LEC.)

This course is for the advanced instrumentalist and vocalist. Jazz is performed in recitals and scheduled functions. Discussion, analysis, writing, rehearsing, improvising, and style are emphasized. Articulating, phrasing, and conducting jazz compositions are discussed with guest artist who work and perform with the group periodically.

MUSIC (MUS) 195 (2)

INTRODUCTION TO SYNTHESIZER (2 LEC.)

The elements of electronically produced music are studied. Emphasis is on the musical aspects of synthesized sound. Topics include theory, basic waveforms, frequency and frequency modulation, amplitude modulation, envelope generators, filters, white noise, pink noise, and patch diagramming.

MUSIC (MUS) 196 (3)

BUSINESS OF MUSIC (3 LEC.)

The world of the music industry is presented. Panels, guest artists, and consultants discuss careers in the recording and performing fields and retail music business. Publishing, copyrights and other legalities, agents, managers, showmanship, and con-

ducting techniques necessary for small and large ensemble work are included.

MUSIC (MUS) 197 (2)

STUDIO TECHNOLOGY (2 LEC.)

Prerequisite: Music 190 and Music 191 or the consent of the instructor. This course is an intensive study of the theory of studio, microphone, and multi-track mixdown techniques.

MUSIC (MUS) 198 (1)

STUDIO TECHNOLOGY LABORATORY (48 CONTACT HRS.)

Prerequisite: Completion of or concurrent enrollment in Music 197 or the consent of the instructor. This course reinforces, by application and demonstration, the theory covered in Music 197. By the end of this course, a student is able to perform the basic operations necessary to operate a multi-track studio. Laboratory fee.

MUSIC (MUS) 199 (1)

RECITAL (2 LAB.)

Students of private lessons perform before an audience one period each week. Credit for this course does not apply to the Associate Degree. This course may be repeated for credit.

MUSIC (MUS) 201 (4)

SOPHOMORE THEORY (3 LEC., 3 LAB.)

Prerequisite: Music 101 and 102 or the consent of the instructor. This course is a continuation of the study of theory. Topics include larger forms, thematic development, chromatic chords such as the Neapolitan sixth and augmented sixth chords, and diatonic seventh chords. Advanced sight-singing, keyboard harmony, and ear training are also included.

MUSIC (MUS) 202 (4)

SOPHOMORE THEORY (3 LEC., 3 LAB.)

Prerequisite: Music 201 or the equivalent or the consent of the instructor. This course is a continuation of Music 201. Topics include the sonata-allegro form and the ninth, eleventh, and thirteenth chords. New key schemes, impressionism, melody, harmony, tonality and formal processes of 20th century music are also included. Sight-singing, keyboard harmony, and ear training are developed further.

MUSIC (MUS) 203 (3)

COMPOSITION (3 LEC.)

Prerequisite: Music 101 and 102 or the consent of the instructor. This course covers composing in small forms for simple media in both traditional styles and styles of the student's choice. The course may be repeated for credit.

MUSIC (MUS) 204 (2)

GUITAR PEDAGOGY (2 LEC.)

Guitar method books are surveyed. Emphasis is on the strengths and weaknesses of each method. Structuring lessons and optimizing each individual teacher-student relationship are also discussed.

MUSIC (MUS) 217 (1)

PIANO CLASS III (2 LAB.)

Prerequisite: Music 118 or the equivalent. This course is a continuation of functional keyboard skills, including harmonization, sightreading, accompanying styles, improvisation, and technical exercises. It is designed for the music major preparing for the piano proficiency exam, but is also open to any interested student. It is recommended that music majors also study privately.

MUSIC (MUS) 218 (1)

PIANO CLASS IV (2 LAB.)

Prerequisite: Music 217 or the equivalent. This course is a continuation of functional keyboard skills in Music 217 with greater emphasis on advanced harmonization and appropriate technical skills. It is designed as a prepara-

tion for the piano proficiency exam for the music major, but is also open to any interested student. It is recommended that music majors also study privately.

MUSIC (MUS) 221-243 (2)

APPLIED MUSIC-CONCENTRATION (1 LEC.)

This course is open to students enrolled in music theory, ensembles, and other music major and minor courses. It provides private instruction in the area of the student's concentration and consists of two half-hour lessons a week. Fee required. Private music may be repeated for credit.

MUSIC (MUS) 251-270 (3)

APPLIED MUSIC-MAJOR (1 LEC.)

This course is primarily for music performance majors and is open to students enrolled in music theory, ensembles, and other music major and minor courses. It provides private instruction in the area of the student's major instrument, and consists of two half-hour lessons a week. Fee required.

MUSIC (MUS) 292 (3)

ARRANGING/ORCHESTRATION (3 LEC.)

The knowledge of ranges and the ability to transpose for instruments, to write for voices, and to plan and execute an arrangement is developed. Standard copying techniques, chord voicing, large ensemble writing and combo writing, and use of strings (simulated by string synthesizer) are also included.

MUSIC (MUS) 293 (3)

INDEPENDENT STUDY (3 LEC.)

This course is for advanced work in music and is designed to meet specific needs of the student. On approval of the instructor and division chairperson, the student prepares and executes a written contract (proposal for learning). Credit is given upon completion of all aspects of the contract. This course may be repeated for credit.

MUSIC (MUS) 295 (2)ADVANCED SYNTHESIZER
TECHNIQUES (2 LEC.)

This course is limited to students who display promise in synthesizer composition or performance. Two major works are composed for the synthesizer and one for the synthesizer and traditional media.

MUSIC (MUS) 296 (3)RECORDING STUDIO PRACTICES (2 LEC., 3
LAB.)

Prerequisite: Music 197 and Music 198. The lecture portion of this course concentrates on the artistic and stylistic considerations of audio recording. The laboratory portion translates these considerations into class projects. Laboratory fee.

MUSIC (MUS) 297 (3)

STUDIO PRODUCTION (2 LEC., 3 LAB.)

Prerequisite: Music 296. In this course students produce, engineer, mix, set-up, and perform in actual recording sessions. Samples for portfolios may be acquired. Laboratory fee.

MUSIC**(MUS) 803, 813 (3)**

(See Cooperative Work Experience)

MUSIC**(MUS) 804, 814 (4)**

(See Cooperative Work Experience)

NURSING (NUR) 141 (7)

NURSING I (4 LEC., 11 LAB.)

Prerequisites: Admission to the program and "C" grade in Biology 120 or 221. "C" grade or concurrent enrollment in Biology 121 or 222, Psychology 105 and English 101. Nursing I is the basic course in nursing which serves as a foundation on which other nursing courses will build and expand. Included are introduction to nursing as a profession, the nursing process, communication, health teaching, and basic technical skills. Based on an integrated approach, concepts of health, illness, growth and development, basic human needs, the family, stress, pain, and loss are explored in all age groups. Selected clinical experiences will enable the

student to begin to assess patients, plan, implement and evaluate nursing care for all age groups. A system of measurements competency is a required component of the pharmacology introduction. Laboratory fee.

NURSING (NUR) 142 (7)

NURSING II (4 LEC., 11 LAB.)

Prerequisites: "C" grade in Nursing 141, Biology 120 or 221, Biology 121 or 222, Psychology 105 and English 101. "C" grade or concurrent enrollment in Microbiology 216, Psychology 201 and English 102. Nursing II focuses on application of the basic principles, concepts, and skills from Nursing I. Included is medication administration and intravenous fluid therapy. Psychological and physiological stress is further explored with discussion of the nursing care of patients experiencing pregnancy, delivery including care of the newborn, surgery, abnormal cell proliferation, impaired nutrition, and maladaptive behavior in all age groups. An application of pharmacology dosage and solution competency is a required component of this course. Laboratory fee.

NURSING (NUR) 240 (4)

NURSING III (7 LEC., 15 LAB.)

Prerequisites: "C" grade in Nursing 141, 142, Biology 120 or 221, 121 or 222, Microbiology 216, Psychology 105, 201, and English 101. "C" grade in Nursing 250 and completion of Sociology 101 is required for the January admission curriculum plan. Nursing III emphasizes application of the nursing process to the care of the postpartum patient, patients experiencing crisis, and patients exhibiting psychotic behavior. Selected clinical experiences include a psychiatric rotation. Nursing 250 precedes Nursing 240 in the January admission curriculum plan. Laboratory fee.

NURSING (NUR) 250 (9)

NURSING IV (5 LEC., 12 LAB.)

Prerequisites: "C" grade in Nursing 141, 142, Biology 120 or 221, 121 or 222, Microbiology 216, Psychology 105, 201 and English 101, 102. "C" grade in Nursing 240 for August admission curriculum plan. "C" grade or concurrent enrollment in Sociology 101. Nursing IV emphasizes a conceptual approach to care of patients in all age groups with complex health care needs pertaining to immobility, problems of moderately impaired oxygen exchange, immunological/inflammatory response, and elimination. Selected clinical experiences focus on application of the nursing process with emphasis on priority setting. A pharmacology application competency is a required component of this course. Laboratory fee.

NURSING (NUR) 255 (9)

NURSING V (5 LEC., 12 LAB.)

Prerequisites: "C" grade in Nursing 141, 142, 240, 250, Biology 120 or 221, 121 or 222, Microbiology 216, Psychology 105, 201, English 101, 102, and Sociology 101. Credit or concurrent enrollment in elective above 100 level. Nursing V emphasizes a conceptual approach to care of patients in all age groups with problems of sensory deprivation and overload, severely impaired oxygen exchange, and severe fluid and electrolyte imbalance. The role transition process and current issues affecting the practice of nursing are explored. Selected clinical experiences focus on continued application of the nursing process to a group of patients, stressing independent decision-making. A pharmacology application competency is a required component of the course. Laboratory fee:

OFFICE CAREERS (INS) 108 (3)

PERSONAL AND COMMERCIAL AUTO INSURANCE (3 LEC.)

The principles of personal and commercial auto insurance are studied, including the general background of and need for these types of insurance. Terminology and

types of coverage are presented. Special emphasis is on rating, writing, billing, and servicing automobile insurance. Students develop skills in selling policies and processing claims. All forms used are those prescribed for and approved by the state of Texas. This is a fundamental course for underwriters, agents, claims adjusters, and clerical and technical personnel.

OFFICE CAREERS (INS) 109 (3)PERSONAL LINES—
HOMEOWNERS/FIRE/MARINE (3 LEC.)

This course is an introduction to the history of and need for homeowners, fire, and marine insurance. Terminology is studied and the fundamentals of coverage are included for all five of the homeowners' forms as well as for fire and marine insurance. Emphasis is on rating, writing, billing, and servicing homeowners, fire, and marine insurance. Students develop skills in selling policies and processing claims. All forms used are those prescribed for and approved by the state of Texas. This is a fundamental course for underwriters, agents, claims adjusters, and clerical and technical personnel.

OFFICE CAREERS (INS) 110 (3)COMMERCIAL CASUALTY, WORKERS
COMPENSATION GENERAL LIABILITY AND
CRIME (3 LEC.)

Prerequisites: Office Careers 108 and Office Careers 109 or the consent of the instructor. The basic facts of casualty insurance worker's compensation, general liability and crime are introduced including its development, policy structures, and provisions of the contracts. Coverage of various worker's compensation laws is presented as well as analysis of policy and rates. The general liability line is examined including manufacturers and contractors; owners, landlords, and tenants; and others. Crime coverage usual to the TMP are examined. The step-by-step procedure for classifying and rating is studied. All forms used are those prescribed for and approved by the state of Texas. This is a fundamental course for underwriters, agents, claims adjusters and clerical and technical personnel.

OFFICE CAREER (INS) 111 (3)

TMP COMMERCIAL FIRE/COMMERCIAL MARINE AND FIDELITY BOND (3 LEC.)

Prerequisites: Credit in or concurrent enrollment in Office Careers 110.

This course is a study of the principles of TMP, including the history of and need for TMP. Emphasis is on commercial fire, commercial marine and fidelity bond. Terminology and basic coverage are introduced. Multiple line policies available for commercial enterprises are analyzed, including forms, rating methods, and trends. The method of determining fire insurance rates for commercial properties and of eliminating or reducing specific changes are presented. The effect on rates of construction, protective devices, exposures, etc., are covered.

Marine and fidelity coverages usual to the TMP are examined. The scope of the coverage, exclusions and classification procedures are studied.

All forms used are those prescribed for and approved by the state of Texas. This is a fundamental course for underwriters, agents, claims adjusters, and clerical and technical personnel.

OFFICE CAREERS (INS) 209 (3)

PRINCIPLES OF INSURANCE (3 LEC.)

This course surveys the insurance needs of business and industry. Life, property, and casualty insurance are covered. Emphasis is on a systematic approach to risk management. Topics include credit life insurance, key-person insurance, worker's compensation, and title insurance. Also covered is insurance for property, auto, accounts receivable for property, auto accounts receivable, business interruption, and accident and health, business liability, and bonding.

OFFICE CAREERS (OFC) 103 (4)

SPEEDWRITING THEORY (3 LEC., 2 LAB.)

Prerequisite: Credit or concurrent enrollment in Office Careers 172 or one year of Typing. The principles of speedwriting are introduced. Included is the development of the ability to read, write and transcribe speedwriting notes. Basic spelling, grammar and punctuation rules are reviewed.

OFFICE CAREERS (OFC) 104 (3)

SPEEDWRITING DICTATION AND TRANSCRIPTION (3 LEC.)

Prerequisite: Office Career 103, Office Careers 172, or one year of Typing. Principles of speedwriting are applied to build dictation speed and transcription rate. Special attention is given to the review of grammar, spelling and punctuation rules.

OFFICE CAREERS (OFC) 140 (3)

EDUCATIONAL PROCESSES (3 LEC.)

This course surveys educational processes from pre-school through college. Both public and private education is included. Emphasis is on the contribution and influence made by education on the culture and the economy.

OFFICE CAREERS (OFC) 141 (3)

CURRENT PRACTICAL PROBLEMS (3 LEC.)

School organization, procedures, and staff utilization are examined. The solution of problems is emphasized.

OFFICE CAREERS (OFC) 143 (1)

CONTEMPORARY TOPICS IN OFFICE CAREERS (1 LEC.)

Prerequisite: The consent of the instructor. This course emphasizes current topics of interest in office career fields. Realistic solutions to problems relevant to the needs of industry are presented. This course may be repeated for credit with different emphasis up to six hours.

OFFICE CAREERS (OFC) 150 (3)

FILING PRACTICES (2 LEC., 2 LAB.)

This course introduces the basic principles and procedures of records storage and control. Topics include records storage methods; procedures for the operation and control of manual and automated storage systems; rules for indexing; and principles for the selection of records equipment and supplies.

OFFICE CAREERS (OFC) 152 (3)
INTRODUCTION TO RECORDS MANAGEMENT (3 LEC.)

A survey course in the policies and principles affecting the creation, protection, circulation, retrieval, preservation and control of business and institutional records. The course includes basic classification systems, history and status of records management, retention and disposition of records, maintenance procedures and career ladders.

OFFICE CAREERS (OFC) 159 (4)
BEGINNING SHORTHAND (3 LEC., 2 LAB.)

Prerequisites: Credit or concurrent enrollment in Office Careers 172 or one year of typing in high school. The principles of Gregg Shorthand are introduced. Included is the development of the ability to read, write, and transcribe shorthand outlines. Knowledge of the mechanics of English is also developed. Laboratory fee.

OFFICE CAREERS (OFC) 160 (3)
OFFICE MACHINES (3 LEC.)

This course focuses on the development of skills in using office machines. Adding machines, printing calculators, electronic display calculators, and electronic printing calculators are included. Emphasis is on developing the touch system for both speed and accuracy.

OFFICE CAREERS (OFC) 162 (3)
OFFICE PROCEDURES (3 LEC.)

Prerequisite: Office Careers 172 or one year of typing in high school. The duties, responsibilities, and personal qualifications of the office worker are emphasized. Topics include filing, reprographics, mail, telephone, financial transactions, and job applications.

OFFICE CAREERS (OFC) 165 (3)
INTRODUCTION TO WORD PROCESSING (3 LEC.)

Prerequisite: Office Careers 174 or concurrent enrollment in Office Careers 174. This course introduces word processing and describes its effect on traditional office operations.

Word processing terminology and concepts for organizing word processing centers are studied. Training in the transcription and distribution of business communications is provided. English skills and mechanics are reinforced.

OFFICE CAREERS (OFC) 166 (4)
INTERMEDIATE SHORTHAND (3 LEC., 2 LAB.)

Prerequisites: Office Careers 159 or one year of shorthand in high school, Office Careers 172 or one year of typing in high school. The principles of Gregg Shorthand are studied. Emphasis is on increased speed dictation, accuracy in typing from shorthand notes, and beginning techniques of transcription skills. Also included are oral reading, speedbuilding, and grammar. Laboratory fee.

OFFICE CAREERS (OFC) 167 (3)
LEGAL TERMINOLOGY AND TRANSCRIPTION (3 LEC.)

Prerequisite: Completion of Office Careers 174 or typing speed of 50 words per minute; completion of Office Careers 165. Legal terms are the focus of this course. Included are the spelling and use of legal terms and Latin words and phrases. Intensive practice is provided in building speed and accuracy in the transcription of legal terms.

OFFICE CAREERS (OFC) 172 (3)
BEGINNING TYPEWRITING (2 LEC., 3 LAB.)

This course is for students with no previous training in typewriting. Fundamental techniques in typewriting are developed. The skills of typing manuscripts, business letters, and tabulations are introduced. Laboratory fee.

OFFICE CAREERS (OFC) 174 (2)
INTERMEDIATE TYPEWRITING (1 LEC., 2 LAB.)

Prerequisites: Office Careers 172 or one year of typing in high school. Typing techniques are developed further. Emphasis is on problem solving. Increasing speed and accuracy in typing business forms, correspondence, and manuscripts is also covered. Laboratory fee.

OFFICE CAREERS (OFC) 176 (1)

BEGINNING TYPING I (1 LEC., 1 LAB.)

This course is for students with no previous training in typing. The course introduces the typewriter parts. Alphabetic keys, numeric keys, and symbol keys are covered. Fundamental techniques are refined, and speed is developed.

OFFICE CAREERS (OFC) 177 (1)

BEGINNING TYPING II (1 LEC.)

Prerequisite: Office Careers 176. Practical techniques for business correspondence are developed. Memorandums, personal letters, and business letters are covered. Exercises to increase skill are stressed.

OFFICE CAREERS (OFC) 178 (1)

BEGINNING TYPING III (2 LAB.)

Prerequisite: Office Careers 176. The typing of manuscripts and tables is emphasized. Production typing is included, and proper report typing is developed. Exercises to increase skill are also included.

OFFICE CAREERS (OFC) 187 (2)

INTERMEDIATE SHORTHAND I (2 Lec.)

Prerequisite: Prior shorthand experience equivalent to office careers 159 or one year in high school. This course is for students who have a basic knowledge of Gregg Shorthand Theory and ability to take dictation at approximately 50 words per minute. The course is a review of selected shorthand phrases, brief forms, word families, and word beginnings and endings. Included are the proper use of basic punctuation, typing format, and simple business letters.

OFFICE CAREERS (OFC) 188 (1)

INTERMEDIATE SHORTHAND II (1 LEC.)

This course is designed for students who have a sound knowledge of Gregg Shorthand Theory and the ability to take dictation at approximately 70-80 words per minute. The course is a review of selected shorthand phrases, brief forms, word families, and word



beginnings and endings. The typing of accurate and attractive letters from shorthand notes is emphasized.

OFFICE CAREERS (OFC) 189 (1)

INTERMEDIATE SHORTHAND III (2 LAB.)

This course is designed for students who have a thorough and complete knowledge of Gregg Shorthand Theory and are interested in increasing speed. Special attention is on producing mailable letters within certain time periods. The dictation speed is flexible and depends on student abilities.

OFFICE CAREERS (OFC) 192 (1)

OFFICE MACHINES I (1 LEC.)

Business mathematical skills needed to operate office machines are reviewed. Ten-key touch development is introduced. Speed development is incorporated with accuracy requirements.

OFFICE CAREERS (OFC) 193 (1)

OFFICE MACHINES II (1 LEC.)

Prerequisite: Office Careers 192. This course covers extensive training on the basic office machines. Speed development and business applications are included.

OFFICE CAREERS (OFC) 194. (1)

OFFICE MACHINES III (1 LEC.)

Prerequisite: Office Careers 192. Extensive training on basic office machines is continued. Speed development and business applications are stressed.

OFFICE CAREERS (OFC) 231 (3)

BUSINESS COMMUNICATIONS (3 LEC.)

Prerequisites: Credit in Office Careers 172 or one year of typing in high school; credit in Communications 131 or English 101. This practical course includes a study of letter forms, the mechanics of writing and the composition of various types of communications. A critical analysis of the appearance and content of representative business correspondence is made.

OFFICE CAREERS (OFC) 250 (3)

RECORDS CONTROL (3 LEC.)

Prerequisite: Office Careers 152. This course includes a comprehensive study and application of the knowledge and skills involved in the control of records and record systems. The course includes the control procedures for the management of routine and unique correspondence, directives, proposals, reports and forms, inventory, scheduling, vital records control, records storage centers, and archives.

OFFICE CAREERS (OFC) 252 (3)

MICROGRAPHICS (3 LEC.)

Prerequisites: Office Careers 152. Microform (microfilm, microfiche, jacket, aperture card and COM) selection, recording, retrieval, and reproduction and technologies in an information system are studied. Special emphasis is on micrographic systems, system design, and micrographic standards.

OFFICE CAREERS (OFC) 256 (3)

OFFICE MANAGEMENT (3 LEC.)

This course focuses on the organization, design, and control of office activities. Topics include office practice, office services, and wage payment plans. The selection, training and supervision of employees are covered. Office planning, organizing, and controlling techniques are presented. Responsibilities of the office manager are also included.

OFFICE CAREERS (OFC) 265 (3)

WORD PROCESSING PRACTICES AND PROCEDURES (3 LEC.)

Prerequisite: Office Careers 165. This course concerns translating ideas into words, putting those words on paper, and turning that paper into communication. Emphasis is on training in composing and dictating business communications. Teamwork skills, priorities, scheduling, and procedures are included. Researching, storing, retrieving documents, and managing word processing systems are also covered. Transcribing and magnetic keyboarding skills are developed. Typing skills and English mechanics are reinforced.

OFFICE CAREERS (OFC) 266 (4)

ADVANCED SHORTHAND (3 LEC., 2 LAB.)

Prerequisites: Office Careers 166 or two years of shorthand in high school, Office Careers 174 or two years of typing in high school. Emphasis is on building dictation speed. Producing mailable, typed transcriptions under timed conditions is also stressed. Vocabulary and extensive production work capabilities are developed. Laboratory fee.

OFFICE CAREERS (OFC) 273 (2)

ADVANCED TYPEWRITING (1 LEC., 2 LAB.)

Prerequisites: Office Careers 174 or two years of typing in high school. Decisionmaking and production of all types of business materials under timed conditions are emphasized. A continuation of skill development and a review of typing techniques are also stressed. Accuracy at advanced speeds is demanded. Laboratory fee.

OFFICE CAREERS (OFC) 274 (3)LEGAL SECRETARIAL
PROCEDURES (3 LEC.)

Prerequisite: Office Careers 174 or typing speed of 50 words per minute; Office Careers 166 or shorthand dictation speed of 80 words per minute. This course focuses on procedures of the legal secretary. Topics include reminder and filing systems, telephone usage, dictation and correspondence, the preparation of legal documents, and the court system. Client contacts, use of the law library, research techniques, timekeeping, billing, bookkeeping, and ethics are also covered. Ways to obtain a position as a Legal Secretary are described.

OFFICE CAREERS (OFC) 275 (3)SECRETARIAL PROCEDURES
(48 CONTACT HOURS)

Prerequisites: Credit or concurrent enrollment in Office Careers 174, credit or concurrent enrollment in either Office Careers 166 or Office Careers 265. Emphasis is on initiative, creative thinking, and follow-through. Topics include in-basket exercises, decision-making problems, and use of shorthand and transcription skills. Public and personal relations, supervisory principles, business ethics, and the organizing of time and work are also covered.

**OFFICE CAREERS
(OFC) 713, 803, 813 (3)**

(See Cooperative Work Experience)

**OFFICE CAREERS
(OFC) 714, 804, 814 (4)**

(See Cooperative Work Experience)

OPTICAL TECHNOLOGY**(OPT) 101 (3)**

OPHTHALMIC MATERIALS (3 LEC.)

The history and development of glass and plastic are reviewed. Basic optical terminology and ophthalmic lens types are introduced. Lens curvature, powers thickness, and prisms are calculated. Adaptation of lenses in the opticianary and the use of optical charts and graphs are also covered.

OPTICAL TECHNOLOGY**(OPT) 102 (3)**OPHTHALMIC GRINDING AND
POLISHING (2 LEC., 2 LAB.)

The functions of optical lens grinding and lens polishing machines are presented. Computations are made for grinding lenses, and the use of optical tools and gauges is studied. Methods are covered for laying out and marking single vision and multifocal lens blanks. Grinding and polishing spherical and cylindrical surfaces are practiced, and the lens generating machine is operated. Laboratory fee.

OPTICAL TECHNOLOGY**(OPT) 103 (3)**OPTICAL LENS DESIGN AND
MEASUREMENTS (3 LEC.)

This course covers lens design and the correction of visual deficiencies according to the refractionist's prescription. Topics include spectacle frame measurements and sizes, methods used to prepare lenses prior to edging, neutralization and duplication of lenses by use of the lensometer/vertometer, and optical standards and tolerances.

OPTICAL TECHNOLOGY**(OPT) 104 (3)**OPTICAL LENS AND FRAME
SELECTION (2 LEC., 2 LAB.)

The preparation of lenses and frames is covered. Laboratory orders are prepared prior to edging lenses. Ophthalmic lenses are neutralized and duplicated by means of the vertometer/lensometer. Spectacle frames and patterns are identified. Proper tools and lens blanks are selected. Hand edging, and fitting spherical lenses into plastic and metal frames are also covered. Laboratory fee.

OPTICAL TECHNOLOGY**(OPT) 205 (3)**

ANATOMY AND PHYSIOLOGY OF THE EYE (3 LEC.)

The anatomy of the eye and its structures are studied. Included are the lid, cornea, lens, and retina. Also included are refractive errors and their correction, accommodation and convergence, presbyopia and aphakia, common eye diseases, binocular vision, and eye muscle imbalances.

OPTICAL TECHNOLOGY**(OPT) 206 (3)**

INTRODUCTION TO CONTACT LENSES (3 LEC.)

The history, theory, and basic design of contact lenses are presented. Fundamental fitting rules and techniques are covered. Fluorescein patterns, evaluation of the fit of contact lenses and the keratometer fitting procedure are also covered.

OPTICAL TECHNOLOGY**(OPT) 207 (3)**

BIFOCALS AND TRIFOCALS LENSES (2 LEC., 2 LAB.)

All aspects of bifocals and trifocals lenses are examined. Processes include cutting and fitting of bifocals and trifocals into plastic and metal frames, handling plastic lenses, and drilling and mounting rimless glasses. Reconstructing and neutralizing lenses and glasses to analyze and duplicate unknown eyeglass prescriptions. Laboratory fee.

OPTICAL TECHNOLOGY**(OPT) 208 (3)**

OPHTHALMIC LABORATORY EQUIPMENT (2 LEC., 2 LAB.)

Various equipment is introduced and used. Processes include automatic edging and blocking, interpreting and analyzing shop orders, preparing compound lenses, creating prisms through decentration to fit prescription specification, and operation lens-hardening machines. Minor repairs to frames and temples and soldering of metal frames are also included. Laboratory fee.

OPTICAL TECHNOLOGY**(OPT) 209 (3)**

OPHTHALMIC DISPENSING ETHICS (3 LEC.)

The ethics, practices, and responsibilities of the ophthalmic worker are explored. Topics include the determination of patient needs, prescription analysis, and interpretation of single vision, multifocal and prism lenses. Considerations in making glasses for occupational use are also discussed, and tinted lenses and their uses are included.

OPTICAL TECHNOLOGY**(OPT) 210 (3)**

OPHTHALMIC FITTING (3 LEC.)

The psychology of dispensing eyewear is discussed. Style and fashion eyewear are included. Visual problems of the aphakic patient are explored. Consideration is given to the effects of illumination, size of type, and working distance on visual performance.

OPTICAL TECHNOLOGY**(OPT) 211 (3)**

OPTIC PRINCIPLES (3 LEC.)

This course examines optic principles. Topics include vibrations, properties of waves, wave motion, geometric and physical optics, Hugen's principle, Young's double-slit experiment, and optical instruments.

OPTICAL TECHNOLOGY**(OPT) 212 (3)**

OPHTHALMIC MEASUREMENT (2 LEC., 2 LAB.)

Ocular measurements are covered. Included are the uses of various measuring instruments. The principle and techniques of fitting and adjusting spectacles by means of optical pliers and other equipment are also included. Completed spectacles are evaluated for accuracy and quality. Laboratory fee.

OPTICAL TECHNOLOGY**(OPT) 213 (3)**

DISPENSING OCCUPATIONAL
EYEWEAR (2 LEC., 2 LAB.)

Dispensing procedures for bifocals and complex prescriptions are studied. Techniques of fitting and adjusting plastic, metal, and rimless spectacles are presented. Occupational eyewear and aids for patients with subnormal vision are also included. Magnifiers, loupes, and projection devices are demonstrated. Laboratory fee.

OPTICAL TECHNOLOGY**(OPT) 703, 713 (3)**

(See Cooperative Work Experience)

OPTICAL TECHNOLOGY**(OPT) 803, 813 (3)**

(See Cooperative Work Experience)

OUTBOARD ENGINE (OE) 114 (3)

OUTBOARD ENGINE SERVICE PRINCIPLES (90 CONTACT HRS.)

The principles of operation and failure analysis of two- and four-cycle engines are covered. The principles of basic electricity as applied to outboard engines are also covered. Laboratory fee.

OUTBOARD ENGINE (OE) 115 (3)

OUTBOARD ENGINE TUNE-UP (90 CONTACT HRS.)

The tune-up procedures for outboard engines including ignition service, carburetion theory and service, and complete adjustment procedures are included in this course. Laboratory fee.

OUTBOARD ENGINE (OE) 116 (3)

OUTBOARD ENGINE POWERHEAD OVERHAUL (90 CONTACT HRS.)

This course includes overhaul procedures for outboard powerheads. Laboratory fee.

OUTBOARD ENGINE (OE) 117 (3)

OUTBOARD ENGINE LOWER UNIT OVERHAUL (90 CONTACT HRS.)

The theory of operation, service, and overhaul procedures for manual, hydraulic, and electric shift lower units are covered. Laboratory fee.

OUTBOARD ENGINE (OE) 118 (3)

OUTBOARD ENGINE ELECTRICAL SYSTEMS (90 CONTACT HRS.)

The theory of operation and troubleshooting procedures for outboard engine ignition and charging systems and accessories are covered in this course. Laboratory fee.

OUTBOARD ENGINE (OE) 723 (3)

(See Cooperative Work Experience)

OUTBOARD ENGINE (OE) 724 (4)

(See Cooperative Work Experience)

PATTERN DESIGN (PDD) 151 (3)

PATTERN DRAFTING I (2 LEC., 4 LAB.)

The principles of drafting and draping basic patterns for collars, skirts, bodices, and sleeves are presented. Cutting out garments is also included. Laboratory fee.

PATTERN DESIGN (PDD) 152 (3)

PATTERN DRAFTING II (2 LEC., 4 LAB.)

Prerequisite: Pattern Design 151. Drafting and draping basic patterns for separates and dresses are covered. Basic techniques are developed in pattern grading. Laboratory fee.

PATTERN DESIGN (PDD) 153 (3)

PATTERN DRAFTING III (2 LEC., 4 LAB.)

Prerequisite: Pattern Design 152. Techniques are developed for drafting and draping patterns for girls, junior petite, and junior sizes. Laboratory fee.

PATTERN DESIGN (PDD) 254 (3)

PATTERN DRAFTING IV (2 LEC., 4 LAB.)

Prerequisite: Pattern Design 153. Techniques are developed for drafting and draping patterns for misses and half-sizes of casual, daytime dresses. Laboratory fee.

PATTERN DESIGN (PDD) 255 (3)

PATTERN DRAFTING V (2 LEC., 4 LAB.)

Prerequisite: Pattern Design 153.
Techniques are developed for drafting and draping patterns for junior sportswear and misses sportswear. Laboratory fee.

PATTERN DESIGN (PDD) 256 (3)

PATTERN DRAFTING VI (2 LEC., 4 LAB.)

Prerequisite: Pattern Design 153.
Techniques are developed for drafting and draping patterns for dressy dresses and lingerie. Laboratory fee.

PATTERN DESIGN (PDD) 257 (3)

PATTERN DRAFTING VII (2 LEC., 4 LAB.)

Prerequisite: Pattern Design 255.
Techniques are developed for drafting and draping patterns for misses and junior tailored garments. Laboratory fee.

PATTERN DESIGN (PDD) 812 (2)

(See Cooperative Work Experience)

PATTERN DESIGN (PDD) 813 (3)

(See Cooperative Work Experience)

PATTERN DESIGN (PDD) 814 (4)

(See Cooperative Work Experience)

PHILOSOPHY (PHI) 102 (3)

INTRODUCTION TO PHILOSOPHY (3 LEC.)

The fundamental problems in philosophy are surveyed. Methods to deal with the problems are discussed. Ancient and modern views are examined as possible solutions.

PHILOSOPHY (PHI) 105 (3)

LOGIC (3 LEC.)

The principles of logical thinking are analyzed. The methods and tools of logic are applied to real-life situations. Fallacies, definitions, analogies, syllogisms, Venn diagrams, and other topics are discussed.

PHILOSOPHY (PHI) 202 (3)

INTRODUCTION TO SOCIAL AND POLITICAL PHILOSOPHY (3 LEC.)

The relationships of philosophical ideas to the community are presented. Emphasis is on concepts of natural rights, justice, education, freedom, and responsibility.

PHILOSOPHY (PHI) 203 (3)

ETHICS (3 LEC.)

The classical and modern theories of the moral nature of the human are surveyed. Alternative views of responsibilities to self and society are posed. Ethical issues and their metaphysical and epistemological bases are vivified. Emphasis is on applying ethical principles in life.

PHILOSOPHY (PHI) 207 (3)

HISTORY OF ANCIENT PHILOSOPHY (3 LEC.)

The history of philosophy from pre-Socratic times to the Renaissance is examined. Connections are made between the pre-Socratics, Plato, and Aristotle. Stoicism, Epicureanism, and Scholasticism are considered.

PHILOSOPHY (PHI) 208 (3)

HISTORY OF MODERN PHILOSOPHY (3 LEC.)

The history of philosophy from the Renaissance through the 19th century is examined. Emphasis is on continental rationalism, British empiricism, Kantian metaphysics and epistemology, and the Hegelian system as it relates to 20th century philosophies. The historical relationship between these schools of thought is explored.

PHILOSOPHY (PHI) 210 (3)

STUDIES IN PHILOSOPHY (3 LEC.)

Prerequisite: 3 hours of philosophy and the consent of the instructor. A philosophical problem, movement, or special topic is studied. The course topic changes each semester. This course may be repeated for credit.

PHOTOGRAPHY (PHO) 110 (3)

INTRODUCTION TO
PHOTOGRAPHY AND
PHOTO-JOURNALISM (2 LEC., 4 LAB.)

Photography and photo-journalism are introduced. Topics include the general mechanics of camera lenses and shutters and the general characteristics of photographic films, papers, and chemicals. Darkroom procedures are presented, including enlarging, processing, contact printing, and exposing films and papers. Artificial lighting is studied. Laboratory fee.

PHOTOGRAPHY (PHO) 111 (3)

ADVANCED PHOTOGRAPHY AND
PHOTO-JOURNALISM (2 LEC., 4 LAB.)

Techniques learned in Photography 110 are refined. Emphasis is on photographic communication. Laboratory fee.

PHOTOGRAPHY (PHO) 120 (4)

COMMERCIAL
PHOTOGRAPHY I (3 LEC., 3 LAB.)

Commercial or contract photography is studied. Field, studio, and darkroom experience for various kinds of photography is discussed. Included are social photography, portrait and studio photography, fashion and theatrical portfolio, publicity photography, and convention photography. The use of natural, stationary, flash, and strobe artificial lights is covered. Laboratory fee.

PHOTOGRAPHY (PHO) 121 (4)

COMMERCIAL
PHOTOGRAPHY II (3 LEC., 3 LAB.)

This course is a continuation of Photography 120. Publicity photography, architectural photography, interior photography, and advertising photography are included. The latest equipment, papers, films, and techniques are explored. Exchanges are made with sample clients, employers, studios, and agencies. Laboratory fee.

PHOTOGRAPHY (PHO) 207 (3)

PHOTOGRAPHY FOR PUBLICATIONS (2 LEC., 4 LAB.)

This course is designed for the student who is interested in journalistic editing, publications photography, and graphic arts procedures. It encourages skills in all three areas and prepares the student for a broad job market that includes photojournalism, printing, editing, composing, and general copy preparation. Students who enroll in this course should have a background in journalism, photography, and graphic arts and be of sophomore standing. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 100 (1)**

LIFETIME SPORTS
ACTIVITIES (3 LAB.)

Various lifetime sports are offered. Courses offered may include archery, badminton, bowling, golf, handball, racquetball, softball, swimming, tennis, and other sports. Activities may be offered singularly or in combinations. Instruction is presented at the beginner and advanced-beginner levels. Both men and women participate. This course may be repeated for credit when students select different activities. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 101 (3)**

FUNDAMENTALS OF HEALTH (3 LEC.)

This course is for students majoring or minoring in physical education or having other specific interest. Personal health and community health are studied. Emphasis is on the causes of mental and physical health and disease transmission and prevention.

PHYSICAL EDUCATION (PEH)**104 (1)**

TOUCH FOOTBALL/SOCCER (3 LAB.)

Touch football and soccer are taught and played. Emphasis is on skill development. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**108 (3)**

SOCIAL RECREATION (3 LEC.)

The methods and materials for social activities for different age groups are introduced. Planning, organizing, and conducting the activities are included.

PHYSICAL EDUCATION (PEH)**109 (3)**

OUTDOOR RECREATION (3 LEC.)

Outdoor recreation and organized camping are studied. Both the development of these activities and present trends are covered.

PHYSICAL EDUCATION**(PEH) 110 (3)**

COMMUNITY RECREATION (3 LEC.)

This course is primarily for students majoring or minoring in health, physical education, or recreation. The principles, organization, and function of recreation in American society are covered.

PHYSICAL EDUCATION (PEH)**111 (1)**

BEGINNING WRESTLING (3 LAB.)

The fundamentals, techniques, rules, and strategy of wrestling are presented. Emphasis is also on spectator appreciation. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**112 (1)**

SOFTBALL AND SOCCER (3 LAB.)

Softball and soccer are taught and played. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**113 (1)**

HANDBALL AND RACQUETBALL (3 LAB.)

Handball and racquetball are taught and played. Emphasis is on the development of skills. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**114 (1)**

BEGINNING BADMINTON (3 LAB.)

The history, rules, and skills of badminton are taught. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**115 (1)**

PHYSICAL FITNESS (3 LAB.)

The student's physical condition is assessed. A program of exercise for life is prescribed. Much of the course work is carried on in the physical performance laboratory. A uniform is required. This course may be repeated for credit. Laboratory fee.

PHYSICAL EDUCATION (PEH)**116 (1)**

INTRAMURAL ATHLETICS (3 LAB.)

Intramural competition in a variety of activities is offered for men and women. A uniform is required. This course may be repeated for credit. Laboratory fee.

PHYSICAL EDUCATION (PEH)**117 (1)**

BEGINNING ARCHERY (3 LAB.)

Beginning archery is taught and played. Equipment is furnished. Laboratory fee.

PHYSICAL EDUCATION (PEH)**118 (1)**

BEGINNING GOLF (3 LAB.)

Beginning golf is taught and played. Equipment is furnished. Laboratory fee.

PHYSICAL EDUCATION (PEH)**119 (1)**

BEGINNING TENNIS (3 LAB.)

This course is designed for the beginner. Tennis fundamentals are taught and played. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**120 (1)**

BEGINNING BOWLING (2 LAB.)

Beginning bowling is taught and played. Equipment is furnished. Laboratory fee.

PHYSICAL EDUCATION (PEH)**121 (1)**

FOLK DANCE (3 LAB.)

Participation is provided in a variety of folk dances from other lands. The study of cultural backgrounds and costumes is included. Laboratory fee.

PHYSICAL EDUCATION (PEH)**122 (1)**

BEGINNING GYMNASTICS (3 LAB.)

Beginning gymnastics is offered. Emphasis is on basic skills in tumbling and in the various apparatus events. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**123 (1)**

BEGINNING SWIMMING (2 LAB.)

This course teaches a non-swimmer to survive in the water. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**124 (1)**

SOCIAL DANCE (3 LAB.)

This course is for students who have limited experience in dance. Ballroom and social dancing are offered. Included are fundamental steps and rhythms of the fox-trot, waltz, tango, and recent dances. "Country" dancing includes the reel, square dance, and other dances. Laboratory fee.

PHYSICAL EDUCATION (PEH)**126 (1)**

AEROBIC DANCE (3 LAB.)

This is a dance class which rhythmically combines dance movement with walking, jogging, and jumping to cause sustained vigorous combination of steps, geared to raise the heart rate to a proper target zone for conditioning purposes. Each routine can be "danced" at different intensities, depending on the physical condition of each participant. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**127 (1)**

BASKETBALL AND VOLLEYBALL (3 LAB.)

The techniques, rules, and strategy of basketball and volleyball are covered. Emphasis is on playing the games. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**128 (1)**

SOCIAL AND FOLK DANCE (3 LAB.)

Social and folk dance is introduced. Laboratory fee.

PHYSICAL EDUCATION (PEH)**129 (1)**

MODERN DANCE (3 LAB.)

This beginning course is designed to emphasize basic dance technique, including body alignment and placement, floor work, locomotor patterns, and creative movements. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 131 (1)**WEIGHT TRAINING AND
CONDITIONING (3 LAB.)

Instruction and training in weight training and conditioning techniques are offered. A uniform is required. This course may be repeated for credit. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 132 (1)**

SELF-DEFENSE (3 LAB.)

Various forms of self-defense are introduced. The history and philosophy of the martial arts are explored. The student should progress from no previous experience in self-defense to an adequate skill level covering basic self-defense situations. Both mental and physical aspects of the arts are stressed.

PHYSICAL EDUCATION**(PEH) 134 (1)**

OUTDOOR EDUCATION (3 LAB.)

Knowledge and skills in outdoor education and camping are presented. Planned and incidental experiences take place, including a week-end camp-out. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 144 (3)**INTRODUCTION TO PHYSICAL
EDUCATION (3 LEC.)

This course is for students majoring in physical education and is designed for professional orientation in physical education, health, and recreation. The history, philosophy, and modern trends of physical education are surveyed. Topics include teacher qualifications, vocational opportunities, expected competencies, and skill testing.

PHYSICAL EDUCATION**(PEH) 147 (3)**

SPORTS OFFICIATING I (2 LEC., 2 LAB.)

This course is for students who choose officiating for an avocation and who want to increase their knowledge and appreciation of sports. Sports covered in this course are football, basketball, and other sports as appropriate. Students are expected to officiate intramural games.

PHYSICAL EDUCATION**(PEH) 148 (3)**

SPORTS OFFICIATING II (2 LEC., 2 LAB.)

This course is for students who choose officiating for an avocation and who want to increase their knowledge and appreciation of sports. Sports covered in this course are softball, track and field, baseball, and other sports as appropriate. Students are expected to officiate intramural games.

PHYSICAL EDUCATION**(PEH) 200 (1)**LIFETIME SPORTS
ACTIVITIES II (3 LAB.)

This course is a continuation of Physical Education 100. Students participate in selected activities. Instruction is at the intermediate and intermediate/advanced levels. This course may be repeated for credit. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 210 (3)**SPORTS APPRECIATION FOR
THE SPECTATOR (3 LEC.)

This course is for students who desire a broader knowledge of major and minor sports. The rules, terminology, and philosophies of many sports are studied. Special emphasis is on football and basketball.

PHYSICAL EDUCATION (PEH)**217 (1)**

INTERMEDIATE ARCHERY (3 LAB.)

This course is for the student who has previous experience in archery. Target shooting and field archery are emphasized. The student must furnish equipment. Laboratory fee.

PHYSICAL EDUCATION (PEH)**218 (1)**

INTERMEDIATE GOLF (2 LAB.)

Prerequisite: The consent of the instructor. Skills and techniques in golf are developed beyond the "beginner" stage. Green fee paid by student. Laboratory fee.

PHYSICAL EDUCATION (PEH)**219 (1)**

INTERMEDIATE TENNIS (3 LAB.)

Prerequisite: The consent of the instructor. Skills and techniques in tennis are developed beyond the "beginner" stage. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION (PEH)**222 (1)**

INTERMEDIATE GYMNASTICS (3 LAB.)

Prerequisite: Physical Education 122. Skills and techniques in gymnastics are developed beyond the "beginner" stage. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 223 (1)**

INTERMEDIATE SWIMMING (2 LAB.)

Prerequisite: Beginning swim certificate or deep water swimmer. This course advances the swimmer's skills. Stroke analysis, refinement, and endurance are emphasized. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 225 (2)**

SKIN AND SCUBA DIVING (1 LEC., 2 LAB.)

Prerequisite: Physical Education 223 or the consent of the instructor. This course includes the use of equipment, safety, physiology, and open water diving. All equipment is supplied except mask, fins, and snorkel. The student may rent needed equipment at the time on registration. Students completing course requirements receive certification as basic scuba divers from the Professional Association of Diving Instructors (PADI) or the National Association of Underwater Instructors (NAUI). Laboratory fee.

PHYSICAL EDUCATION**(PEH) 226 (1)**

ADVANCED LIFE SAVING (2 LAB.)

Prerequisite: Physical Education 223 or deep water swim ability. This course qualifies students for the Red Cross Advanced Lifesaving Certificate. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 234 (2)**

WATER SAFETY INSTRUCTOR (1 LEC., 2 LAB.)

Prerequisite: Current Advanced Life Saving card. The principles and techniques for instructors in water safety and life saving classes are covered. Completion of the course qualifies the student to test for certification by the Red Cross as a water safety instructor. A uniform is required. Laboratory fee.

PHYSICAL EDUCATION**(PEH) 236 (3)**

THE COACHING OF FOOTBALL AND BASKETBALL (2 LEC., 2 LAB.)

The skills and techniques of coaching football and basketball are presented. Included are the history, theories, philosophies, rules, terminology, and finer points of the sports. Emphasis is on coaching techniques.

PHYSICAL EDUCATION**(PEH) 238 (2)**

AQUATICS (1 LEC., 2 LAB.)

The techniques and procedures of selected water-related activities are studied. The use of the activities in recreation programs is included. Pool management, staff training, safety, and supervision of aquatics are also included.

PHYSICAL EDUCATION**(PEH) 257 (3)**

ADVANCED FIRST AID AND EMERGENCY CARE (3 LEC.)

The Advanced First Aid and Emergency Care course of the American Red Cross is taught, presenting both theory and practice. Various aspects of safety education also are included.

**PHYSICAL SCIENCE (PSC) 118 (4)**

PHYSICAL SCIENCE (3 LEC., 3 LAB.)

This course is primarily for non-science majors. It is a study of the basic principles and concepts of physics, chemistry, and nuclear science. The three basic sciences are related to the physical world at an introductory level. Laboratory fee.

PHYSICAL SCIENCE (PSC) 119 (4)

PHYSICAL SCIENCE (3 LEC., 3 LAB.)

This course is for non-science majors. It focuses on the interaction of the earth sciences and the physical world. Geology, astronomy, meteorology, and space science are emphasized. Selected principles and concepts are explored. Laboratory fee.

PHYSICS (PHY) 110 (4)

INTRODUCTORY PHOTOGRAPHIC SCIENCE (3 LEC., 3 LAB.)

Prerequisites: Photography 110, Art 113, or the consent of the instructor, and access to a camera with variable speed and aperture. This course introduces the physical and chemical principles which form the basis for photographic technology. Topics covered include the production of light, its measurement and control, principles of optics and the formation of images, the basic chemistry of black and white and color processes, film structure and characteristics, filter characteristics, lasers, and holography. Laboratory fee.

PHYSICS (PHY) 111 (4)

INTRODUCTORY GENERAL
PHYSICS (3 LEC., 3 LAB.)

Prerequisite: Two years of high school algebra, including trigonometry, or the equivalent. This course is for pre-dental, biology, pre-medical, pre-pharmacy, and pre-architecture majors and other students who need a two-semester technical course in physics. Mechanics and heat are studied. Laboratory fee.

PHYSICS (PHY) 112 (4)

INTRODUCTORY GENERAL
PHYSICS (3 LEC., 3 LAB.)

Prerequisite: Physics 111. This course is a continuation of Physics 111. Electricity, magnetism, light, and sound are studied. Laboratory fee.

PHYSICS (PHY) 117 (4)

CONCEPTS IN PHYSICS (3 LEC., 3 LAB.)

This course is for non-science majors. It introduces principles of physics and does not require a mathematical background. Emphasis is on classical mechanics and thermodynamics. Historical developments and their impact on daily life are included. The principle of energy conservation is stressed, and current problems of world-wide energy production are examined. Laboratory fee.

PHYSICS (PHY) 118 (4)

CONCEPTS IN PHYSICS (3 LEC., 3 LAB.)

This is for non-science majors. It introduces principles of physics and does not require a mathematical background. Emphasis is on modern developments in physics. Topics include acoustics, electricity and magnetism, light and the electromagnetic spectrum, atomic physics, and relativity. Laboratory fee.

PHYSICS (PHY) 131 (4)

APPLIED PHYSICS (3 LEC., 3 LAB.)

Prerequisite: Mathematics 195 or concurrent enrollment in Mathematics 195. This course is primarily for students in technical programs. The properties of matter, mechanics, and heat are introduced. Emphasis is on uses and problem-solving. Laboratory fee.

PHYSICS (PHY) 132 (4)

APPLIED PHYSICS (3 LEC., 3 LAB.)

Prerequisite: Physics 131. This course is a continuation of Physics 131. Concepts of sound, light, electricity, magnetism, and atomic theory are explained. Laboratory fee.

PHYSICS (PHY) 201 (4)

GENERAL PHYSICS (3 LEC., 3 LAB.)

Prerequisite: Credit or concurrent enrollment in Mathematics 124. This course is designed primarily for physics, chemistry, mathematics, and engineering majors. The principles and applications of mechanics, wave motion, and sound are studied. Emphasis is on fundamental concepts, problem-solving, notation, and units. The laboratory includes a one-hour problem session. Laboratory fee.

PHYSICS (PHY) 202 (4)

GENERAL PHYSICS (3 LEC., 3 LAB.)

Prerequisites: Physics 201 and credit or concurrent enrollment in Mathematics 225. This course presents the principles and applications of heat, electricity, magnetism, and optics. Emphasis is on fundamental concepts, problem solving, notation and units. The laboratory includes a one-hour problem session. Laboratory fee.

PHYSICS (PHY) 203 (4)

INTRODUCTION TO MODERN
PHYSICS (3 LEC., 3 LAB.)

Prerequisite: Physics 202. The principles of relativity, atomic physics, and nuclear physics are covered. Emphasis is on basic concepts, problem-solving, notation, and units. Laboratory fee.

POLICE SCIENCE (POL) 134 (3)CRIMINAL EVIDENCE AND
PROCEDURE (3 LEC.)

This course is a study of trial and courtroom procedure. Topics include parties in the case, rules of evidence, decision, and punishment. Due process is emphasized.

POLICE SCIENCE (POL) 137 (3)POLICE COMMUNITY
RELATIONS (3 LEC.)

The role of the individual officer in getting and holding public support is examined. Topics include human relations, public information and relationships with violators and complainants.

POLICE SCIENCE (POL) 140 (3)INTRODUCTION TO LAW
ENFORCEMENT (3 LEC.)

The history of U.S. systems of justice is surveyed, including the police system. Topics include police problems, and crime trends and statistics. The organization and jurisdiction of local, state, and federal enforcement agencies are covered. Professional opportunities and personnel qualifications are also studied. Emphasis is on analysis of modern trends and thinking in the police service.

POLICE SCIENCE (POL) 141 (3)POLICE ORGANIZATION AND
ADMINISTRATION (3 LEC.)

Prerequisite: Police Science 140. This course focuses on organization and administration. Topics include philosophies of organization structures, and administrative processes and management. Traditional organizational concepts, administrative techniques, personnel policies, and operating systems are also covered.

POLICE SCIENCE (POL) 142 (3)LEGAL ASPECTS OF LAW
ENFORCEMENT (3 LEC.)

Prerequisite: Police Science 140. This course is an orientation to criminal law in the American justice system. Topics include criminal statutes, case law, legal definitions, and procedures of law enforcement.

POLICE SCIENCE (POL) 143 (3)PRACTICAL SPANISH FOR
PUBLIC SERVICE PERSONNEL (3 LEC.)

This course is primarily for police officers. It focuses on communication skills with the Spanish-speaking community. Skills in understanding, speaking, and listening to the Spanish of the local area are included. Emphasis is on a highly specialized vocabulary taught in English and Spanish. Extensive conversational drills in Spanish are included.

POLICE SCIENCE (POL) 144 (3)PRACTICAL SPANISH FOR
PUBLIC SERVICE PERSONNEL (3 LEC.)

Prerequisite: Police Science 143. This course is a continuation of Police Science 143. Emphasis continues on the skills of understanding, speaking, and listening. Specialized vocabulary and conversational drills in English and Spanish are also continued.

POLICE SCIENCE (POL) 146 (3)

PATROL ADMINISTRATION (3 LEC.)

Prerequisite: Police Science 140. All aspects of patrol are presented. The philosophy, history, role, functions, organization, and operation of patrol are included. Operational and administration problems are studied and alternate solutions analyzed.

POLICE SCIENCE (POL) 233 (3)INTRODUCTION
CRIMINALISTICS (3 LEC.)

Prerequisites: Police Science 140 and 240. Physical evidence in criminal investigation is studied. Topics include the recognition, collection, preservation, and laboratory processing of evidence. Instrumental methods are surveyed. Photographs of evidence from actual cases are examined using various identification and comparison techniques.

POLICE SCIENCE (POL) 240 (3)
CRIMINAL INVESTIGATION (3 LEC.)

Prerequisite: Police Science 140. This course covers the theory and practical aspects of a complex investigation. Topics include investigative techniques, legal procedures, and scientific analysis. Criminalistics and crime scene search are also included.

POLICE SCIENCE (POL) 241 (3)
POLICE ROLE IN CRIME AND DELINQUENCY (3 LEC.)

Prerequisite: Police Science 140. Philosophies of preventing and controlling delinquency are introduced. Topics include police services for delinquent, neglected, and special-problem juveniles, and organization for dealing with delinquent behavior. Sociological, psychological, and biological factors relating to criminal activity are explored. Legal concepts in the treatment of juvenile offenders are reviewed.

POLICE SCIENCE (POL) 242 (3)
JUVENILE PROCEDURES (3 LEC.)

Prerequisite: Police Science 140. The course covers recent research and new materials in juvenile procedures. Emphasis is on the major responsibilities of police work with children and youth.

POLICE SCIENCE (POL) 243 (3)
PROBATION AND PAROLE (3 LEC.)

Prerequisite: Police Science 140. Criminal corrections are introduced. The history of corrections is included.

POLICE SCIENCE (POL) 244 (3)
TRAFFIC PLANNING AND ADMINISTRATION (3 LEC.)

Prerequisite: Police Science 140. The magnitude and complexities of traffic problems are presented. Topics include techniques used by various agencies to eliminate or control these problems. Emphasis is on evaluation of problems and solutions.

POLICE SCIENCE (POL) 245 (3)
TRAFFIC LAW (3 LEC.)

Prerequisite: Police Science 140. This course focuses on the principles of traffic control, traffic law enforcement, and traffic court procedures. Texas traffic laws are stressed. Topics include professional approaches to deal with traffic law violators and the police role in accident prevention and investigation. The principles of education, enforcement, and engineering are also included.

POLICE SCIENCE (POL) 246 (3)
PENOLOGY (JAIL OPERATION AND MANAGEMENT) (3 LEC.)

Prerequisite: Police Science 140. The concepts of penology are presented. The operation and management of a penal institution are studied, and the rationale for the penal institution is covered.

POSTAL SERVICE ADMINISTRATION (PSA) 210 (3)
LABOR RELATIONS (3 LEC.)

This course will provide an overview of the laws and practices leading to the current labor situation in the Postal Service. Discussion will focus on development of labor unions, problems and/or issues in the Postal Service, national and local agreements, bargaining units, grievance procedures, disciplinary action procedures and the relationships to the national labor relations board.

POSTAL SERVICE ADMINISTRATION (PSA) 110 (3)
INTRODUCTION TO POSTAL SERVICE (3 LEC.)

This survey course of the Postal Service, taking a historical view, will depict and compare the private, corporate, and governmental agencies which have been responsible for mail service throughout the world. The current U.S. Postal Organization, mandated by public law, is studied. Also included in the course are discussions of postal philosophies, policies, procedures, rules and

regulations, and the history of the Postal Inspection Service.

**POSTAL SERVICE
ADMINISTRATION (PSA) 120 (3)**
MAIL PROCESSING (3 LEC.)

Through discussion of mail processing and transportation procedures of the U.S. Postal Service, this course will provide the student with an in-depth view of revenue determination and flow characteristics involved in movement of mail from sender to recipient. The course will also include a study of the systems devised to attain maximum efficiency in mail handling with a minimum of errors.

**POSTAL SERVICE
ADMINISTRATION (PSA) 122 (3)**
CUSTOMER SERVICES (3 LEC.)

This course provides functional information about mail delivery and collection systems and in-depth information about services provided for postal customers. Included in the course are rural and city delivery systems, marketing of postal products and services, and techniques of effective public relations.

**POSTAL SERVICE
ADMINISTRATION (PSA) 125 (3)**
POSTAL ECONOMICS AND
FINANCE (3 LEC.)

This course explores how postal revenues are established, controlled, received, processed and used to defray operating costs. With emphasis on planning, organization, cost control, budget preparation, cost benefit analysis and related office services functions, the course will deal in depth with control techniques and accountability required of the Postal Service.

**POSTAL SERVICE
ADMINISTRATION (PSA) 212 (3)**
EMPLOYEE SERVICES (3 LEC.)

This course details the actual functions of the employee relations office with a view of the services provided for Postal Service employees. Among the topics included are policies and practices concerning selection, placement,

training, and promotion of employees, the Equal Employment Opportunity Act, programs for alcoholic recovery, insurance and retirement benefits, awards programs, salary schedules, and safety and health rules.

**POSTAL SERVICE
ADMINISTRATION (PSA) 214 (3)**
POSTAL PROBLEMS ANALYSIS (3 LEC.)

This course provides opportunity for practical application of Postal Service and management theories. Students must use system analysis, problem solving grids and other tools of management decision-making to assess a stated Postal Service problem and to determine appropriate solution(s).

**PRECISION OPTICS TECHNOLOGY
(POP) 101 (3)**
INTRODUCTION TO PRECISION OPTICS
TECHNOLOGY (3 LEC.)

This course introduces the student to the precision optics industry. The student examines the impact of precision optics in our present day society and studies the terminology, types of optical materials, basic optical systems, and processing technology.

**PRECISION OPTICS TECHNOLOGY
(POP) 102 (3)**
PRECISION OPTICS MACHINING I (2 LEC., 2
LAB.)

Skills required for milling, blocking, core drilling, generating and sawing precision optical elements are identified and developed. Class-room instruction and actual machine operation are included. Laboratory fee.

**PRECISION OPTICS TECHNOLOGY
(POP) 103 (3)**
PRECISION OPTICS MACHINING II (2 LEC., 2
LAB.)

Prerequisite: Previous completion or concurrent enrollment in Precision Optics Technology 102 or the equivalent. This course is a continuation of Precision Optics Machining I. Skill development for pell grinding, loose abrasive grinding, polishing and edging operations are included. Laboratory fee.

**PRECISION OPTICS TECHNOLOGY
(POP) 104 (3)**

INDUSTRIAL SHOP SAFETY (3 LEC.)

This course is designed to develop a safety awareness, good safety attitudes and the ability to detect unsafe conditions and practices. The course covers materials handling and storage, industrial housekeeping, personal protective equipment, machines and power tools, fire prevention and first aid.

**PRECISION OPTICS TECHNOLOGY
(POP) 105 (3)**

PRECISION OPTICS MACHINING III (2 LEC., 2 LAB.)

Prerequisite: Precision Optics Technology 103 or the equivalent. This course is a continuation of Optical Machining I & II advancing into the theory involved in each fabrication operation. The course also covers the methods and tooling required for the different lens types. Laboratory fee.

**PRECISION OPTICS TECHNOLOGY
(POP) 106 (4)**

THIN FILM OPTICAL COATINGS (3 LEC., 3 LAB.)

This course includes principles and applications of thin film coatings emphasizing fundamental concepts, notation, machine operation, and clean room requirements. Laboratory fee.

**PRECISION OPTICS TECHNOLOGY
(POP) 107 (2)**

PRECISION OPTICS HANDLING AND CLEANING (1 LEC., 3 LAB.)

This course is designed to give the student a full understanding of the handling and cleaning of optical elements throughout the entire fabrication process. The hardness and stain factor of each glass type, cleaning processes for both fabrication and coating, symbolization, equipment usage and packaging are included. Laboratory fee.

**PRECISION OPTICS TECHNOLOGY
(POP) 201 (3)**

BASIC PRECISION OPTICS THEORY (3 LEC.)

This course includes basic theory of lens design, properties of waves and wave motion, refraction and reflection, Hugen's principle, and a functional understanding of optical instrument design.

**PRECISION OPTICS TECHNOLOGY
(POP) 203 (3)**

PRECISION OPTICS QUALITY CONTROL (3 LEC.)

The function of a standard quality control organization with a detailed look into the sampling and reporting requirements to insure quality standards is covered. The student gains a working knowledge of the required equipment and quality specification standards employed throughout the optical industry.

**PRECISION OPTICS TECHNOLOGY
(POP) 204 (3)**

PRECISION OPTICS ASSEMBLY (2 LEC., 2 LAB.)

This course is a study of the basic principles and concepts of precision optical assembly. The student gains the theory and skills necessary to use the tooling and equipment to set and bond the various optical elements. Laboratory fee.

**PRECISION OPTICS TECHNOLOGY
(POP) 205 (3)**

ADVANCED PRECISION OPTICS PROCESSES (2 LEC., 2 LAB.)

This course includes an intensive study in advanced optical fabrication and coating processes dealing with exotic glass materials and ultra high precision optical elements. Laboratory fee.

**PRECISION OPTICS TECHNOLOGY
(POP) 703 (3)**

(See Cooperative Work Experience)

PSYCHOLOGY (PSY) 103 (3)

HUMAN SEXUALITY (3 LEC.)

Students may register for either Psychology 103 or Sociology 103 but receive credit for only one of the two. Topics include physiological, psychological, and sociological aspects of human sexuality.

PSYCHOLOGY (PSY) 105 (3)

INTRODUCTION TO PSYCHOLOGY (3 LEC.)

Principles of human behavior and problems of human experience are presented. Topics include heredity and environment, the nervous system, motivation, learning, emotions, thinking, and intelligence. (This course is offered on campus and may be offered via television.)

PSYCHOLOGY (PSY) 131 (3)

HUMAN RELATIONS (3 LEC.)

Psychological principles are applied to human relations problems in business and industry. Topics include group dynamics and adjustment factors for employment and advancement.

PSYCHOLOGY (PSY) 201 (3)

DEVELOPMENTAL PSYCHOLOGY (3 LEC.)

Prerequisite: Psychology 105. This course is a study of human growth, development, and behavior. Emphasis is on psychological changes during life. Processes of life from prenatal beginnings through adulthood and aging are included. (This course is offered on campus and may be offered via television.)

PSYCHOLOGY (PSY) 202 (3)

APPLIED PSYCHOLOGY (3 LEC.)

Prerequisite: Psychology 105. Psychological facts and principles are applied to problems and activities of life. Emphasis is on observing, recording, and modifying human behavior. Some off-campus work may be required.

PSYCHOLOGY (PSY) 205 (3)

PSYCHOLOGY OF PERSONALITY (3 LEC.)

Prerequisite: Psychology 105. Important factors of successful human adjustment such as child parent relationships, adolescence, anxiety states, defense mechanisms, and psychotherapeutic concepts are considered. Methods of personality measurement are also included.

PSYCHOLOGY (PSY) 207 (3)

SOCIAL PSYCHOLOGY (3 LEC.)

Prerequisite: Psychology 105 or Sociology 101. Students may register for either Psychology 207 or Sociology 207 but may receive credit for only one. Theories of individual behavior in the social environment are surveyed. Topics include the socio-psychological process, attitude formation and change, interpersonal relations, and group processes.

PSYCHOLOGY (PSY) 210 (3)

SELECTED TOPICS IN PSYCHOLOGY (3 LEC.)

Prerequisite: Psychology 105. An elective course designed to deal with specific topics in psychology. Examples of topics might include "adult development," "adolescent psychology," and "behavioral research." Course may be repeated once for credit.

QUALITY CONTROL**TECHNOLOGY (QCT) 121 (2)**

INTRODUCTION TO QUALITY CONTROL (2 LEC.)

Prerequisite: Credit or concurrent enrollment in Math 195. This course introduces some of the concepts and techniques currently being used by industry to prevent defective products from reaching the consumer. Included are reliability analysis, control charts, inspection and sampling plans. The language, terminology and organization of typical industry Quality Control functions are studied. Elementary probability and statistics concepts are presented as background.

QUALITY CONTROL**TECHNOLOGY (QCT) 122 (3)**

DIMENSIONAL MEASUREMENT (2 LEC., 2 LAB.)

Prerequisite: Credit or concurrent enrollment in Quality Control Technology 121 or the consent of the instructor. This course provides an opportunity to obtain a practical and theoretical understanding of many types of mechanical and optical measuring devices which are used in dimensional inspection. Laboratory fee.

QUALITY CONTROL**TECHNOLOGY (QCT) 220 (3)**

PHYSICAL AND ENVIRONMENTAL TESTING (2 LEC., 2 LAB.)

Prerequisite: Quality Control Technology 121. This course introduces tests and evaluations used on raw materials and fabricated parts. Topics include tensile and hardness testing, metallurgical cross-sectioning, temperature-humidity cycling, and corrosion resistance testing. Laboratory fee.

QUALITY CONTROL**TECHNOLOGY (QCT) 227 (3)**

NON-DESTRUCTIVE EVALUATION (2 LEC., 2 LAB.)

Prerequisite: Quality Control Technology 122. This course provides a basic background in such areas as industrial radiography, magnetic particle and penetrant inspection, eddy current, and ultrasonic testing. Laboratory fee.

QUALITY CONTROL**TECHNOLOGY (QCT) 236 (4)**

ADVANCED QUALITY CONTROL SYSTEMS (3 LEC., 2 LAB.)

Prerequisite: Quality Control Technology 122. A detailed study is made of the control and information systems and decision procedures necessary to effectively operate the quality control function. Topics and problems include reliability process control, failure analysis, and corrective action systems. A problem-prevention and problem-solving approach is emphasized.

RADIOGRAPHY TECHNOLOGY**(RAD) 150 (3)**

INTRODUCTION TO RADIOGRAPHY TECHNOLOGY (2 LEC., 2 LAB.)

Prerequisites: Admission to program and concurrent enrollment in Radiography Technology 152, 154, and 156. This course introduces students to the goals, philosophies, and organization of the radiography program. Other subjects included are history of X-ray, medical ethics, basic radiation protection, interpersonal relationships, and principles of patient care.

RADIOGRAPHY TECHNOLOGY**(RAD) 152 (4)**

RADIOGRAPHIC PROCEDURES I (3 LEC., 2 LAB.)

Prerequisites: Admission to program and concurrent enrollment in Radiography Technology 150, 154, and 156. This course is an integrated study of medical terminology, patient care, and osteology and positioning of the upper extremities and lower extremities, pectoral and pelvic girdle. Laboratory fee.

RADIOGRAPHY TECHNOLOGY**(RAD) 154 (3)**

RADIOGRAPHIC EXPOSURE AND PHYSICS I (2 LEC., 2 LAB.)

Prerequisites: Admission to program and concurrent enrollment in Radiography Technology 150, 152, and 156. This course is an introduction to the prime exposure factors and factors influencing radiographic quality. An analysis of physical principles related to matter, energy and basic electricity is included. Laboratory fee.

RADIOGRAPHY TECHNOLOGY**(RAD) 156 (2)**

CLINICAL EDUCATION I, FILM EVALUATION (16 LAB.)

Prerequisites: Concurrent enrollment in Radiography Technology 150, 152, and 154. The first seven weeks consist of a study of radiographic processing techniques, basic radiographic procedures, basic radiographic exposure, film evaluation, and a seminar session. For the remaining weeks, the student is assigned to a



Dallas area hospital for supervised clinical education in a radiology department in which an adequate variety and number of examinations are available. Students work closely with experienced registered radiographers, where they observe and assist in handling patients as they undergo radiographic examination.

RADIOGRAPHY TECHNOLOGY

(RAD) 160 (4)

RADIOGRAPHIC
PROCEDURES II (3 LEC., 2 LAB.)

Prerequisites: "C" grade in Radiography Technology 150, 152, and 156 and concurrent enrollment in Radiography Technology 162 and 164. This course is an integrated study of medical terminology, patient care, and osteology and positioning of the thoracic cage, and vertebral spine. Laboratory fee.

RADIOGRAPHY TECHNOLOGY

(RAD) 162 (3)

RADIOGRAPHIC EXPOSURE AND
PHYSICS II (2 LEC., 2 LAB.)

Prerequisites: "C" grade in Radiography Technology 150, 152, 154 and 156 and concurrent enrollment in Radiography Technology 160 and 164. Technic formation and conditions influencing exposure factors are covered. An analysis of physical principles related to magnetism, induction principles and transformers, basic X-ray tubes and rectifiers are included. Laboratory fee.

RADIOGRAPHY TECHNOLOGY

(RAD) 164 (3)

CLINICAL EDUCATION II,
FILM EVALUATION (24 LAB.)

Prerequisite: "C" grade in

Radiography Technology 150, 152, 154 and 156 and concurrent enrollment in Radiography Technology 160 and 162. Students receive clinical education in a hospital radiology department.

RADIOGRAPHY TECHNOLOGY

(RAD) 170 (1)

RADIOGRAPHIC
PROCEDURES III (1 LEC., 1 LAB.)

Prerequisite: "C" grade in Radiography Technology 160, 162, and 164, Biology 120 (summer start), and Biology 121 (fall start) and concurrent enrollment in Radiography Technology 172, 174, and 176. This course is an integrated study of medical terminology, patient care, and osteology and positioning of the skull. Laboratory fee.

RADIOGRAPHY TECHNOLOGY

(RAD) 172 (1)

RADIOGRAPHY EXPOSURE III (1 LEC., 1 LAB.)

Prerequisites: "C" grade in Radiography Technology 160, 162, and 164 and concurrent enrollment in Radiography Technology 170, 174, and 176. This course is an intermediate study of exposure factors. Laboratory fee.

RADIOGRAPHY TECHNOLOGY

(RAD) 174 (1)

RADIOGRAPHIC PHYSICS III (1 LEC., 1 LAB.)

Prerequisites: "C" grade in Radiography 160, 162, and 164 and concurrent enrollment in Radiography 170, 172, and 176. This course is an analysis of physical principles involved in the production of X-rays, and interaction of X-rays in matter and detection of X-rays.

RADIOGRAPHY TECHNOLOGY

(RAD) 176 (4)

CLINICAL EDUCATION III,
FILM EVALUATION (32 LAB.)

Prerequisites: "C" grade in Radiography Technology 160, 162, and 164 and concurrent enrollment in Radiography Technology 170, 172, and 174. Students receive clinical education in a hospital radiology department.

RADIOGRAPHY TECHNOLOGY**(RAD) 250 (1)**

RADIOGRAPHIC EXPOSURE IV (1 LEC., 1 LAB.)

Prerequisites: "C" grade in Radiography Technology 170, 172, 174, and 176 and concurrent enrollment in Radiography Technology 252, 254, and 256. Image quality and quality assurance are covered. Laboratory fee.

RADIOGRAPHY TECHNOLOGY**(RAD) 252 (1)**

RADIOGRAPHIC PROCEDURES IV (1 LEC., 1 LAB.)

Prerequisites: "C" grade in Radiography Technology 170, 172, 174, and 176 and concurrent enrollment in Radiography Technology 250, 254, and 256. This course is a continuing study of osteology and positioning of the skull and miscellaneous radiographic procedures. Laboratory fee.

RADIOGRAPHY TECHNOLOGY**(RAD) 254 (1)**

SPECIAL PROCEDURES (1 LEC., 1 LAB.)

Prerequisites: "C" grade in Radiography Technology 170, 172, 174, and 176, Biology 120 and 121, and concurrent enrollment in Radiography Technology 250, 252, and 256. The equipment, anatomy, and basic procedures pertinent to invasive special procedures are introduced.

RADIOGRAPHY TECHNOLOGY**(RAD) 256 (4)**

CLINICAL EDUCATION IV, FILM EVALUATION (24 LAB.)

Prerequisites: "C" grade in Radiography Technology 170, 172, 174, and 176 and concurrent enrollment in Radiography Technology 250, 252, and 254. Students receive clinical education in a hospital radiology department.

RADIOGRAPHY TECHNOLOGY**(RAD) 260 (2)**

IMAGING AND PATHOLOGY (2 LEC.)

Prerequisites: "C" grade in Radiography Technology 250, 252, 254, and 256 and concurrent enrollment in Radiography Technology

262 and 264. This course is an integrated study of the various imaging modalities utilized in radiography and related fields. Various pathologic conditions of the body and their impact on the radiographic process are introduced.

RADIOGRAPHY TECHNOLOGY**(RAD) 262 (3)**

RADIATION BIOLOGY AND RADIATION PROTECTION (2 LEC., 2 LAB.)

Prerequisites: "C" grade in Radiography Technology 250, 252, 254, and 256 and concurrent enrollment in Radiography Technology 260 and 264. This course is an analysis of the effects of ionizing radiation on biologic systems. The application of radiation limiting devices and techniques utilized in radiography to protect the public from excessive radiation during radiographic examinations are covered. Laboratory fee.

RADIOGRAPHY TECHNOLOGY**(RAD) 264 (4)**

CLINICAL EDUCATION V, FILM EVALUATION (32 LAB.)

Prerequisites: "C" grade in Radiography Technology 250, 252, 254, and 256 and concurrent enrollment in Radiography Technology 260 and 262. Students receive clinical education in a hospital radiology department.

RADIOGRAPHY TECHNOLOGY**(RAD) 270 (2)**

DEPARTMENTAL MANAGEMENT (2 LEC.)

Prerequisites: "C" grade in Radiography Technology 260, 262, and 264 and concurrent enrollment in Radiography Technology 272 and 274. This course is an introduction to radiology department planning, design and management.

**RADIOGRAPHY TECHNOLOGY
(RAD) 272 (3)**

SEMINAR (1 LEC., 3 LAB.)

Prerequisites: "C" grade in Radiography Technology 260, 262, and 264 and concurrent enrollment in Radiography Technology 270 and 274. This course is a seminar session to prepare students for job interviews, to write resumes, and to develop an appreciation for their role as a radiographer in the community. A comprehensive review of major subject areas is included.

**RADIOGRAPHY TECHNOLOGY
(RAD) 274 (4)**CLINICAL EDUCATION VI,
FILM EVALUATION (32 LAB.)

Prerequisites: "C" grade in Radiography Technology 260, 262, and 264 and concurrent enrollment in Radiography Technology 270 and 272. Students receive clinical education in a hospital radiology department.

READING (RD) 101 (3)

EFFECTIVE COLLEGE READING (3 LEC.)

Comprehension techniques for reading fiction and non-fiction are presented. Critical reading skills are addressed. Analysis, critique, and evaluation of written material are included. Reading comprehension and flexibility of reading rate are stressed. Advanced learning techniques are developed in listening, note-taking, underlining, concentrating, and reading in specialized academic areas.

READING (RD) 102 (3)SPEED READING
AND LEARNING (3 LEC.)

Reading and learning skills are addressed. Speed reading techniques and comprehension are emphasized. Learning and memory skills are also covered.

REAL ESTATE (RE) 130 (3)

REAL ESTATE PRINCIPLES (3 LEC.)

Real estate principles, law, and operating procedures in the State of Texas are presented. Topics include arithmetical calculations for real estate transactions, conveyancing, land economics and appraisals, obligations between the principal and agent, ethics, and rules and regulations of the State Commission of Real Estate. The purposes of various real estate instruments are also covered, such as deeds, deed of trust, mortgages, land contracts of sale, leases, liens, and listing contracts.

REAL ESTATE (RE) 131 (3)

REAL ESTATE FINANCE (3 LEC.)

Prerequisite: Credit or concurrent enrollment in Real Estate 130. Procedures in financing real estate sales and obtaining funds are covered. Legal aspects of mortgages and related instruments are included. Problems and case studies are also included.

REAL ESTATE (RE) 133 (3)

REAL ESTATE MARKETING (3 LEC.)

Prerequisites: Real Estate 130, 131, and 136. The principles and techniques of marketing real estate are studied. Emphasis is on professional procedures and the satisfaction of all parties. Topics include the relationship between the agent and principal, product knowledge, prospective markets, and customer prospective markets, and customer prospecting. Planning the sales presentation, meeting the prospect, having the interview, overcoming sales resistance, closing the sale, and building goodwill are also included. Listing and sales contracts are prepared, and case studies are analyzed.

REAL ESTATE (RE) 135 (3)

REAL ESTATE APPRAISAL (3 LEC.)

Prerequisites: Real Estate 130, 131, and 133. This course focuses on principles and methods of appraising used in establishing the market value of real estate.

REAL ESTATE (RE) 136 (3)

REAL ESTATE LAW (3 LEC.)

Prerequisite: Real Estate 130 or the consent of the instructor. The complex parts of real estate law are examined. Topics include ownership, the use and transfer of real property, enforceability of contractual rights, and the impact of litigation.

REAL ESTATE (RE) 230 (3)REAL ESTATE OFFICE
MANAGEMENT (3 LEC.)

Prerequisites: Real Estate 130, 131, 133, 135, and 136 or the consent of the instructor. Managing a real estate office is covered. Topics include office procedures, relations, communications, and ethics.

REAL ESTATE (RE) 233 (3)COMMERCIAL AND INVESTMENT
REAL ESTATE (3 LEC.)

Prerequisites: Real Estate 130, 131, 133, 135, and 136 or the consent of the instructor. Commercial and investment real estate is studied. Topics include syndication, "Joint Venture" or group ownership of real estate, selection, financing, and management.

REAL ESTATE (RE) 235 (3)

PROPERTY MANAGEMENT (3 LEC.)

Prerequisites: Real Estate 130, 131, and 133 and concurrent enrollment in Real Estate 254. Also, the student must submit an application to the instructor, be interviewed, and be approved prior to registration. This course provides practical work experience in the field of real estate. Principles and skills learned in other courses are applied. The employer/sponsor and a member of the real estate faculty provide supervision. Job-related studies and independent research are emphasized.

REAL ESTATE (RE) 240 (1)

SPECIAL PROBLEMS IN REAL ESTATE (16 LEC.)

This is a special problems study course for organized class instruction in real estate. Examples of topics might include: market analysis and feasibility studies, land economics, international real estate, urban planning and development, tax shelter regulations, international money market, environmental impact and energy conservation. This course may be repeated for credit up to a maximum of 3 hours of credit.

REAL ESTATE (RE) 250 (4)

REAL ESTATE INTERNSHIP I (20 LAB.)

Prerequisites: Real Estate 130, 131, and 133 and concurrent enrollment in Real Estate 254. Also, the student must submit an application to the instructor, be interviewed, and be approved prior to registration. This course provides practical work experience in the field of real estate. Principles and skills learned in other courses are applied. The employer/sponsor and a member of the real estate faculty provide supervision. Job-related studies and independent research are emphasized.

REAL ESTATE (RE) 251 (4)

REAL ESTATE INTERNSHIP II (20 LAB.)

Prerequisite: Real Estate 130, 131, and 133 and concurrent enrollment in Real Estate 255. Also, the student must submit an application to the instructor, be interviewed, and be approved prior to registration. This course is a continuation of Real Estate 250.

REAL ESTATE (RE) 254 (2)

REAL ESTATE SEMINAR I (2 LEC.)

Prerequisites: Real Estate 130, 131, and 133 and concurrent enrollment in Real Estate 250. Preliminary interview by real estate faculty is required. This course is for students majoring in real estate. A particular area or problem beyond the scope of regularly offered courses is studied. Problems are analyzed, and projects are developed.

REAL ESTATE (RE) 255 (2)

REAL ESTATE SEMINAR II (2 LEC.)

Prerequisites: Real Estate 130, 131, and 133 and concurrent enrollment in Real Estate 251. Preliminary interview by real estate faculty is required. Business strategy and the decision-making process are applied to trends in the real estate profession. Emphasis is on the use of the intern's course knowledge and work experiences.

RELIGION (REL) 101 (3)

RELIGION IN AMERICAN CULTURE (3 LEC.)

This course examines the nature of religion in America. It covers important influences from the past and characteristics of current religious groups and movements. Emphasis is on understanding the role of religion in American life.

RELIGION (REL) 102 (3)

CONTEMPORARY RELIGIOUS PROBLEMS (3 LEC.)

Both classic and recent issues are explored. Such topics as the nature of religion, the existence of God, world religions, mysticism, sexuality and religion, and the interpretation of death are included. This course may be offered with emphasis on a specific topic, such as death and dying.

RELIGION (REL) 201 (3)

MAJOR WORLD RELIGIONS (3 LEC.)

This course surveys the major world religions. Hinduism, Buddhism, Judaism, Islam, and Christianity are included. The history of religions is covered, but the major emphasis is on current beliefs. Other topics may also be included, such as the nature of religion, tribal religion, and alternatives to religion.

RESPIRATORY THERAPY (RES) 137 (4)

BASIC RESPIRATORY THERAPY SKILLS AND PRACTICE I (3 LEC., 6 LAB.)

The field of respiratory therapy is introduced. The therapy and hospital environment are also presented. Instruction, observation and practice in

the laboratory and in the hospital of patient care and respiratory therapy techniques are included. Laboratory fee.

RESPIRATORY THERAPY (RES) 138 (4)

CLINICAL PRACTICE II (16 LAB.)

Prerequisite: "C" or better in all Respiratory Therapy courses. Practice in procedures related to cleaning and sterilization, periodic positive therapy, humidity and aerosol therapy, and chest physiotherapy is provided.

RESPIRATORY THERAPY (RES) 141 (2)

MEDICATIONS (2 LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides instruction in the identification, classification, dosage and dilution calculation, and principal and side effects of inhalational medications. The identification of other medications in common use and their possible effect on cardio-respiratory function is included.

RESPIRATORY THERAPY (RES)**144 (2)**

PATHOLOGY AND TREATMENT RATIONALE I (2 LEC.)

This course provides a description of the normal conditions and the deviation from normal in specific disease states with an assessment of reversability and an expression of the intent of therapy.

RESPIRATORY THERAPY (RES)**145 (4)**

BASIC TECHNOLOGY I (3 LEC., 4 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides instruction in specific details of design and function of respiratory therapy equipment, routine maintenance procedures, and detection and correction of malfunction. It also provides practice in adapting, applying, and modifying equipment in the patient care situation. Laboratory fee.

RESPIRATORY THERAPY (RES)**147 (2)**

CLINICAL PROCEDURES II (8.8 LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. Practice in procedures related to cleaning and sterilization, periodic positive pressure therapy, humidity and aerosol therapy, and chest physiotherapy is provided.

RESPIRATORY THERAPY (RES)**150 (2)**

CLINICAL PROCEDURES III (16 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course is a continuation of practice of procedures related to periodic positive pressure therapy, humidity and aerosol therapy, and chest physiotherapy, with emphasis on the critically ill patient.

RESPIRATORY THERAPY (RES)**152 (2)**

PHARMACOLOGY (2 LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides instruction in the identification, classification, dosage, and principal effects and side effects of cardiopulmonary medications. Drugs affecting the cardiopulmonary system are also discussed.

RESPIRATORY THERAPY (RES)**160 (3)**

CLINICAL PRACTICE III (24 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course is a continuation of Clinical Practice II with introduction to continuous ventilation.

RESPIRATORY THERAPY (RES)**162 (4)**

CLINICAL PRACTICE IV (32 LAB.)

Prerequisite: "C" or better in all Respiratory Therapy courses. Continued practice in respiratory therapy procedures with emphasis on continuous ventilation and pediatric and neonatal therapy is provided.

RESPIRATORY THERAPY (RES)**164 (3)**

BASIC TECHNOLOGY II (4 LEC., 6 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. A continuation of Basic Technology I with emphasis on continuous ventilation and volume ventilators. Laboratory fee.

RESPIRATORY THERAPY (RES)**243 (3)**

ADVANCED TECHNOLOGY AND INSTRUMENTATION I (2 LEC., 3 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides instruction in measurement of spirometry, pulmonary mechanics, lung volumes, and airway resistance. Emphasis is on equipment operation, testing techniques, data calculations, and interpretation. Laboratory fee.

RESPIRATORY THERAPY (RES)**246 (3)**

ADVANCED TECHNOLOGY AND INSTRUMENTATION II (2 LEC., 3 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course is a continuation of Advanced Technology and Instrumentation I. Laboratory fee.

RESPIRATORY THERAPY**(RES) 249 (3)**

SEMINAR AND CASE PRESENTATION (3 LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides physician-directed in-depth study, presentation, and discussion of case histories involving cardiorespiratory problems.

RESPIRATORY THERAPY**(RES) 254 (1)**

INSTRUCTION AND MANAGEMENT METHODS I (1 LEC., 1 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course is designed to give the potential therapist direction and practice in education of co-workers, physicians, patients, families of patients, and departmental trainees or students. Laboratory fee.

RESPIRATORY THERAPY**(RES) 255 (1)**INSTRUCTION AND
MANAGEMENT METHODS II (1 LEC., 1 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course is designed to provide the potential therapist with instruction, discussion, and practice in problem-solving related to respiratory therapy department operations. Laboratory fee.

RESPIRATORY THERAPY (RES)**256 (2)**INSTRUCTION AND MANAGEMENT METHODS II
(2 LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course is designed to provide instruction, discussion, and practice in problem solving related to respiratory therapy department operations.

RESPIRATORY THERAPY (RES)**257 (3)**ADVANCED PHYSIOLOGY AND PATHOLOGY (3
LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides an in-depth study of disease states related to cardiopulmonary function and the application and interpretation of related diagnostic, evaluative, and therapeutic procedures.

RESPIRATORY THERAPY (RES)**260 (4)**

CLINICAL PROCEDURES IV (16 LAB.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides practice in intensive care procedures, including ventilator monitoring, airway care, and weaning. Students participate in preoperative evaluation, observation of thoracic surgery, and postoperative management of thoracic surgery patients. Practice in emergency and recovery room procedures is also provided.

RESPIRATORY THERAPY**(RES) 261 (4)**

CLINICAL PROCEDURES V (16 LAB.)

Prerequisite: A grade of "C" or better in all Respiratory Therapy courses. Practice is provided in assuming total responsibility for continuous ventilator patients. Monitoring, airway care, and weaning are all included. Students participate in pre-operative evaluation, observation of surgery, and post-operative management of thoracic surgery patients. Students also participate in pediatric intensive care, acute and chronic disease management, and cardiopulmonary rehabilitation.

RESPIRATORY THERAPY**(RES) 262 (2)**

CLINICAL PROCEDURES VI (16 LAB.)

Prerequisite: A grade of "C" or better in all Respiratory Therapy courses. This course is the student's final exposure to critical care procedures and validation of all respiratory therapy procedures previously learned. It is the last clinical course before graduation.

RESPIRATORY THERAPY (RES)**270 (2)**

VENTILATOR PATIENT MANAGEMENT (2 LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. The need for mechanical ventilation, complications which may incur, and basic weaning procedures are discussed. This course correlates different disease states with alternative methods of ventilator management.

RESPIRATORY THERAPY (RES)**271 (2)**

PEDIATRIC RESPIRATORY THERAPY (2 LEC.)

Prerequisite: "C" or better in all previous Respiratory Therapy courses. This course provides an in-depth study of fetal lung development and the cardiopulmonary disorders associated with neonates and pediatric patients.

RETAIL DISTRIBUTION AND MARKETING (RDM) 245 (3)

SALES MANAGEMENT (48 CONTACT HOURS)

The qualities and characteristics of the sales executive are examined. Emphasis is on pricing, distribution, promotion, and brand management. The recruiting, selecting, training, and motivating of salespersons are also covered.

RETAIL DISTRIBUTION AND MARKETING (RDM) 246 (3)

MARKETING AND MANAGEMENT CASES (48 CONTACT HOURS)

Prerequisites: Business 136 and 206. Selected case studies in marketing and management are presented. Emphasis is on business decision-making.

RETAIL DISTRIBUTION AND MARKETING (RDM) 290 (3)

FASHION BUYING (3 LEC.)

This course focuses on the principles of fashion buying. It is designed to prepare the student for employment as an assistant buyer or buyer of fashion merchandise.

RETAIL DISTRIBUTION AND MARKETING (RDM) 291 (3)

FASHION MERCHANDISING (3 LEC.)

This course introduces the field of fashion. Emphasis is on its historical development and trends, career opportunities, marketers, and merchandising methods.

RETAIL DISTRIBUTION AND MARKETING (RDM) 292 (3)

FASHION DESIGN (48 CONTACT HOURS)

Fashion design is presented. History, color theory, and styling terminology are included. Emphasis is on silhouette, color, and accessories.

RETAIL DISTRIBUTION AND MARKETING (RDM) 703 (3)

(See Cooperative Work Experience)

RETAIL DISTRIBUTION AND MARKETING (RDM) 803 (3)

(See Cooperative Work Experience)

SMALL ENGINE (SE) 124 (3)

SMALL ENGINE SERVICE PRINCIPLES (90 CONTACT HRS.)

This course includes the principles of operation and failure analysis of two and four cycle engines. The principles of basic electricity as applied to small engines are also covered. Laboratory fee.

SMALL ENGINE (SE) 125 (3)

SMALL ENGINE TUNE-UP (90 CONTACT HRS.)

This course includes the tune-up procedures for small engines including ignition service and carburetion theory and service. Laboratory fee.

SMALL ENGINE (SE) 126 (3)

SMALL ENGINE AND TWO STROKE OVERHAUL (90 CONTACT HRS.)

Overhaul procedures for two stroke engines and drive systems as applied to small engine powered equipment are topics covered in this course. Laboratory fee.

SMALL ENGINE (SE) 127 (3)

SMALL ENGINE FOUR STROKE OVERHAUL (90 CONTACT HRS.)

This course includes overhaul procedures for four stroke engines, drive systems, and hydraulic systems, as applied to small engine powered equipment. Laboratory fee.

SMALL ENGINE (SE) 128 (3)

SMALL ENGINE ELECTRICAL SYSTEMS (90 CONTACT HRS.)

This course includes the theory of operation and troubleshooting procedures for ignition, charging, and accessory systems as applied to small engine powered equipment. Laboratory fee.

SMALL ENGINE (SE) 733 (3)

(See Cooperative Work Experience)

SMALL ENGINE (SE) 734 (4)

(See Cooperative Work Experience)

SOCIAL SCIENCE (SS) 131 (3)

AMERICAN CIVILIZATION (3 LEC.)

Theories and institutions of modern society are introduced. Psychological, historical, sociocultural, political, and economic factors are considered. The nature of the human being and the relationships of the individual are examined. Emphasis is on the national, state, and local experiences which affect daily life.

SOCIAL SCIENCE (SS) 132 (3)

AMERICAN CIVILIZATION (3 LEC.)

Prerequisite: Social Science 131.

Topical studies are made of the theories and institutions of modern society. Psychological, historical, sociocultural, political, and economic factors are all considered. Emphasis is on analyzing and applying theory to life experiences.

SOCIOLOGY (SOC) 101 (3)

INTRODUCTION TO SOCIOLOGY (3 LEC.)

This course is a study of the nature of society and the foundations of group life. Topics include institutions, social change, processes, and problems.

SOCIOLOGY (SOC) 102 (3)

SOCIAL PROBLEMS (3 LEC.)

This course is a study of social problems which typically include: crime, poverty, minorities, deviancy, population, and health care. Specific topics may vary from semester to semester to address contemporary concerns.

SOCIOLOGY (SOC) 103 (3)

HUMAN SEXUALITY (3 LEC.)

Students may register for either Psychology 103 or Sociology 103 but receive credit for only one of the two. Topics include physiological, psychological, and sociological aspects of human sexuality.

SOCIOLOGY (SOC) 203 (3)

MARRIAGE AND FAMILY (3 LEC.)

Prerequisite: Sociology 101 recommended. Courtship patterns and marriage are analyzed. Family forms, relationships, and functions are included. Sociocultural differences in family behavior are also included.

SOCIOLOGY (SOC) 204 (3)

AMERICAN MINORITIES (3 LEC.)

Prerequisite: Sociology 101 or 6 hours of U.S. history recommended. Students may register for either History 204 or Sociology 204 but may receive credit for only one. The principal minority groups in American society are the focus of this course. The sociological significance and historic contributions of the groups are presented. Emphasis is on current problems of intergroup relations, social movements, and related social changes.

SOCIOLOGY (SOC) 205 (3)

INTRODUCTION TO SOCIAL RESEARCH (3 LEC.)

Prerequisite: Sociology 101, Developmental Mathematics 091, or the equivalent. Principles and procedures in social research are presented. Topics include sources of data, techniques of collection, analysis, and statistical description.

SOCIOLOGY (SOC) 206 (3)

INTRODUCTION TO SOCIAL WORK (3 LEC.)

The development of the field of social work is studied. Topics include the techniques of social work and the requirements for training in social work.

SOCIOLOGY (SOC) 207 (3)

SOCIAL PSYCHOLOGY (3 LEC.)

Students may register for either Psychology 207 or Sociology 207 but may receive credit for one. Theories of individual behavior in the social environment are surveyed. Topics include the socio-psychological process, attitude formation and change, interpersonal relations, and group processes.

SOCIOLOGY (SOC) 209 (3)

SELECTED TOPICS (3 LEC.)

Prerequisite: Sociology 101 or the consent of the instructor. This is an elective course designed to deal with specific topics in sociology. Examples of topics might be: "urban sociology," "women in society," or "living with divorce." As the topics change, this course may be repeated once for credit.

SOCIOLOGY (SOC) 210 (3)

FIELD STUDIES IN AMERICAN MINORITIES (3 LEC.)

Prerequisite: Sociology 101 or Sociology 204. Experience is provided in Indian, Black, and Mexican-American community centers. Work is under professional supervision in a task-oriented setting.

SOCIOLOGY (SOC) 231 (3)

URBAN SOCIAL PROBLEMS (3 LEC.)

The sociology of social institutions is studied. Topics include urbanization, theories of formation, and the impact of urbanization on the individual.

SOLAR ENERGY TECHNOLOGY**(ST) 101 (4)**

ENERGY SCIENCE I (3 LEC., 3 LAB.)

This course is an introduction to Energy Science. Terms are defined, and solar radiation characteristics are described. The principles of temperature, heat transfer, and thermodynamics are included. Laboratory fee.

SOLAR ENERGY TECHNOLOGY**(ST) 102 (2)**

INTRODUCTION TO SOLAR ENERGY (2 LEC.)

Solar energy is introduced. Topics include a brief history of solar energy, an overview of collector types, the conversion of solar radiation to thermal energy, and solar vocabulary. Different types of energy efficient construction, traditional and non-traditional solar applications are also covered.

SOLAR ENERGY TECHNOLOGY**(ST) 103 (2)**

MATERIALS AND HANDLING (1 LEC., 2 LAB.)

This course presents the properties and handling of materials in a solar system. Topics include plumbing, sheet

metal, carpentry, roofing, glazing, concrete, soldering, and welding. Problems and compatibility of different construction materials are explored. Laboratory fee.

SOLAR ENERGY TECHNOLOGY**(ST) 104 (4)**

ENERGY SCIENCE II (3 LEC., 3 LAB.)

This course is a continuation of Solar Energy Technology 101. Topics include hydrostatics, hydrodynamics, and basic electrical considerations. Electromagnetic interactions, light, optics, and geography are also included. Laboratory fee.

SOLAR ENERGY TECHNOLOGY (ST)**105 (4)**

COLLECTORS AND ENERGY STORAGE (3 LEC., 3 LAB.)

Methods of collecting solar energy for heating and cooling are examined. Topics include collector types, collector parameters, and the chemical compatibility of different collector materials and fluids. Methods of storing solar energy, advantages and disadvantages of storage system construction, and exotic storage systems for use in electrical generation are also covered. Laboratory fee.

SOLAR ENERGY TECHNOLOGY (ST)**106 (3)**

INTRODUCTION TO SOLAR ENERGY (3 LEC., 1 LAB.)

This course presents a general history and overview of past, present and promising future energy resources. Topics include fossil fuels, nuclear fuels, conversion processes and thermal processes. Emphasis is placed on solar energy applications appropriate for present and near future technology, energy conservation and solar energy conversion methods. Also, passive solar construction techniques will be explored. Solar collection and storage methods will be examined while acquiring a general solar vocabulary. Lab experiments are designed to examine working models which demonstrate basic principles of solar energy conversion. Laboratory fee.

**SOLAR ENERGY TECHNOLOGY (ST)
107 (3)**

MATERIALS AND MATERIALS HANDLING (2 LEC., 3 LAB.)

This course presents the properties and handling of materials in a solar system. Topics include plumbing, sheet metal, carpentry, roofing, glazing, concrete, soldering, and welding. Problems and compatibility of different construction materials are explored. Laboratory fee.

**SOLAR ENERGY TECHNOLOGY (ST)
108 (3)**

FLUID TRANSPORT SYSTEMS (2 LEC., 2 LAB.)

This course presents piping, conduit and duct system practices. Topics include the identification and selection of appropriate pipe and duct sizes with the required fittings.

System designs using series, parallel, direct return and reverse return fluid flow patterns are a major emphasis of this course. Solar liquid and air transport components, along with HVAC air distribution components and piping requirements are studied as an integral part of the design process. Laboratory fee.

**SOLAR ENERGY TECHNOLOGY
(ST) 201 (4)**

SIZING DESIGN AND RETROFIT (3 LEC., 3 LAB.)

A solar installation is examined as a complete system. Control systems for heating, cooling, and domestic hot water are studied. Using solar equipment with conventional systems and sizing system components to meet the required load are also included. Laboratory fee.

**SOLAR ENERGY TECHNOLOGY (ST)
205 (4)**

OPERATIONAL DIAGNOSIS (3 LEC., 3 LAB.)

Diagnostic instruments and calculations are explored. Common problems are examined, and malfunctioning components are isolated and repaired. Laboratory fee.

**SOLAR ENERGY TECHNOLOGY (ST)
206 (3)**

ECONOMICS, CODES, LEGALITIES AND CONSUMERISM (3 LEC.)

The economics of solar energy systems is presented. Financing, customer relations, consumer protection and marketing aspects are explored. Regulating agencies, building codes and acceptable practices are studied along with energy conservation, energy audits, model contracts and warranties.

**SOLAR ENERGY TECHNOLOGY (ST)
208 (3)**

ENERGY CONSERVATION AND PASSIVE DESIGN CONCEPTS (3 LEC., 1 LAB.)

Conservation opportunities and decisions as related to building envelopes are studied. Conservation topics will include HVAC options, hot water systems, lighting systems, auxiliary equipment, economic and social impact along with potential solar applications. Also, passive solar design considerations and guidelines will be examined with emphasis on advantages and disadvantages of passive solar concepts. Laboratory fee.

**SOLAR ENERGY TECHNOLOGY (ST)
210 (3)**

NON-RESIDENTIAL AND PHOTOVOLTAIC APPLICATIONS (2 LEC., 3 LAB.)

This course covers the uses of solar technology for other than home heating and cooling. The course is open-ended, and materials are added as the technology changes. Laboratory fee.

**SOLAR ENERGY TECHNOLOGY
(ST) 803, 813 (3)**

(See Cooperative Work Experience)

SPANISH (SPA) 101 (4)

BEGINNING SPANISH (3 LEC., 2 LAB.)

The essentials of grammar and easy idiomatic prose are studied. Emphasis is on pronunciation, comprehension, and oral expression. Laboratory fee.

SPANISH (SPA) 102 (4)

BEGINNING SPANISH (3 LEC., 2 LAB.)

Prerequisite: Spanish 101 or the equivalent. This course is a continuation of Spanish 101. Emphasis is on idiomatic language and complicated syntax. Laboratory fee.

SPANISH (SPA) 201 (3)

INTERMEDIATE SPANISH (3 LEC.)

Prerequisite: Spanish 102 or the equivalent or the consent of the instructor. Reading, composition, and intense oral practice are covered. Grammar is reviewed.

SPANISH (SPA) 202 (3)

INTERMEDIATE SPANISH (3 LEC.)

Prerequisite: Spanish 201 or the equivalent. This course is a continuation of Spanish 201. Contemporary literature and composition are studied.

SPANISH (SPA) 203 (3)

INTRODUCTION TO SPANISH LITERATURE (3 LEC.)

Prerequisite: Spanish 202 or the equivalent or the consent of the instructor. This course is an introduction to Spanish literature. It includes readings in Spanish literature, history, culture, art, and civilization.

SPANISH (SPA) 204 (3)

INTRODUCTION TO SPANISH LITERATURE (3 LEC.)

Prerequisite: Spanish 202 or the equivalent or the consent of the instructor. This course is a continuation of Spanish 203. It includes readings in Spanish literature, history, culture, art, and civilization.

SPEECH (SPE) 100 (1)

SPEECH LABORATORY (3 LAB.)

This course focuses on preparing speeches, reading dialogue from literature, and debating propositions. Presentations are made throughout the community. This course may be repeated for credit each semester.

SPEECH (SPE) 105 (3)

FUNDAMENTALS OF PUBLIC SPEAKING (3 LEC.)

Public speaking is introduced. Topics include the principles of reasoning, audience analysis, collection of materials, and outlining. Emphasis is on giving well prepared speeches.

SPEECH (SPE) 109 (3)

VOICE AND ARTICULATION (3 LEC.)

Students may register for either Speech 109 or Theatre 109 but may receive credit for only one of the two. The mechanics of speech are studied. Emphasis is on improving voice and pronunciation.

SPEECH (SPE) 110 (1)

FORENSIC WORKSHOP (2 LAB.)

This course focuses on preparing speeches, readings, and debate propositions. Presentations are made in competition and before select audiences. This course may be repeated for credit.

SPEECH (SPE) 201 (1)

FORENSIC WORKSHOP (2 LAB.)

This course focuses on preparing speeches, readings, and debate propositions. Presentations are made in competition and before select audiences. This course may be repeated for credit.

SPEECH (SPE) 205 (3)

DISCUSSION AND DEBATE (3 LEC.)

Public discussion and argumentation are studied. Both theories and techniques are covered. Emphasis is on evaluation, analysis, and logical thinking.

SPEECH (SPE) 206 (3)

ORAL INTERPRETATION (3 LEC.)

Techniques of analyzing various types of literature are examined. Practice is provided in preparing and presenting selections orally. Emphasis is on individual improvement.

SPEECH (SPE) 208 (3)

GROUP INTERPRETATION (3 LEC.)

Prerequisite: Speech 105 and 206.

Various types of literature are studied for group presentation. Emphasis is on selecting, cutting and arranging prose and poetry, and applying reader's theatre techniques to the group performance of the literature. Although not an acting class, practical experience in sharing selections from fiction and non-fiction with audiences will be offered.

SURGICAL TECHNOLOGY**(SGT) 140 (2)**

MEDICAL TERMINOLOGY (2 LEC.)

The origin and structure of medical terms are studied. Emphasis is on building a medical vocabulary.

SURGICAL TECHNOLOGY**(SGT) 141 (8)**

OPERATING ROOM TECHNIQUES (6 LEC., 10 LAB.)

Prerequisites: Admission to the Surgical Technology Program, credit or concurrent enrollment in Biology 120 and 121, or Biology 123. This course is an introduction to the operating room. The basic principles of asepsis, sterilization, preparation care of surgical supplies and equipment and ethical-legal implications studied. Also the basic care and safety of the patient in the operating room is presented. Laboratory fee.

SURGICAL TECHNOLOGY**(SGT) 152 (8)**

OPERATING ROOM PROCEDURES (4 LEC., 20 LAB.)

Prerequisites: A grade of "C" in Surgical Technology 140 and 141, credit or concurrent enrollment in Biology 120 and 121, or Biology 123. In this course the student expands the basic principles from Surgical Technology 141 to include specific patient preparation, medication, instrumentation, and complications related to selected surgical procedures. Laboratory fee.

SURGICAL TECHNOLOGY**(SGT) 153 (7)**

CLINICAL PROCEDURES (35 LAB.)

Prerequisites: A grade of "C" in Surgical Technology 140, 141, and 152 and successful completion of curriculum requirements. This course provides the practical clinical experience in the operating room. An effective level of practice and knowledge must be demonstrated by the student in selected surgical procedures.

SURGICAL TECHNOLOGY**(SGT) 154 (2)**

SEMINAR (2 LEC.)

Prerequisites: A grade of "C" in Surgical Technology 140, 141, and 152 and successful completion of curriculum requirements. This course is a study of special problems which correlate with the individual needs of students during clinical practice. Continuing education is discussed in this seminar.

SURGICAL TECHNOLOGY**(SGT) 160 (8)**

OPERATING ROOM PROCEDURES FOR REGISTERED NURSES (4 LEC., 20 LAB.)

Prerequisites: A grade of "C" in Surgical Technology 140 and 141 and current licensure by the Texas State Board of Nurse Examiners. In this course the student expands the principles presented in Surgical Technology 141. Included are specific patient preparation, roles, and legal and ethical responsibilities of operating room nursing. Roles of the registered nurse in pre-operative and post-operative visitation and in complications of surgery are presented.

THEATRE (THE) 100 (1)

REHEARSAL AND PERFORMANCE (4 LAB.)

Prerequisite: To enroll in this course, a student must be accepted as a member of the cast or crew of a major production. Participation in the class will include the rehearsal and performance of the current theatrical presentation of the division. This course may be repeated for credit.



THEATRE (THE) 101 (3)

INTRODUCTION TO THE
THEATRE (3 LEC.)

The various aspects of theatre are surveyed. Topics include plays, playwrights, directing, acting, theatres, artists, and technicians.

THEATRE (THE) 102 (3)

CONTEMPORARY THEATRE (3 LEC.)

This course is a study of the modern theatre and cinema as art forms. The historical background and traditions of each form are included. Emphasis is on understanding the social, cultural, and aesthetic significance of each form. A number of modern plays are read, and selected films are viewed.

THEATRE (THE) 103 (3)

STAGECRAFT I (2 LEC., 3 LAB.)

The technical aspects of play production are studied. Topics include set design and construction, stage lighting, make-up, costuming, and related areas.

THEATRE (THE) 104 (3)

STAGECRAFT II (2 LEC., 3 LAB.)

Prerequisite: Theatre 103 or the consent of the instructor. This course is a continuation of theatre 103. Emphasis is on individual projects in set and lighting design and construction. The technical aspects of play production are explored further.

THEATRE (THE) 105 (3)

MAKE-UP FOR THE STAGE (3 LEC.)

The craft of make-up is explored. Both theory and practice are included. Laboratory fee.

THEATRE (THE) 106 (3)

ACTING I (2 LEC., 3 LAB.)

The theory of acting and various exercises are presented. Body control, voice, pantomime, interpretation, characterization, and stage movement are included. Both individual and group activities are used. Specific roles are analyzed and studied for stage presentation.

THEATRE (THE) 107 (3)

ACTING II (2 LEC., 3 LAB.)

Prerequisite: Theatre 106 or the consent of the instructor. This course is a continuation of Theatre 106. Emphasis is on complex characterization, ensemble acting, stylized acting, and acting in period plays.

THEATRE (THE) 108 (3)

MOVEMENT FOR THE STAGE (2 LEC., 3 LAB.)

Movement is studied as both a pure form and as a part of the theatre arts. It is also presented as a technique to control balance, rhythm, strength, and flexibility. Movement in all the theatrical forms and in the development of characterization is explored. This course may be repeated for credit.

THEATRE (THE) 109 (3)

VOICE AND ARTICULATION (3 LEC.)

Students may register for either Speech 109 or Theatre 109 but may receive credit for only one of the two. Emphasis is on improving voice and pronunciation.

THEATRE (THE) 110 (3)

HISTORY OF THEATRE I (3 LEC.)

Theatre is surveyed from its beginning through the 16th century. The theatre is studied in each period as a part of the total culture of the period.

THEATRE (THE) 111 (3)

HISTORY OF THEATRE II (3 LEC.)

Theatre is surveyed from the 17th century through the 20th century. The theatre is studied in each as a part of the total culture of the period.

THEATRE (THE) 112 (3)

BEGINNING DANCE TECHNIQUE
IN THEATRE (2 LEC., 3 LAB.)

Basic movements of the dance are explored. Emphasis is on swing movements, circular motion, fall and recovery, contraction and release, and contrast of literal and abstract movements. Body balance, manipulation of trunk and limbs, and the rhythmic flow of physical energy are developed.

THEATRE (THE) 113 (3)

INTERMEDIATE DANCE (2 LEC., 3 LAB.)

Prerequisite: Theatre 112 or the consent of the instructor. Various aspects of dance are surveyed. Topics include the role of dance in total theatre, the evolution of dance styles, and the jazz style. Emphasis is on the flow of movement, body placement, dynamic intensity, level, focus, and direction.

THEATRE (THE) 115 (2)

MIME (1 LEC., 2 LAB.)

Prerequisite: Theatre 108. Mime is studied. Both the expressive significance and techniques of mime are included.

THEATRE (THE) 199 (1)

DEMONSTRATION LAB (1 LAB.)

This course provides practice before a live audience of theory learned in theatre classes. Scenes studied in various drama classes are used to show contrast and different perspectives. This course may be repeated for credit.

THEATRE (THE) 201 (3)

TELEVISION PRODUCTION I (2 LEC., 3 LAB.)

Station organization, studio operation, and the use of studio equipment are introduced. Topics include continuity, camera, sound, lights, and video-tape recording.

THEATRE (THE) 202 (3)

TELEVISION PRODUCTION II (2 LEC., 3 LAB.)

Prerequisite: Theatre 201. This course is a continuation of Theatre 201. Emphasis is on the concept and technique of production in practical situations.

THEATRE (THE) 203 (3)

BROADCASTING
COMMUNICATIONS I (3 LEC., 2 LAB.)

The nature and practice of broadcasting are covered. Basic techniques of radio and television studio operations are introduced.

THEATRE (THE) 204 (3)

BROADCASTING
COMMUNICATIONS II (3 LEC., 2 LAB.)

This course is a continuation of Theatre 203. Emphasis is on radio and television as mass media and practical applications in both radio and television.

THEATRE (THE) 205 (3)

SCENE STUDY I (2 LEC., 3 LAB.)

Prerequisite: Theatre 106 and 107. This course is a continuation of Theatre 107. Emphasis is on developing dramatic action through detailed study of the script. Students deal with stylistic problems presented by the staging of period plays and the development of realism. Rehearsals are used to prepare for scene work.

THEATRE (THE) 207 (3)

SCENE STUDY II (2 LEC., 3 LAB.)

Prerequisite: Theatre 205. This course is a continuation of Theatre 205. Emphasis is on individual needs of the performer. Rehearsals are used to prepare for scene work.

THEATRE (THE) 208 (3)

INTRODUCTION TO TECHNICAL
DRAWING (2 LEC., 3 LAB.)

Basic techniques of drafting are studied. Isometrics, orthographic projections, and other standard procedures are included. The emphasis is on theatrical drafting, including groundplans, vertical sections, construction elevations, and spider perspective.

THEATRE (THE) 209 (3)

LIGHTING DESIGN (2 LEC., 3 LAB.)

Prerequisite: Theatre 103 and 104. The design and techniques of lighting are covered. Practical experience in departmental productions is required for one semester.

THEATRE (THE) 235 (3)

COSTUME HISTORY (3 LEC.)

Fashion costume and social customs are examined. The Egyptian, Greek, Roman, Gothic, Elizabethan, Victorian, and Modern periods are included.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 140 (3)

INTRODUCTION TO DEAFNESS (3 LEC., 1 LAB.)

The psychology and history of educating the deaf are introduced. Emphasis is on the psychological, social, emotional, and occupational aspects of deafness.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 141 (4)

BEGINNING SIGN LANGUAGE (3 LEC., 2 LAB.)

Prerequisite: Majors in Training Paraprofessionals for the Deaf should enroll concurrently in Training Paraprofessionals for the Deaf 142. Sign language and fingerspelling are introduced. Practice and experience in developing expressive and receptive skills are provided. Emphasis is on mastering expressive skills. Laboratory fee.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 142 (3)

COMMUNICATION THEORY (3 LEC.)

Basic communication methods used by the deaf are explored. Emphasis is on the interrelationship of all language methods and the concept of total communication, including theories, ideas, methods of language, communication, and English. (This course is not a sign language course.)

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 143 (4)

INTERMEDIATE SIGN LANGUAGE (3 LEC., 2 LAB.)

Prerequisite: Training Paraprofessionals for the Deaf 141 for Training Paraprofessionals for the Deaf majors and Training Paraprofessionals for the Deaf 142 for all students. Receptive and expressive fingerspelling skills are increased. Basic vocabulary is expanded, and idioms are introduced. Emphasis is on mastering receptive skills. Laboratory fee.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 145 (3)

CLASSROOM MANAGEMENT (2 LEC., 2 LAB.)

Prerequisite: Training Paraprofessionals for the Deaf 140. Techniques of effective classroom management are studied for nursery, elementary, and secondary school. Emphasis is on interpersonal relationships, team-teaching, and behavior management. The role of the teacher aide and the teacher aide/interpreter in the school setting is defined.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 146 (2)

THE DEAF ADULT (2 LEC.)

Prerequisite: Training Paraprofessionals for the Deaf 140. This course focuses on techniques to develop the social and work behaviors of the deaf. Experiences are provided in working with adult deaf in group interaction and in developing business and social skills.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 147 (3)

LANGUAGE DEVELOPMENT OF THE DEAF (3 LEC.)

The language development of deaf persons is studied. The period from infancy to adulthood is included. The importance of family, community, and school relationships is stressed. Various methods and materials used in developing language are presented. An overview of learning theory and normal language acquisition is also included.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 148 (1)

RECEPTIVE FINGERSPELLING (2 LAB.)

Prerequisites: Training Paraprofessionals for the Deaf 141, 143, or concurrent enrollment in Training Paraprofessionals for the Deaf 240. This course increases the student's ability to read fingerspelling. Video tapes are used to demonstrate fingerspelling — starting with two-letter words and progressing to words of several syllables. These words are presented individually as well as in sentences.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 230 (4)

ETHICS AND SPECIFICS OF
INTERPRETING (3 LEC., 2 LAB.)

Prerequisite: Training Paraprofessionals for the Deaf 141 or the consent of the instructor. This class focuses on interpreter protocol, i.e., manner of dress, code of ethics, language level. The student will learn about the preparation and training to become an interpreter for the deaf in different settings. Examples of these settings are legal, religious, vocational, medical, educational, counseling and rehabilitation.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 240 (4)

ADVANCED SIGN LANGUAGE (3 LEC., 2 LAB.)

Prerequisites: Training Paraprofessionals for the Deaf 141, 142, and 143. This course is a continuation of training in sign language. Practical experiences are included. Increased ability in both receptive and expressive areas is developed. The ability to move from one kind of sign language to another kind is stressed, and emphasis is on mastering Ameslan.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 241 (4)

AUDIOMETRY (3 LEC., 2 LAB.)

Prerequisite: 15 to 20 hours of Training Paraprofessionals for the Deaf courses or the consent of the instructor. A study of the uses of auditory equipment with the deaf in all situations. Includes instruction combined with practicum experiences in utilization of various types of group and individual auditory equipment. Training in techniques of utilization of equipment and materials to enable the deaf to respond meaningfully to their environments via the auditory channel.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 242 (3)

MEDIA FOR THE DEAF (2 LEC., 2 LAB.)

All types of media are surveyed. Emphasis is on specialized uses in a classroom for the deaf and on media production. Practice is provided in the use and maintenance of all media.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 247 (3)

SPECIAL PROBLEMS IN
DEAFNESS (3 LEC.)

Prerequisite: The consent of the instructor. Various topics are studied as demand warrants. Examples include residential care, introduction to rehabilitation, and the deaf/blind. This course may be repeated for credit when topics vary.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 248 (3)

REHABILITATION OF THE
MULTIPLY HANDICAPPED DEAF (3 LEC., 1 LAB.)

Prerequisite: Training Paraprofessionals for the Deaf 140. An overview of other handicapping conditions accompanying deafness. Emphasis on problems of development and education and on severity of vocational problems when deafness is one of the handicaps. Techniques of management and instruction are included. Instructional personnel will include guest professionals from areas of all handicaps.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 250 (3)

REVERSE INTERPRETING (3 LEC.)

Prerequisite: Training Paraprofessionals for the Deaf 240. This course is designed for the advanced sign language student. Reverse skills are developed and practiced through the use of video tapes (ranging from manual English to Ameslan), audio tapes and live subjects.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TDP) 251 (4)

EDUCATIONAL/SPECIALIZED SIGNS (3 LEC., 2 LAB.)

Prerequisites: Training Paraprofessionals for the Deaf 141, 142, 143 and 240. This course provides students with knowledge of specialized signs, particularly educational signs. Other contents covered are medical, sexual, legal, drug related and religious. Additional content areas are explored as needed. Laboratory fee.

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 802 (2)

(See Cooperative Work Experience)

TRAINING PARAPROFESSIONALS FOR THE DEAF (TPD) 803 (3)

(See Cooperative Work Experience)

TRANSPORTATION TECHNOLOGY

(TRT) 144 (3)

INTRODUCTION TO
TRANSPORTATION (3 LEC.)

This course is an overview of specialized fields within the transportation industry. The role of transportation in modern society is identified. Other topics include community needs, the philosophy of transportation, and the future of transportation.

TRANSPORTATION TECHNOLOGY

(TRT) 145 (3)

INTRODUCTION TO RATES AND
TARIFFS (3 LEC.)

Special emphasis is placed on present-day transportation modes, carrier pricing systems documentation, and federal and state regulation policies.

TRANSPORTATION TECHNOLOGY

(TRT) 146 (3)

TRANSPORTATION AND
TRAFFIC MANAGEMENT (3 LEC.)

This course is for students majoring in transportation technology. It emphasizes current transportation methods. Included are carrier services, carrier pricing systems, documentation, carrier liability, claims, import and export procedures, and governmental regulations. The course is designed to prepare students to take the certification examinations of the American Society of Traffic and Transportation.

TRANSPORTATION TECHNOLOGY

(TRT) 147 (3)

ECONOMICS OF
TRANSPORTATION (3 LEC.)

Prerequisite: Transportation Technology 146. The economic significance of transportation is studied. Topics include the rationale of pricing, the economics of regulation, subsidies and coordination, and interagency control. This course is designed to prepare students to take

the certification examinations of the American Society of Traffic and Transportation.

TRANSPORTATION TECHNOLOGY

(TRT) 148 (3)

GOVERNMENT POLICIES IN
TRANSPORTATION (3 LEC.)

Federal, state, and local government roles and policies in transportation are explored. Included are policy making, subsidy, taxation, and controls.

TRANSPORTATION TECHNOLOGY

(TRT) 240 (3)

INTERSTATE COMMERCE LAW I (3 LEC.)

Prerequisite: Transportation Technology 147. Principles of transportation regulation are studied. Topics include the framework of regulation, regulatory acts, and administrative agencies. The regulatory policies of the Interstate Commerce Commission, the Civil Aeronautics Board, and the Federal Maritime Commission are also included. This course is designed to prepare students to take the certifying examinations of the American Society of Traffic and Transportation and the Interstate Commerce Commission.

TRANSPORTATION TECHNOLOGY

(TRT) 241 (3)

INTERSTATE COMMERCE LAW II (3 LEC.)

Prerequisite: Transportation Technology 240. Rules and regulations covering the practice and procedure of federal agencies are studied. The agencies include the Interstate Commerce Commission, the Civil Aeronautics Board, and the Federal Maritime Administration. Pleadings, rules of evidence, rules of ethics, and judicial review are covered. This course is designed to prepare students to take the certifying examinations of the American Society of Traffic and Transportation and the Interstate Commerce Commission.

**TRANSPORTATION TECHNOLOGY
(TRT) 249 (3)**

APPLIED RATES AND TARIFFS (3 LEC.)

Prerequisite: Transportation Technology 145. This course is an analytical study of transportation pricing structures. Special emphasis is given to the methodology for construction of carrier tariffs, the development of freight rates, and special services provided by carriers. This course is designed to develop skills leading to certification examinations of The American Society of Traffic and Transportation.

**TRANSPORTATION TECHNOLOGY
(TRT) 250 (1)**

STUDIES IN TRANSPORTATION TECHNOLOGY (1 LEC.)

This course provides the student an opportunity to explore selected topics in the field of transportation. The course may be repeated with a different emphasis for a maximum of nine hours of credit.

**TRANSPORTATION TECHNOLOGY
(TRT) 287 (3)**

PHYSICAL DISTRIBUTION MANAGEMENT I (3 LEC.)

The management and organization of physical distribution are studied. Emphasis is on decision-making in inventory control, warehousing, packaging, and material handling. The analysis of location and international distribution and transport systems are also covered.

**TRANSPORTATION TECHNOLOGY
(TRT) 288 (3)**

PHYSICAL DISTRIBUTION MANAGEMENT II (3 LEC.)

Relationships in the management of physical distribution and the market are studied. Topics include market environment, distribution channels and systems, cost planning and analysis, financial control, and system design.

**TRANSPORTATION TECHNOLOGY
(TRT) 713, 803, 813 (3)**

(See Cooperative Work Experience)

**VOCATIONAL NURSING (VN)
144 (3)**

HEALTH MAINTENANCE THROUGH THE LIFE CYCLE (3 LEC.)

Prerequisite: Admission to the Vocational Nursing Program. This course presents the concepts necessary for general health maintenance including normal growth and development; geriatrics, normal nutrition for all ages; mental health principles; and the prevention and control of disease.

**VOCATIONAL NURSING (VN)
145 (3)**

NURSING PROCESS I (3 LEC.)

Prerequisite: Admission to the Vocational Nursing Program. Nursing process provides the basic concepts that serve as the foundation for other nursing courses. It includes an introduction to the health care delivery system, nursing as a profession, the nursing process, and communication techniques. The course focuses on meeting the basic physical and psychological needs of patients. A Calculation-Conversion Proficiency Test is a required component of the course.

**VOCATIONAL NURSING (VN)
150 (8)**

CLINICAL II (28 LAB.)

Prerequisite: Completion of Vocational Nursing 147, 148 with a grade of "C" or better. Must be concurrently enrolled in Vocational Nursing 149. This course provides the opportunity for students to use the nursing process and clinical skills to meet the needs of patients experiencing medical, surgical or emotional problems. Supervised practice in the administration of medications is included.

VOCATIONAL NURSING (VN)**152 (6)****NURSING PRACTICE (24 LAB.)**

Prerequisite: Admission to the Vocational Nursing Program. This course emphasizes the scientific principles and nursing competency in nursing skills in simulated laboratory situations that prepare the student to meet the basic needs of patients in clinical situations. Selected clinical experiences enable the student to assess, plan, implement, and evaluate nursing care. Laboratory fee.

VOCATIONAL NURSING (VN)**153 (8)****MATERNAL CHILD HEALTH (7 LEC., 3 LAB.)**

Prerequisite: Completion of Vocational Nursing 144, 145, 146 and all support courses with grade of "C" or better. This course focuses on the theory, principles and nursing skills related to meeting the basic needs of maternity, newborn, and pediatric patients. Laboratory fee.

VOCATIONAL NURSING (VN)**154 (7)****MATERNAL CHILD HEALTH CLINICAL (28 LAB.)**

Prerequisites: Completion of Vocational Nursing 144, 145, 146 and all support courses with grade of "C" or better. Must be concurrently enrolled in Vocational Nursing 147. This course provides clinical experiences focusing on normal prenatal, labor and delivery, post partum, and newborn nursing care situations. Students also have the opportunity to apply the nursing process to the care of pediatric patients with acute or chronic problems. Laboratory fee.

VOCATIONAL NURSING (VN)**155 (10)****NURSING PROCESS II (8 LEC., 4 LAB.)**

Prerequisites: Completion of Vocational Nursing 147, 148 with grade of "C" or better. This course focuses on the nursing care of patients with various medical, surgical or emotional problems. Drug and diet therapy and clinical skills used in caring for acutely or chronically ill patients are included.

The topic of professional and vocational adjustment to the employee role is included. Laboratory fee.

WELDING (WE) 101 (3)**BASIC WELDING AND CUTTING PRACTICES (1 LEC., 5 LAB.)**

This course is for students who need welding on the job, such as in auto body, auto mechanics, or air conditioning. Emphasis is on setting up and using oxyfuel equipment. Cutting up to and including $\frac{3}{8}$ " mild steel, welding up to and including $\frac{1}{8}$ " mild steel, and brazing up to and including 16 ga. mild steel are all included. Setting up and using arc welding equipment are also included. Welding $\frac{1}{4}$ " through $\frac{3}{8}$ " mild steel in the flat and vertical position using E60's series electrodes is covered. Laboratory fee.

WELDING (WE) 111 (2)**OXYFUEL I (60 CONTACT HOURS)**

This course gives both theory and practice in basic tools, equipment and processes used in welding and brazing guage materials. Lab work includes preparation and performance of welded and brazed joints. Laboratory fee.

WELDING (WE) 112 (2)**OXYFUEL II (60 CONTACT HOURS)**

Prerequisite: Welding 111. This course gives both theory and practice in the basic tools, equipment and procedures used in layout, cutting, shaping, forming and the heat treating of metals. Lab work includes the selection and use of fuel gases for heat treating and the set-up and usage of semi-automatic and manual cutting equipment. Laboratory fee.

WELDING (WE) 113 (2)**SHIELDED METAL ARC WELDING I (60 CONTACT HOURS)**

This course gives both theory and practice in the identification and usage of shielded metal arc welding electrodes. Laboratory work includes the use of E60 and E70 series including low hydrogen electrodes primarily in the flat and horizontal position. Laboratory fee.

WELDING (WE) 114 (2)

SHIELDED METAL ARC WELDING II (60 CONTACT HOURS)

Prerequisite: Welding 113. This course includes both theory and laboratory work, emphasizing the production and properties of mild steel alloys. Arc welding equipment set-up and operation are also included. Laboratory work will include the use of E60 and E70 series electrodes primarily in the vertical and overhead position. Laboratory fee.

WELDING (WE) 115 (4)

SHIELDED METAL ARC WELDING III (120 CONTACT HOURS)

Prerequisite: Welding 114. This course gives both the theory and practice in code quality welding. Laboratory work includes passing standard test according to the American Welding Society and American Society of Mechanical Engineers for certifying procedures for 3/16" - 3/4" thickness range material in all positions. Laboratory fee.

WELDING (WE) 116 (4)

SHIELDED METAL ARC WELDING IV (120 CONTACT HOURS)

Prerequisite: Welding 115. This course is designed to introduce the basis of shielded metal arc welding of pipe. Lab work includes welding 3" through 10" schedule 40 mild steel pipe. The vertical, horizontal rolled and fixed using E60 and E70 series electrodes are included. Laboratory fee.

WELDING (WE) 117 (3)

GENERAL METAL LAYOUT (90 CONTACT HOURS)

Prerequisite: Drafting 182 or equivalent. This course gives both theory and practice in blueprint reading, welding symbols, layout work and fabrication techniques of metal weldments. Lab work consists of developing shop drawings and fabrication of designed structures. Laboratory fee.

WELDING (WE) 118 (4)

WELDING INSPECTION AND QUALITY CONTROL (120 CONTACT HOURS)

Prerequisites: Welding 117 and six credit hours of welding lab courses or equivalent. This course is both a theory and practical application of welding codes, processes, testing procedures, testing equipment and weld discontinuities. Lab work emphasis is on inspection and qualification of welds and welding procedures.

WELDING (WE) 211 (2)

GAS TUNGSTEN ARC WELDING I (60 CONTACT HOURS)

This course gives both theory and practice in the set-up and use of gas-tungsten arc welding of plate. Laboratory work will include setting up and using 18 gauge through 3/8" thick mild steel, stainless and aluminum. Welds will be made primarily in the flat and horizontal positions. Laboratory fee.

WELDING (WE) 212 (2)

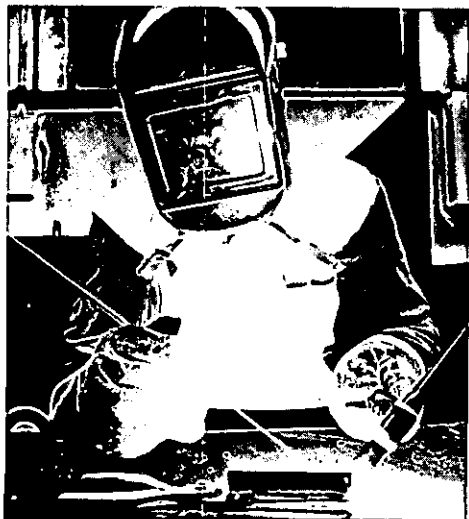
GAS TUNGSTEN ARC WELDING II (60 CONTACT HOURS)

Prerequisite: Welding 211 or equivalent. This course gives both theory and practice in the set-up and use of gas tungsten arc welding of pipe. Lab work includes the welding of thin wall tubing and schedule 40 pipe. Welding is primarily in the vertical, horizontal rolled and horizontal fixed positions. Laboratory fee.

WELDING (WE) 213 (4)

GAS TUNGSTEN ARC WELDING III (120 CONTACT HOURS)

Prerequisite: Welding 212 or equivalent. This is an advanced theory and skills course in the use of gas tungsten arc welding of plate and pipe. Lab work will include passing the standard qualification test in a variety of metals in all positions. Laboratory fee.



WELDING (WE) 214 (2)

GAS METAL ARC WELDING I (60 CONTACT HOURS)

This course gives both theory and practice in the set-up and use of gas metal arc welding processes of plate. Lab work will be on setting up and using gas metal arc welding equipment in welding 18 gauge 3/8" thick mild steel, stainless and aluminum, primarily in the flat and horizontal position. Laboratory fee.

WELDING (WE) 215 (2)

GAS METAL ARC WELDING II (60 CONTACT HOURS)

Prerequisite: Welding 214. This course gives both theory and practice in the set-up and use of gas metal arc welding processes of pipe. Lab work includes the welding of schedule 40 mild steel pipe in the vertical, horizontal rolled and fixed positions. Laboratory fee.

WELDING (WE) 216 (4)

GAS METAL ARC WELDING III (120 CONTACT HOURS)

Prerequisite: Welding 215. This is an advanced theory and skills course in the use of gas metal arc welding of plate and pipe. Lab work will be on passing the standard qualification test in plate and pipe on plate and pipe in a variety of metals and thickness ranges in all positions. Laboratory fee.

WELDING (WE) 217 (3)

BASIC WELDING METALLURGY (90 CONTACT HOURS)

This is a theory type course designed to assist those students in welding and related industries to refresh and extend their knowledge of the behavior of the various fabricating metals during welding. The effects of the joining processes and procedures on the fabrication and service performance of weldments are also considered. Laboratory fee.

WELDING (WE) 218 (3)

APPLIED WELDING METALLURGY (90 CONTACT HOURS)

Prerequisite: Welding 217 and six credit hours of welding lab courses. This course is designed to assist the student in improving communication skills with welding engineers and metallurgists. The course includes a study of welding processes and their relationship to and effect upon metals and why they can or cannot be used for certain applications; the theory of heat treating and its many uses; the value of preheat, interpass temperature, and post-heat in welding procedures. This course should increase the students knowledge of what metals are made of and why they are used for specific industrial applications; to strengthen the knowledge and understanding of the grain structure of metals and the effect that welding processes have on them. Laboratory fee.

WELDING (WE) 219 (3)

WELDING DESIGN (90 CONTACT HOURS)

Prerequisites: Welding 117, and six credit hours of welding lab courses or equivalent. Concepts in designing products for welding, joint design and selection, weld size determination, welding costs, codes and applications in welding. A design project is chosen and carried to completion using the design team concept. Laboratory fee.

WELDING (WE) 220 (2)

SPECIAL WELDING APPLICATION I (60
CONTACT HOURS)

This is an advanced skills development course designed to allow the student to program his own specialization area course objectives under instructional supervision. This will allow a student to upgrade his present skills development level in order to meet employment reclassification requirements of a selected potential employer. This course is open only to those students in advanced standing or who are presently employed and in need of additional skill development. This course may be repeated for credit. Laboratory fee.

WELDING (WE) 701, 711, 801, 811 (1)

(See Cooperative Work Experience)

WELDING (WE) 702, 712, 802, 812 (2)

(See Cooperative Work Experience)

WELDING (WE) 703, 713, 803, 813 (3)

(See Cooperative Work Experience)

WELDING (WE) 704, 714, 804, 814 (4)

(See Cooperative Work Experience)

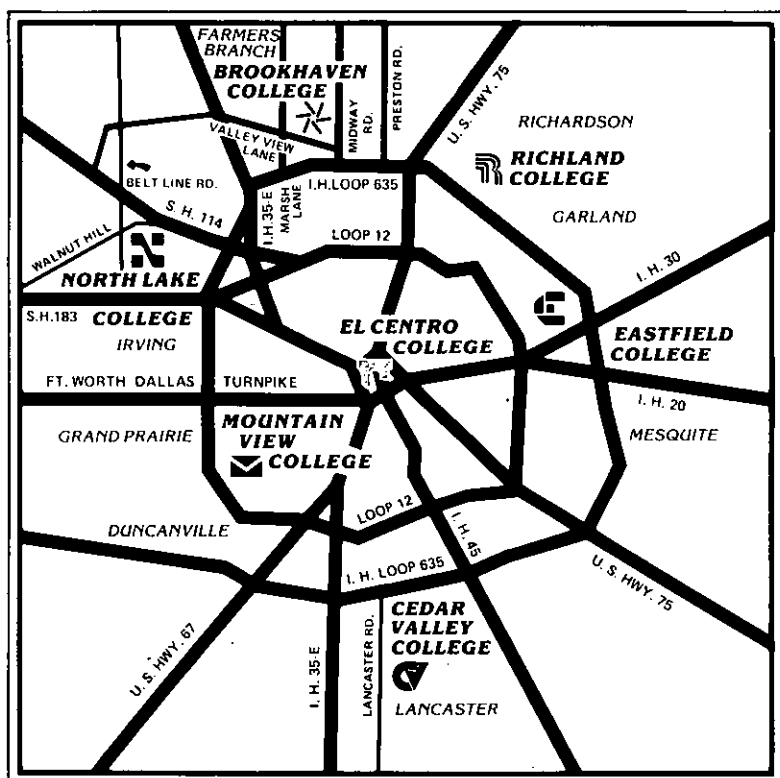
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Dallas County Community College District



Brookhaven College
3939 Valley View Lane
Farmers Branch, Texas 75234

Cedar Valley College
3030 North Dallas Avenue
Lancaster, Texas 75134

Eastfield College
3737 Motley Drive
Mesquite, Texas 75150

El Centro College
Main & Lamar Streets
Dallas, Texas 75202

Mountain View College
4849 West Illinois Avenue
Dallas, Texas 75211

North Lake College
5001 N. MacArthur Blvd.
Irving, Texas 75062

Richland College
12800 Abrams Road
Dallas, Texas 75243

 Brookhaven College

 Cedar Valley College

 Eastfield College

 El Centro College

 Mountain View College

 North Lake College

 Richland College



Dallas County
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701 Elm Street
Dallas, Texas 75202