CEDAR VALLEY COLLEGE CATALOG
1979-80

DALLAS COUNTY COMMUNITY COLLEGE DISTRICT

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Cedar Valley College

Catalog 3

3030 Dallas Avenue
Lancaster, Texas 75134
746-4810

Equal Educational 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, or national origin. Title IX of the Educational Amendments of 1972 prohibits discrimination on the basis of sex in any educational program or activity receiving federal financial assistance by way of grant, contract, or loan. Title VI of the Civil Rights Act of 1964 is similar in its prohibition of discrimination on the basis of race, color, sex, or national origin. Equal educational opportunity includes: admission, recruitment, extracurricular programs and activities, housing, facilities, access to course offerings, counseling and testing, financial assistance, employment, health, and insurance services, and athletics. Dallas County Community College District also is committed to equal opportunities for the physically or mentally handicapped in compliance with federal regulations, **Sec. 504, Rehabilitation Act of 1973.**

Student grievances shall be handled in accordance with the existing administrative channels of the college. When a student believes a condition of the college to be unfair, unjust, inequitable, or discriminatory, an appeal can be made to the administrator in charge of that area. Appeals to higher administrative authority shall be considered based on the merits of the case.

Director of Services for Handicapped Students (746-4718) is the designated responsible person for Cedar Valley's compliance to Sec. 504.

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READING THE CATALOG

Following is a list of terms used throughout the Cedar Valley College Catalog. A brief explanation follows each term.

1. CONCURRENT ENROLLMENT — Two courses that a student *must* enroll in during the same semester.
2. CONTACT HOURS — The number of clock hours that a student will spend in the 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. Credit hours are sometimes referred to as semester hours.
4. ELECTIVE — A course that is chosen by the student that is not one of the required courses for a certificate or degree.
5. FLEXIBLE ENTRY — A course that permits enrollment at times other than the beginning of the semester. Consult Cedar Valley College class schedule for further information.
6. LABORATORY HOURS (lab.) — The number of clock hours the student will spend *per week* in the laboratory.
7. LECTURE HOURS (lec.) — The number of clock hours the student will spend *per week* in the regular classroom setting.
8. MAJOR — The student's main emphasis of study (i.e. Automotive Technology, Psychology, etc.)
9. PREREQUISITE — A prerequisite course is a course that must be successfully completed before enrolling in an advanced course.

This catalog contains policies, regulations and procedures which were in effect as the publication went to press. The catalog reserves the right to make administrative changes regarding any items published in this catalog.

CALENDAR: 1979-80

FALL SEMESTER, 1979

Aug	20 ()	Faculty Reports
Aug	21-23 (T-R)	Registration
Aug	24 (F)	Faculty Professional Development
Aug	25 (S)	Saturday classes begin
Aug	27 (M)	Classes begin
Aug	31 (F)	Last day for tuition refund
Sept	3 (M)	Labor Day Holiday
Sept	8 (S)	12th class day (Includes Saturdays)
Nov	22-25 (R-S)	Thanksgiving Day Holidays
Nov	26 (M)	Classes resume
Dec	7 (F)	Last day to withdraw "W"
Dec	13 (R)	Last day of classes (T-R)
Dec	14 (F)	Last day of classes (MWF)
Dec	15 (S)	Final Examinations for Saturday classes
Dec	17-20 (M-R)	Final examinations
Dec	20 (R)	Semester closes

SPRING SEMESTER, 1980

Jan	7 (M)	Faculty Reports
Jan	8-10 (T-R)	Registration
Jan	11 (F)	Faculty Professional Development
Jan	12 (S)	Saturday classes begin
Jan	14 (M)	Classes begin
Jan	18 (F)	Last day for tuition refund
Jan	25 (F)	12th class day
Feb	22 (F)	Faculty Professional Development
Mar	9-16 (S-S)	Spring Break
Mar	14 (F)	Spring Holiday for all employees
Mar	17 (M)	Classes resume
Apr	4-6 (F-S)	Easter Holidays
Apr	7 (M)	Classes resume
May	1 (R)	Last day to withdraw "W"
May	6 (T)	Last day of classes (T-R)
May	9 (F)	Last day of classes (MWF)
May	10 (S)	Final examinations for Saturday classes
May	8 & 13 (R&T)	Final examinations T&R classes
May	12 & 14 (M&W)	Final Examinations MWF Classes
May	14 (W)	Graduation
May	14 (W)	Semester closes

SUMMER SESSIONS, 1980

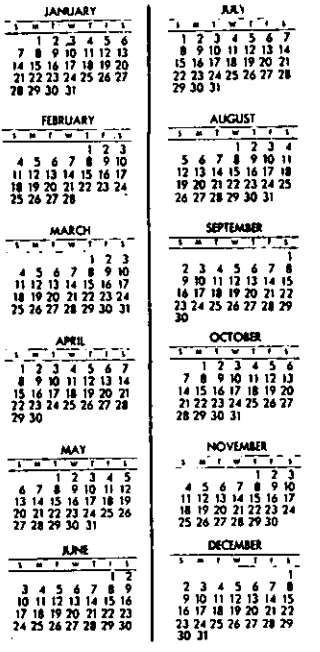
First Summer Session

May	26 (M)	Memorial Day Holiday
May	27 (T)	Registration
May	29 (R)	Classes begin
May	30 (F)	Last day for tuition refund
June	3 (T)	4th class day
June	26 (R)	Last day to withdraw "W"
July	2 (W)	Final examinations
July	2 (W)	Semester closes

Second Summer Session

July	3 (R)	Registration
July	4 (F)	Fourth of July
July	7 (M)	Classes begin
July	8 (T)	Last day for tuition refund
July	10 (R)	4th class day
Aug	4 (M)	Last day to withdraw "W"
Aug	8 (F)	Final examinations
Aug	8 (F)	Semester closes

1979



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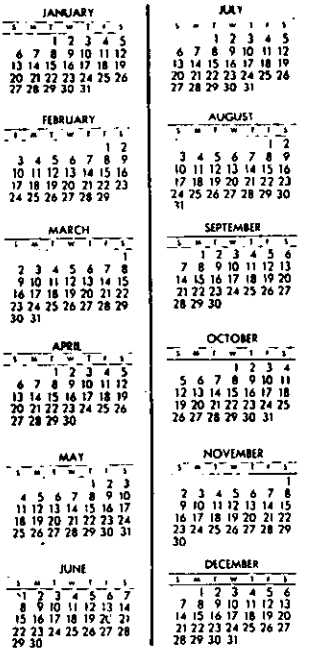
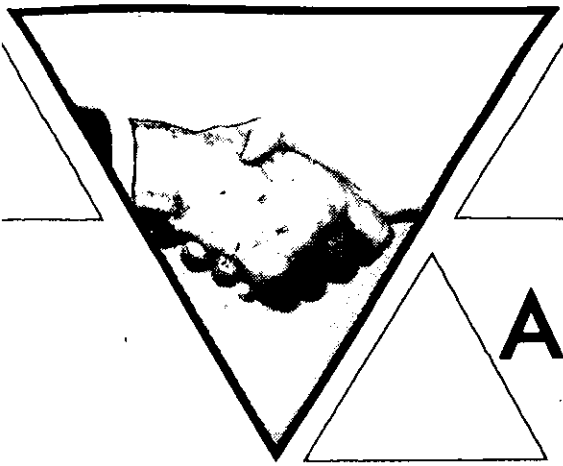




Administration

ADMINISTRATIVE STAFF — DALLAS COUNTY COMMUNITY COLLEGE DISTRICT

Chancellor ..... Bill J. Priest
Vice Chancellor of Academic Affairs ..... R. Jan LeCroy
Vice Chancellor of Business Affairs ..... Walter L. Pike
Assistant Chancellor of Operations and Planning ..... Stephen K. Mittelstet
Special Assistant to the Chancellor ..... Jan Sanders
Director of Computer Services ..... James R. Hill
Director of Development ..... James L. Richardson, Jr.
Director of Personnel ..... Quincy Ellis
Director of Program Development ..... Linda Coffey
Director of Public Information ..... Claudia Robinson
Director of Special Services ..... Bonny Franke
Director of Technical Services ..... Paul E. Dumont

ADMINISTRATIVE STAFF — CEDAR VALLEY COLLEGE

President ..... Floyd S. Elkins
Vice President — Instruction ..... Ruth G. Shaw
Vice President — Business Services ..... Walter N. Beene
Associate Dean, Extended Day Programs ..... Kenneth W. Thomas
Associate Dean, Learning Resources Center ..... Ruth J. Watkins
Associate Dean, Technical/Occupational Programs ..... Roger E. Kinseth
Assistant Dean, Community Service Programs ..... Diana Henshaw
Director of Counseling ..... Joanne Cox
Director of Public Information ..... Kathleen Krebbs
Director of Financial Aids ..... David Hawes
Registrar and Director of Admissions ..... John Williamson
Division Chairperson, Business/Social Science Division ..... Patsy Fulton
Division Chairperson, Communications/ Humanities ..... Mary Davidson
Division Chairperson, Math/Science/ PE/Technology Division ..... Mike R. Huddleston

THE DALLAS COUNTY COMMUNITY COLLEGE DISTRICT HISTORY AND PURPOSE

The Dallas County Community College District's seven innovative educational communities are dedicated to a common goal: serving in the best possible way the complex, varied and ever-changing educational requirements of a growing metropolitan community.

Each of the District's seven colleges — Brookhaven, Cedar Valley, Eastfield, El Centro, Mountain View, North Lake, and Richland — is therefore committed to providing every person in Dallas County a quality educational experience, whether the person is a youth setting forth toward a degree in medicine, or an adult wanting to enrich his leisure hours with an interesting hobby.

There is a place for a student who wishes to spend a year or two preparing himself to enter a trade or profession, and a place for an employed person who wants to further his training in his occupational field.

There is a place for the very bright high school student who is ready to undertake college-level training in advance of his graduation from secondary school, and a place for the high school dropout who has changed his mind about the necessity of education in today's complex, demanding society.

There is, simply stated, a place for everyone.

Of primary importance to the District's goal is making certain that a student's educational program is tailored to his needs, abilities and ambitions. The philosophy of the District is to create an educational program for an individual, rather than to try to squeeze or stretch an individual to fit an "educational mold."

Every student is offered competent, intensive counseling to help discover his goals and special abilities. Continued guidance is available to update a student's educational program if his goals change during his college experience. This emphasis on counseling, rare for some institutions, is routine procedure at all District colleges.

The District officially became the Dallas County Community College District in 1972, when its philosophy, function and breadth outgrew the traditional "junior" college label. The new name more closely states the District's mission — to meet the educational needs of the entire metropolitan community.

Dallas County voters created the District in May 1965 and approved a $41.5 million bond issue.

The following year the District's first college, El Centro, opened its doors for the fall semester in the heart of downtown Dallas. In August 1970, Eastfield College and Mountain View College enrolled their first students and the multi-campus district envisioned by the District planners became a reality. Richland College became the District's fourth college in the fall of 1972.

In September of 1972, the voters of Dallas County approved the sale of an additional $85 million in bonds, thereby paving the way for expansion of existing campuses as needed and the planning and construction of three more colleges. The first priority in the expansion program was the remodeling and enlarging of El Centro College. The first phase of that program was completed in time for the 1976-77 academic year. In 1977, Dallas County Community College District opened two new

campuses, Cedar Valley College in Lancaster, and North Lake College in Irving. Brookhaven College, the final college in the seven-college master plan, opened for enrollment in August, 1978.

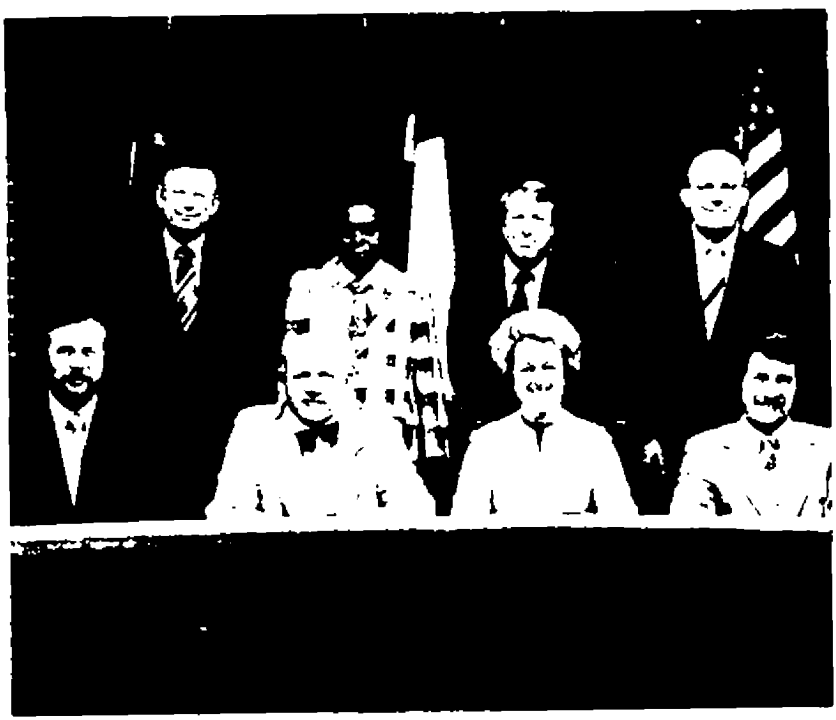
How do the District's colleges serve the educational requirements of such a complex family? The answer is found in educational offerings in four broad categories:

—For the student seeking the first two years of work toward the goal of a bachelor's or higher degree, the colleges offer a wide range of courses which are transferable to senior colleges and universities.

—For the student wishing to enter an occupation at a level above the bottom rung of the ladder, the colleges offer one-year and two-year programs of credit courses covering specific technical/occupational fields.

—For the employed person wishing to improve his knowledge of his field, or train for a move into a new occupational field, the colleges offer a broad range of credit and non-credit adult education courses.

—For the person who simply wants to make life a little more interesting, there are community service programs offering a myriad of courses on cultural, civic and avocational topics.



Dallas County Community College District Board of Trustees: front row: Jerry Gilmore; Pattie Powell, chairperson; Bill Priest, chancellor; Robert Power — back row: Bob Beard; Bart Rominger; J. D. Hall; and Don Buchholz.

THE PHILOSOPHY AND PURPOSE OF CEDAR VALLEY COLLEGE

Cedar Valley College operates under the philosophy that each individual is unique, and must function in an ever-changing society whose members are becoming increasingly dependent on one another. This philosophy presents three major challenges to education. To comply with the uniqueness of individuals, the college must offer alternative modes of instruction to insure maximum learning for each and every student. Second, students must be taught flexibility in order to adjust to society's rapid changes. Third, beyond work skills, a student must develop skills in effective interpersonal relations.

The purpose of Cedar Valley College is to provide all students with the learning experiences that meet these needs. These learning experiences will be in keeping with every student's personal interests and abilities as he/she moves toward his/her educational goals. This purpose will be accomplished through effective career planning with guidance from a competent counseling staff and the alternative modes of learning provided by a faculty dedicated to helping all students achieve their maximum potential in becoming well-adjusted, productive citizens.

ACCREDITATION AND AFFILIATION AT CEDAR VALLEY COLLEGE

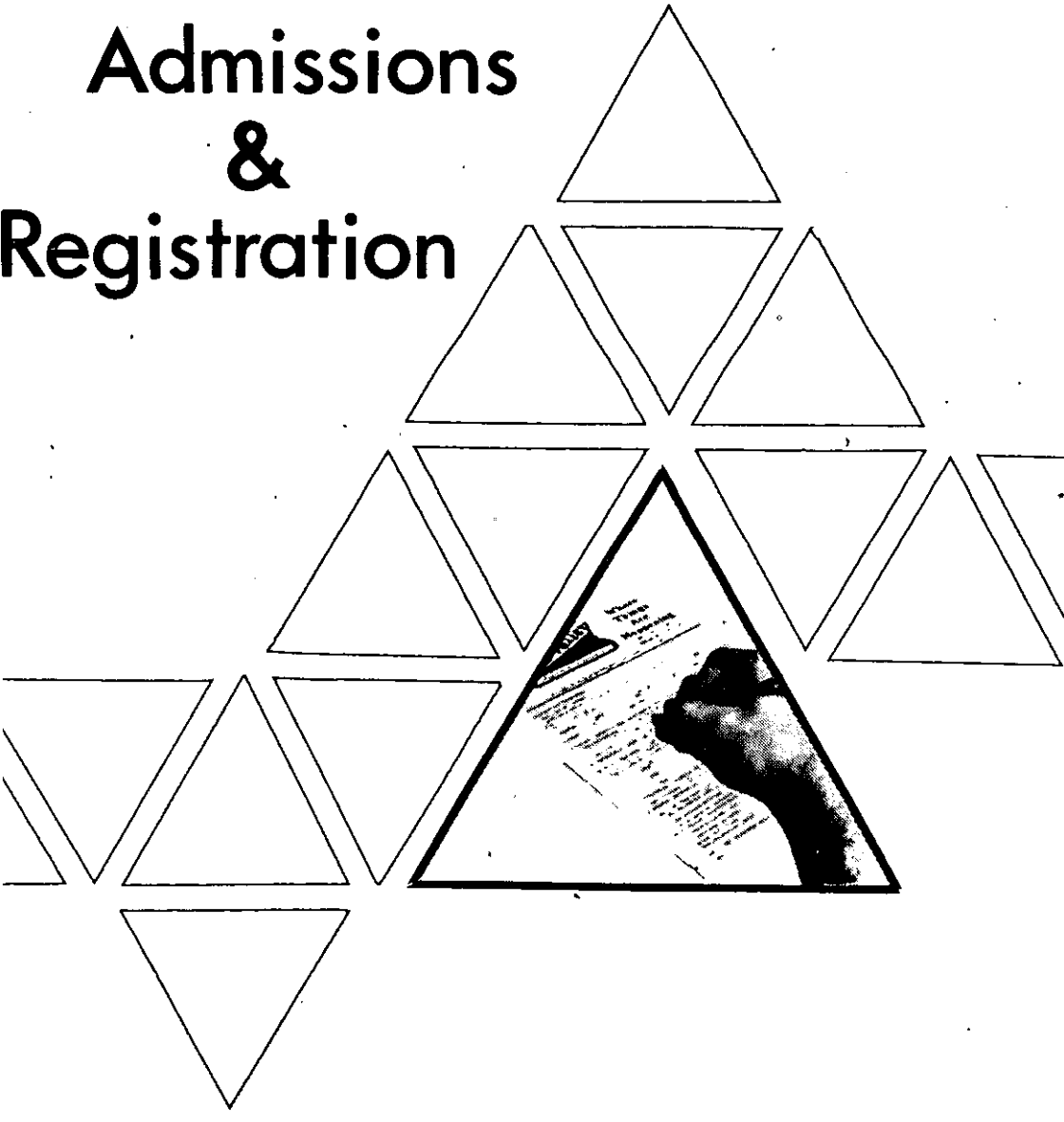
Cedar Valley College of the Dallas County Community College District was granted candidate status by the Southern Association of Colleges and Schools in 1977. The College has been given recognition and sanction by the Coordinating Board of the Texas College and University System and the Texas Education Agency. Memberships are held in the American Association of Community and Junior Colleges and The League for Innovation in the Community College.

LEAGUE FOR INNOVATION

Cedar Valley College is a member of the League For Innovation in the Community College. Sixteen outstanding community college districts throughout the nation compose the League membership. Innovative experimentation and the continuing development of the community college movement in America are the purposes and goals of the League. Membership commits the Dallas County Community College District to research, evaluation and cooperation with other community college districts in providing the best possible educational program and fullest utilization of its resources to serve the needs of its community.


FLOYD S. ELKINS

Admissions & Registration



GENERAL ADMISSION POLICY

The College's admission policy is "open door." It insures that all persons who can profit from post-secondary education will have an opportunity to enroll.

Cedar Valley College encourages the attendance of mature students of all ages from all ethnic backgrounds and fully complies with the provisions of Title VI of the Civil Rights Act of 1964 (P.L. 88-352).

APPLICATION INFORMATION

Applications will be accepted any time prior to registration. Since registration priorities are assigned according to the date an applicant fulfills all admission requirements, applicants should plan to submit applications at least three weeks before registration to insure adequate counseling and schedule planning.

Applications received after this date will receive a low priority. All applicants are limited in their selection of classes to those available when they register.

Enrollment is available in certain courses at times other than regular semester registration. Consult the registrar's office for information.

ADMISSION REQUIREMENTS

1. BEGINNING FRESHMEN:
   Students enrolling in college for the first time may apply if they are:
   - Graduates from an accredited high school.
   - Graduates from an unaccredited high school who are eighteen years of age.
   - Non-high school graduates who are eighteen years of age and whose high school classes have graduated.
   - High school students recommended by the high school principal. In this case, a limited number of high school seniors may be concurrently enrolled for special study, but not for more than six hours per semester, providing the student is making normal progress toward high school graduation.
2. TRANSFER STUDENTS:
   - College transfer applicants will be considered for admission on the basis of their previous college record. Academic standing for transfer applicants will be determined by the Office of Admissions based on the standards established by the College.
   - Students on scholastic or disciplinary suspension from another institution must petition via the Admissions Office to the Committee on Admissions and Retention for special approval.
3. FORMER STUDENTS:
   Former Dallas County Community College District students will be required to submit an application for readmission to any one of the District colleges. A student will not be readmitted to any college within the District if he or she has unsettled financial debts at any of the District Colleges. Former Cedar Valley College students who have not attended school for the preceding long semester should also file an application for readmission.
4. FOREIGN STUDENTS:
   Cedar Valley College is authorized under Federal Law to enroll nonimmigrant alien students. However, under present con-

ditions, no foreign students are admitted without approval from the foreign student advisor and recommendation of a counselor. The following admission requirements must be met by foreign students seeking admission to Cedar Valley College:

1. Application Form — The application form must include your Social Security number. If you do not have a Social Security number or have not applied for one through the Social Security Administration Office, you will be assigned a temporary number upon acceptance to the college.
2. Medical Form — Proof of a negative tuberculin skin test or chest x-ray within the last year, and proof of a Diphtheria-Tetanus innoculation within the last ten years is required for admission to Cedar Valley College. A physician's signature is required as verification.
3. English Language School — If you are presently enrolled at the English Language School, you must have completed Level 7 before you are eligible to apply for admission to Cedar Valley College.
4. English Proficiency Examination — This test is administered at Cedar Valley College and is required of all foreign students. Only students that have completed 24 hours of previous college with a G.P.A. of 2.00 will be exempted from this examination. A total score of 30 is required for admission to Cedar Valley College.
5. Official Transcripts — All college transcripts must bear the college seal and the signature of the Registrar.
6. Statement of Standing — If you are currently enrolled in an accredited college, a statement of standing is required from the Registrar's Office of that school.
7. Statement of Financial Support — Documented evidence of financial income must be presented to the foreign student advisor. A statement of financial support must be signed before the Form I-20 will be issued.
8. Immigration Documents — You must be in possession of a valid I-94 Arrival Departure Card and a valid passport before your admission to Cedar Valley College can be finalized.

The Form I-20 is issued by Cedar Valley College to non-immigrant students accepted for enrollment in a full course of study after the school has determined that the student has the academic qualifications, the English proficiency and the financial support needed to pursue a full course of study at Cedar Valley College. Students already accepted by other U.S. educational institutions (I-20 issued) must complete one full year at the admitting institution.

Cedar Valley College requires a personal interview with each foreign student applicant. Therefore, the Form I-20 is not issued to students outside the United States.

All questions should be directed to Carolyn Boswell, Associate Registrar, Cedar Valley College, 746-4814.

5. NON-CREDIT STUDENTS: Students seeking enrollment for non-credit courses are directed to contact the Office of Community Services.

Exceptions to these requirements will be referred to the Committee on Admission and Retention.

ADMISSION PROCEDURES

The following material must be submitted to the Office of Admissions before a student's entrance file is considered complete:

- an application for admission
- an official transcript from the last school (high school or college) attended. Transcripts are important for program advising in the Counseling Center. Students who are seeking a Certificate or Associate Degree are required to submit transcripts of all previous college work prior to the end of the first semester.
- written proof from a medical office of
  — a negative tuberculin skin test or chest x-ray
  — a polio immunization if the applicant is under 19 years of age
  — a diphtheria/tetanus injection within the last ten years

This medical proof is required by state law (Senate Bill 27).

FLEXIBLE ENTRY

The Dallas County Community College District has committed its staff to providing programs which may be entered at the first of every month. In addition to the regular registration periods, registration for courses offered through Flexible Entry is held the first Monday of each month. Registration is in the Registrar's Office and requires instructor approval.

Students should check with the Registrar's Office each month to determine the sections which will be offered.

CONCURRENT COLLEGE ENROLLMENT

Each college in the Dallas County Community College District has no geographical boundary restrictions for enrollment at any of its campuses. Admission requirements for all of the colleges are established by the DCCCD Board of Trustees and are the same for all District colleges. Students may enroll in more than one college at the same time.

TRANSFER OF CREDITS

Transfer credit will be given for all passing work completed at accredited colleges and universities. The Admissions Office will be responsible for the evaluation of all transfer credit.

Students who are admitted with a grade point deficiency cannot graduate from this college until this deficiency has been cleared.

Credits earned in military service-connected schools or through the U.S. Armed Forces institute will be reviewed by the Director of Admissions and credit granted if applicable.

TUITION AND FEES

Tuition is charged on a sliding scale according to the number of credit hours in which a student is enrolled and his place of legal residence. Tuition is subject to change without notice by the DCCCD Board of Trustees or the Texas Legislature. Tuition for credit courses will be charged according to the following schedule:

Dallas County Community College District
Tuition and Student Services
Fall, Spring Sessions, 1979-80

Semester	In-District			Out-of-District*			Out-of-State**			Out-of-Country		
Cr. Hrs.	Tuition	Fees	Total	Tuition	Fees	Total	Tuition	Fees	Total	Tuition	Fees	Total
1	25	1	26	25	1	26	40	1	41	200	1	201
2	25	1	26	40	1	41	80	1	81	200	1	201
3	25	1	26	60	1	61	120	1	121	200	1	201
4	25	5	30	80	5	85	160	5	165	200	5	205
5	30	5	35	100	5	105	200	5	205	200	5	205
6	36	5	41	120	5	125	240	5	245	240	5	245
7	42	8	50	140	8	148	280	8	288	280	8	288
8	48	8	56	160	8	168	320	8	328	320	8	328
9	54	8	62	180	8	188	360	8	368	360	8	368
10	60	10	70	200	10	210	400	10	410	400	10	410
11	64	10	74	204	10	214	440	10	450	440	10	450
12	68	10	78	208	10	218	480	10	490	480	10	490
13	72	10	82	212	10	222	520	10	530	520	10	530
14	76	10	86	216	10	226	560	10	570	560	10	570
15	80	10	90	220	10	230	600	10	610	600	10	610
16	84	10	94	224	10	234	640	10	650	640	10	650
17	88	10	98	228	10	238	680	10	690	680	10	690
18	92	10	102	232	10	242	720	10	730	720	10	730
19	96	10	106	236	10	246	760	10	770	760	10	770
20	100	10	110	240	10	250	800	10	810	800	10	810

Dallas County Community College District
Tuition Schedule
Summer Sessions, 1980

Semester Credit Hours	In-District	Out-of-District* (Other Texas Counties)	Out-of-State**	Out-of-Country
1	25	30	45	100
2	25	60	90	100
3	30	90	135	135
4	40	120	180	180
5	50	150	225	225
6	60	180	270	270
7	64	184	310	310
8	68	188	350	350
9	72	192	390	390

*The Dallas County Community College District Board of Trustees defines an Out-of-District Student as: (1) a student who is eighteen (18) years of age or older who resides in a Texas County other than Dallas County; (2) a student who is less than eighteen (18) years of age whose parents do not live in Dallas County.

**A non-resident student is hereby defined to be a student of less than eighteen (18) years of age living away from his family and whose family resides in another state, or whose family has not resided in Texas for twelve (12) months immediately preceding the date of registration, or a student of eighteen (18) years of age who resides out of the state or who has not been a resident of the state twelve (12) months.

SPECIAL FEES AND CHARGES

Student Service Fee	see fee schedule
Laboratory Fee (per lab)	$2 to $8 a semester
Physical Education Fee	$5 a semester
Private Music Lessons Fee **	$20 per 1/2 hour $35 per hour (maximum charge for one course)
Audit Fee	The charge for auditing a course is at the same rate as taking a course for credit regardless of the number of hours enrolled except that a student service fee is not charged.
Credit by Examination***	$20 per exam

**Available only to music majors enrolled for 12 hours or more
***This fee can change without prior notice.

ADDITIONAL FEES

Additional fees may be assessed as new programs are developed with special laboratory costs. These fees will always be kept to a basic practical minimum for the program involved. A graduation fee is not assessed students receiving a degree; however, each student taking part in the commencement exercise will pay for cap and gown rental.

REFUND POLICY

The Refund Policy is based on the fact that student tuition and fees provide only a fraction of the cost of providing educational opportunities. When a student enrolls in a class, he reserves a place which cannot be made available to another student unless he officially drops the class during the first week of the semester. Also, a student's original enrollment represents a sizeable cost to the District whether or not he continues in the class. Therefore, a refund will be made only under the following conditions.

- No 100% refund is granted unless college error is involved.
- An 80% refund of tuition and fees may be obtained through the date noted in the college calendar. 80% refund will be given through the first two class days of a six week summer session or Fastrak semester. Refunds for flexible entry courses will be considered through completion of the second day of class from the date of enrollment.
- Credit by Examination: No refund will be given for advanced placement or CLEP exams.
- A physician's statement must be submitted with petitions related to medical reasons for withdrawing from college.
- Requests for refunds must be submitted before the end of a semester session for which the refund is requested.
- A refund of less than $4.00 for tuition and/or fees will not be made.
- Refund Petition forms are available in the Counseling Center and the Office of the Vice President-Student Services.

Students who feel that their refund requests are due to extenuating circumstances beyond the limits of

the refund policy should be explicit when completing the refund form. All requests for refund will be referred to the Refund Petition Committee. The Committee's recommendations are made to the Vice President — Student Services who notifies the student of the action to be taken. Refund checks normally require a minimum of one month from date of approval.

BAD 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 will be added for returned checks.

If a check for tuition payment is returned, the student's enrollment will be considered void.

SERVICEMEN'S OPPORTUNITY COLLEGE

The colleges of the Dallas County Community College District, in cooperation with other community colleges in the United States, participate in the Servicemen's Opportunity College. This program enables the institution to plan an educational experience with the serviceman regardless of his mobility pattern.

For further information, contact the Office of Admissions.

ADVISEMENT PROCEDURES

When students receive their letter of acceptance, they will be invited to an advisement session. This session may be conducted individually or as a group with a counselor; however, beginning freshmen are expected to attend a New Student Orientation. It is designed to help students make schedule choices based on assessment of courses or programs. The half-day session is designed for students who are enrolling in college for the first time and who expect to attend full-time. All students are assigned faculty advisors in their area of interest.

A variety of diagnostic instruments may be used for assessment and placement in courses or programs at the discretion of the college. These instruments are used as counseling tools for more reliable placement. For those students who wish to send their ACT scores for placement, use the code for Cedar Valley College (4087).

Developmental Studies are provided for those students who may require developmental assistance in reading, writing, or math. Test data, transcripts of previous work, and counseling assessment may be used to determine placement in this program.

STUDENT INFORMATION

Students are reminded to inform the Office of the Registrar of any changes which occur in their name or address. All applicants are required to furnish a social security number which is used as the student's identification number and insures accuracy of student records.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974

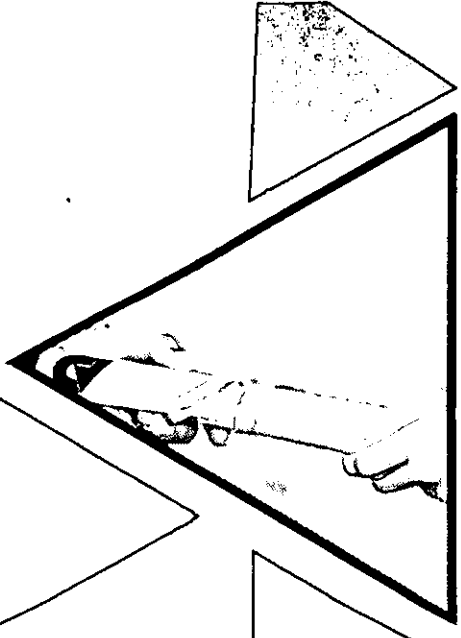
In compliance with the Family Educational Rights and Privacy Act of 1974, Federal Law 93-380, information classified as "directory information" may be released to the general public without the written consent of the student.

Directory information is defined as:

- Student name
- Student address
- Telephone listing
- Dates of attendance
- Most recent previous educational institution attended
- 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 submitting a written request 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 term. If no request is filed, information will be released upon inquiry. No telephone inquiries will be acknowledged; all requests must be made in person.

Directory information is the only part of a student record that may be released without written consent from the student. No transcript or inquiries concerning an academic record will be released to the general public under any circumstances without WRITTEN CONSENT from the student, except as otherwise provided by law (e.g., court subpoena).



Academic Information

ACADEMIC TRANSFER PROGRAM (first two years of bachelors)

At Cedar Valley College students may take the first two years of a Bachelor's Degree and transfer to a four-year senior institution for the remaining two years. Students may choose nearly any major desired. If they know the senior institution to which they wish to transfer, a curriculum will be designed which will result in a smooth, trouble-free transfer.

Listed below are many of the possible majors a student may consider:

- Art
- Business Administration
- Computer Science
- Criminal Justice
- Liberal Arts
- Music
- Political Science
- Pre-Med
- Psychology
- Public Administration
- Science
- Sociology
- Speech
- Teacher Education

For students who have not yet chosen a major field of study, but who wish to eventually earn a Bachelor's Degree, the following courses can be used in nearly any major chosen at a later date:

Course	Credit Hours
English 101, 102	6
History 101, 102	6
Laboratory Science	8
Social Science Electives	6
Mathematics and/or Fine Arts Elective	6
Physical Education	2

DEGREE REQUIREMENTS

Cedar Valley College confers the Associate in Arts and Sciences Degree or the Associate in Applied Arts and Sciences Degree upon students who have completed all the 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 will be granted by the college at which the student took the last 15 hours or where the majority of hours were accrued.

Correspondence work submitted for graduation credit must be approved by the Registrar. No more than one-fourth of the work required for a degree or certificate may be taken by correspondence.

Associate in Arts and Sciences Degree

A student must have a total of 60 hours and present an average grade of at least "C" (2.0).

These 60 hours may be earned at any Dallas County Community College District college and must include:

English 101-102, plus an additional 6 hours of English.
12 Hours

Laboratory Science (Music majors are exempt from this requirement. Check listings under subject field).
8 Hours

History 101-102* and Government 201-202* (No substitutions allowed).
12 Hours

Humanities: To be selected from Theatre 101, Art 104, Music 104, Humanities 101 or Philosophy 102.
3 Hours

A maximum of two physical education activity hours may be counted as credit toward requirements for graduation. All students who expect to transfer to a four-year institution are urged to complete their four semester requirements in physical education during their freshman and sophomore years.

Music 199, Art 199, Theatre 199, and courses numbered 99 and below may not be counted toward the 60-hour minimum.

The student is urged to consult the catalogs of the institutions to which he/she may transfer for their special requirements. These catalogs should be used by students and advisors as the basis for the program plans.

*Only 3 hours of history or 3 hours of government credit may be earned by credit-by-examination. (CLEP credit does not meet this requirement.)

Associate in Applied Arts and Sciences Degree and Certificate Career Programs

A minimum of 60 hours exclusive of Art 199, Music Recital 199, and Theatre 199 must be presented for the degree with an average grade of at least "C" (2.0). All of the prescribed requirements for the specific technical or occupational program for which the student is enrolled must be completed. For some programs, the semester hour total is over 60. These programs may also have criteria for successful completion beyond degree requirements. The student is referred to the Technical/Occupational Programs section of this catalog for a more detailed explanation.

Certificate requirements are detailed under specific programs listed in the Technical/Occupational Programs section of this catalog. A "C" (2.0) grade average is necessary for all courses listed in the requirements of the certificate program in which the student is enrolled.

A maximum of two physical education activity hours may be counted as credit toward graduation. Courses numbered 99 and below cannot be included to meet degree or certificate requirements.

PROCEDURE FOR FILING DEGREE AND CERTIFICATE PLANS

- The student should request a degree plan from the Admissions Office upon completion of 30 semester hours. Transcripts of all previous college work must be on file at the time of the request for a degree plan.
- Students following a 1-year certificate program should request an official plan during their first semester.

Candidates for any degree or certificate must meet the requirements as set forth in the catalog for the year of first enrollment unless they elect to graduate under the requirements of a later catalog. The choice to graduate under the original catalog assumes a student has pursued a program of study with reasonable diligence. Candidates must indicate the catalog of their choice when they file degree plans.

To qualify for a second degree or certificate a student must fulfill the residence requirement for the second degree and must complete all required courses in the plan for the second degree or certificate.

RECOMMENDED ACADEMIC LOAD

No student will be permitted to carry more than 18 semester units of course work or more than 5 classes plus physical education without permission of the Director of Counseling. Employed students are advised to limit their academic loads in accordance with the following recommendation: If students carry full college loads (12 semester units or more), they should not work more than 20 hours per week. If they must work more hours, their credit unit loads in college should be reduced proportionately.

CHANGE OF SCHEDULE

Extreme care should be exercised in the registration process. A student should schedule only courses for the days and hours he/she is able to attend. As a general policy, class changes are only authorized for students who have been incorrectly placed.

The change is not completed until it has been processed by the Registrar.

DROPPING A COURSE OR WITHDRAWAL FROM COLLEGE

A student must drop a class or withdraw from college in the following manner:

- Obtain a drop or withdrawal form from a counselor and follow the procedure outlined.
- Should circumstances prevent a student from appearing in person to withdraw from college, he/she may withdraw by mail by writing to the Director of Admissions. No drop or withdrawal requests are accepted by telephone.

Students who drop a class or withdraw from college before the deadline will receive a "W" in each class from which they have withdrawn. The deadline for receiving a "W" is two weeks prior to the end of the semester. After that time a student will receive a performance grade in the course.

CREDIT BY EXAMINATION

Students who believe they are qualified by experience or previous training may take a special examination to establish credit in a particular course. Not all courses are approved for credit by examination. A list of those credits which may be established through this method is available in the Assessment Center.

Students will be allowed to earn as many credits through the credit-by-examination procedure as their needs require and abilities permit. However, the minimum number of hours as a resident student required for a certificate or a diploma may not be reduced through credit-by-examination.

Credit by examination may be attempted only one time in any given course. A score of "C" is required to receive credit. Only currently enrolled students will have the semester hours earned through examination become part of their permanent records. Requests for examinations should be made to the appropriate division office, which will provide the necessary forms and advise the student of the procedure.

A student, whether part-time or full-time, will pay $20 per exam. This fee must be paid prior to taking the exam and is nonrefundable. Upon transferring to a four-year institution, final acceptance of credit by examination is determined by that institution. No more than three credit hours can be earned by credit by examination for the degree requirements in History and Government.

AUDITING A COURSE

Any person 18 years of age or older may, with the consent of the instructor, and provided that space is available, enroll in the status of audit. This student may attend classes but not take the examinations or receive credit for the course unless he/she enrolls in the course again as a regular student.

The same fee is charged for auditing as for credit. Procedures for auditing a course will be administered by the Registrar. No audits will be approved prior to the first day of the second week of classes in any semester. Most lab courses may not be audited.

The combined number of semester

hours in credit courses and audit shall not exceed 18.

SCHOLASTIC REGULATIONS

Acceptable Scholastic Performance

College work is measured in terms of semester credit hours or units. The number of semester hours or units of credit offered for each course is included with each course description. Acceptable scholastic performance is the maintenance of a grade point average of 2.0 (on a four-point scale) or better. Students may not be graduated from any degree or certificate program without a cumulative grade point average of 2.0 or better. Grade points and hours earned in courses numbered 99 and below are computed when deriving a student's scholastic standing, but are not computed in determining graduation requirements.

Scholastic Standards: Grades and Grade Point Average

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

Grade	Interpretation	Grade Point Average
A	Excellent	4 points
B	Good	3 points
C	Average	2 points
D	Poor	1 point
P	Progress	Not Computed
F	Failing	0 points
I	Incomplete	Not Computed
W	Withdrawn	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. A student's grade point average is computed by adding the total grade point values for all courses for which grade point values may be computed ("performance grade") and dividing by the appropriate number of credit hours attempted during the same period.

P Grade

The *P* grade may be awarded in those cases when a student has attended class regularly and the instructor has evidence that the student has made significant progress toward meeting course objectives but has *not* fulfilled those objectives at a level appropriate for the awarding of a performance grade (A-D).

Students wishing to earn credit for a course in which they have earned a *P* grade must re-enroll in that course.

I Grade

An *Incomplete* grade may be awarded when a student who has made every effort to complete a course cannot do so within the time constraints of that course. An *Incomplete Contract*, setting forth requirements for the satisfactory completion of the course, must be agreed upon and signed by the instructor, the student and the Division Chairperson and submitted with the final grade report. In those cases where it is necessary to submit an *Incomplete Contract* without the student's signature, the instructor must accompany the contract with a statement indicating that the student is aware of, and in agreement with, the conditions and requirements of the contract.

Repeated Courses:

In computing cumulative grade-point averages, only the latest grade earned in repeated courses will be included. However, transcripts should indicate all work completed in the District. This policy shall apply, even if the latest grade is lower than the preceding grade. In cases where students withdraw from a course which they are repeating, their cumulative grade-point averages shall be calculated by using

the immediately preceding grade in the same course.

Grade Reports:
At the end of each semester, grade reports are issued to each student. Transcripts will be withheld if the student does not have all required student information on file in the Registrar's Office or if any financial obligations to the College have not been paid.

Scholastic Probation
Full-time students taking 12 or more semester hours during a Fall or Spring semester are required to earn during the first semester of attendance, and maintain during subsequent semesters, a cumulative grade-point average of 2.0 or greater. Failure to meet this standard will place the student on scholastic probation.

The scholastic record of a part-time student will not be evaluated until the student has attempted a minimum of 12 semester hours. The scholastic standards required of a full-time student will then be used to determine the scholastic status of the part-time student. The part-time student must meet the minimum standards required of the full-time student in each succeeding semester.

Students on scholastic probation who achieve either a cumulative grade-point average of 1.5 or above or a grade-point average of 2.0 or above for the last completed semester may continue on scholastic probation. In order to be removed from probation, the student must earn at least a 2.0 cumulative grade-point average.

Students on probation who do not meet the requirements will be placed on scholastic suspension. Suspension for the first time is one regular semester and subsequent

suspensions, two regular semesters. Suspended students must file a petition for readmission. The conditions for readmission are established and administered by the Vice President-Instruction.

Honors
A full-time student who has completed at least 12 hours of credit and who earns a grade-point average of 3.00-3.49 will be listed on the college Honor Roll. Full-time students who complete at least 12 hours of credit and who average 3.50-4.00 will be placed on the Dean's List. A part-time student who is taking 6-11 credit hours and who maintains a 3.5 or higher grade-point average will receive Academic Recognition. The Honor Roll, the Dean's List and the Academic Recognition List will be published each semester.

Transcripts of Credit
The Registrar's Office will send the student's transcript upon request to any college or agency named. However, a student's official transcript may be withheld until all financial obligations to the college

have been settled. The first transcript will be issued without charge; there is a $1 charge for each transcript requested thereafter.

CLASS ATTENDANCE

Students are expected to attend regularly all classes in which they are enrolled. Class attendance is the responsibility of the student. It is also the responsibility of the student to consult with the class instructor when an absence occurs.

Instructors are responsible for appropriate notification of attendance policy and procedures to all students enrolled in their classes. Generally, when absences have reached a total equal to the number of class hours as credit for the course, a drop for excessive absences will be filed by the instructor. The student will be notified by a letter from the Admissions Office sent to the student's address of record. The effective drop date will be stated in the warning letter. Students who desire to remain in class must contact the instructor. With the instructor's approval, a student may be reinstated.

Students dropped for excessive absences prior to the published withdrawal deadline will receive a grade of "W". A student who does not attend class during the first 12 days of a long semester (or the first 4 days of summer semesters) will be dropped.

CLASS ATTENDANCE NON-TRADITIONAL SECTIONS

Even though instruction may be received by students in a manner which does not require their regular attendance in class, instructors are nevertheless required to fulfill their responsibility to students for informing them when they are not satisfactorily progressing because of lack of attention to assignments. This can be accomplished by instructors providing guidelines for students which inform them of the "pace" they must maintain in order to remain in good standing in the course. Such guidelines may be expressed in terms of number of assignments, number of tests, or other activities which must be accomplished within a particular time frame. (Examples: A student will be warned and dropped who has not completed Test #1 by the end of the fourth week; or, a student will be warned and dropped who has not completed Tests #1 and #2 and Assignments #1, #2, and #3 by the end of the eighth week of class.)

STUDENT CLASSIFICATION

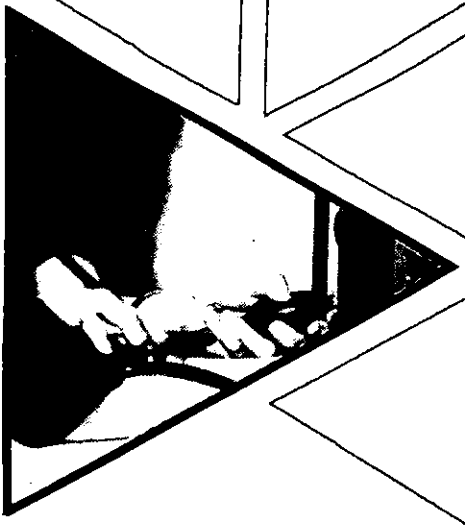
- Freshman: A student who has completed successfully fewer than 30 credit hours.
- Sophomore: A student who has completed successfully 30 or more credit hours.
- Part-Time: A student enrolled in fewer than 12 credit hours in a given semester.
- Full-Time: A student enrolled in 12 or more credit hours in a given semester.

GRADUATION

An annual graduation ceremony is held at the conclusion of the spring semester.

- Students who have degree plans filed in the Registrar's Office and who anticipate completion of the degree requirements by the end of the summer session are eligible to participate in the spring ceremony. Such participation is ceremonial only and confers on a student no rights to a degree.
- Applications for graduation must be made in the Registrar's Office prior to the announced deadline.
- Graduates are expected to participate in the ceremony.

Student Services



STUDENT SERVICES

Cedar Valley College strives to provide maximum educational opportunities — personal, social, cultural — and career development for all students. Such development is stimulated through programs of coordinated college services as needed by any individual student or by groups of students. These services are evaluation, counseling, planning, tutoring, and programs of student activites.

The programs and services are planned to meet the needs of all groups and individuals and to furnish support services enabling students to reach their potentials.

ASSESSMENT CENTER

The four primary functions of the Assessment Center are to administer:

- Psychological tests of personality, vocational interests and aptitudes.
- Academic tests for the college instructional programs. Many courses are individualized and self-paced permitting students to be tested at appropriate times.
- Diagnostic tests which make appropriate class placement possible. These tests are very strongly recommended to insure student success.
- National testing programs, including ACT, GED, CLEP, and TOEFL.

TUTORING SERVICES

For students needing special temporary assistance in course work, arrangements for tutoring services can be made through the Counseling Office.

Students are encouraged to seek such services through self referral as well as through instructor referral.

COUNSELING

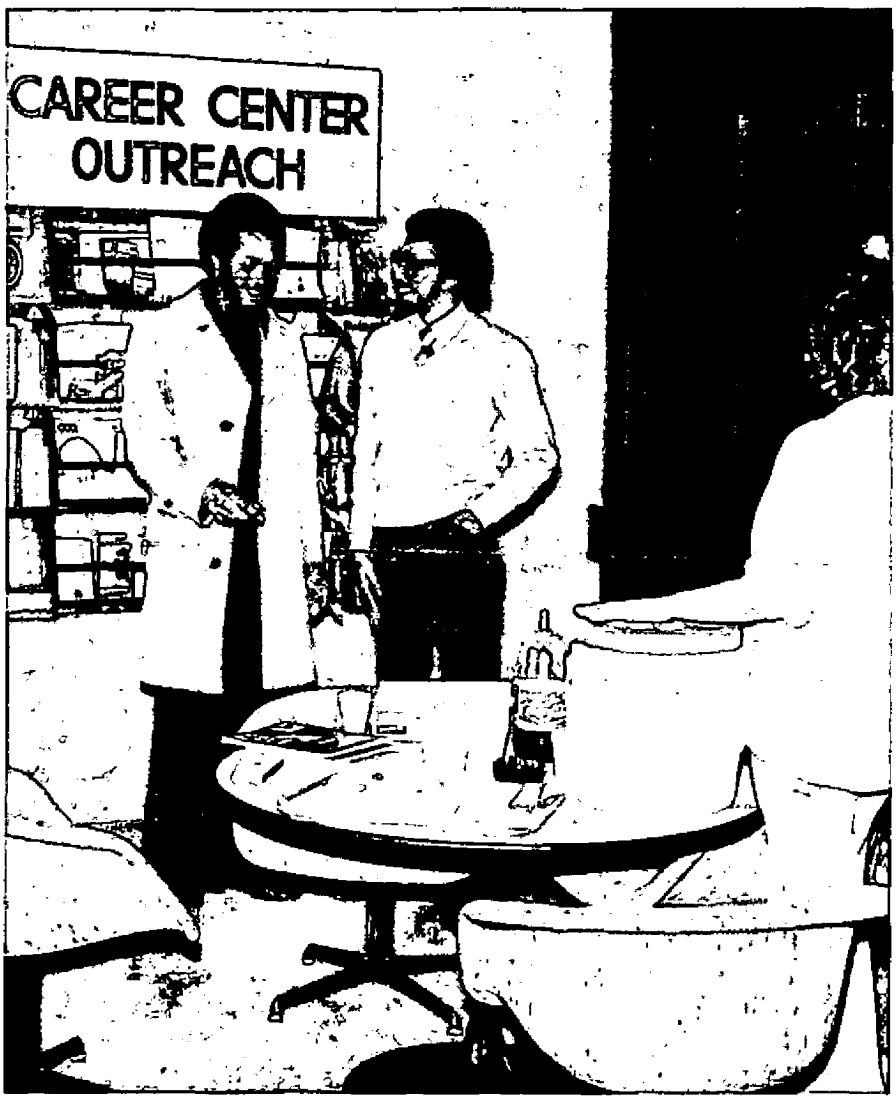
Confidential assistance is provided by the counseling staff in any of the following areas:

- Career counseling regarding possible vocational directions to explore, occupational information, or self-appraisals pertaining to job stability.
- Personal-social counseling regarding adjustment within the college community, relating to instructors or to other people, drug matters, marriage counseling or any other concerns which interfere with personal development.
- Academic advisement regarding appropriate course choice, study habits, remedial work or transferring to another college. Trained paraprofessionals also assist the counselors in this function. Students are also assigned faculty advisors.
- Small group discussions led by counselors focusing on matters of concern in areas where group feedback can be helpful. Participation in these confidential groups is available as space permits.
- Testing to provide additional standardized testing information when called for in planning or decision making. Tests are available to assess abilities, vocational interests and personality.
- Referral to provide in-depth assistance if necessary for such matters as financial aid, tutoring, job placement and medical or psychiatric problems.

Because we are a community centered college, counseling services are also provided to residents who are not yet enrolled. The following are examples of counseling community services which may be offered, consistent with the needs of

the student population:

- Consultation regarding the decision of whether or not to enter college.
- Consultation regarding possible course selections for vocational advancement or for personal enrichment.
- Consultation with area high schools regarding their students enrolling at Cedar Valley.
- Consultation for persons desiring to discover and develop their hidden talents.
- Group discussions of a subject-centered nature for parents interested in their children's development; married couples interested in learning to enrich the communication between themselves; mature people considering return to the classroom after many years absence; military veterans returning to civilian life.



LEARNING RESOURCES CENTER

The Learning Resources Center (LRC) is more than a library — it's a complete learning complement to regular classroom instruction. It's a place where students can go to find books and non-print material to supplement their classroom learning, or where — if they choose — they can actually take a course.

The LRC makes learning flexible by providing slides, tapes and films, as well as books, and by encouraging students to learn in their own way at their own speed.

The campus has a growing collection of books on a wide variety of general information areas to support the college transfer and occupational/technical programs. In addition, there are special collections of career materials and pamphlet resources. The library also subscribes to current popular and technical periodicals as well as to area and national newspapers.

Classroom Resource Services are designed to support the instructional program. The LRC houses all campus audiovisual equipment and non-print materials for use in the classroom, by individual students, or for the production of instructional materials.

The primary function of the program is to improve student learning by providing resources and services. Because Cedar Valley College is part of the community, its Learning Resources Center also becomes one of the community resources.

LIBRARY OBLIGATIONS

Willful damage to library materials (or property) or actions disturbing to the other users of the Library may lead to revocation of library privileges. Cases involving such damage will be referred for further action by the appropriate authorities.

All books and other library materials must be returned before the end of each semester. No grades will be sent to students who have not returned all such materials or who have unpaid library fines. No transcripts of grades may be sent until the library record is cleared.

LEARNING SKILLS CENTER

The Learning Skills Center, which is located in the library, provides resources and equipment selected for individual study and classroom presentations. The center offers students the opportunity to learn at their own pace and convenience under the guidance of trained instructors and assistants.

FINANCIAL AID PROGRAMS

The Financial Aid Program functions as a multipurpose financial assistance service for students. A major objective is to provide assistance to students who, without such aid, would be unable to attend college. Basic to this philosophy is the belief that the educational opportunities of able students should not be controlled by their financial resources.

Requests for information should be directed to the Director of Financial Aid.

Students who anticipate the need for financial assistance for college should complete an application well in advance of the semester in which they plan to enroll.

BUREAU OF INDIAN AFFAIRS

For information on educational benefits, an Indian student should contact the nearest BIA office.

HAZELWOOD ACT

Certain veterans who have no

remaining V.A. educational benefits can attend Texas state supported institutions with their tuition and fees waived if they were residents of Texas at the time they entered the service and are now residents of Texas. Contact the Financial Aid Office for details.

SOCIAL SECURITY ADMINISTRATION

Benefits under this program are available to students who meet the criteria set up by the Social Security Administration. The Admissions Office acts as liaison between students and the Social Security Administration.

VETERANS' BENEFITS

The Veterans' Benefits Programs for eligible students is coordinated by the Veterans' Affairs Office located in the Admissions Office.

Services of the Veterans' Affairs Office include counseling the veteran concerning benefits, V.A. Work Study Programs, financial problems, V.A. loans, 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 eligibility. Tutoring services are also available to the veteran who is having learning difficulties in one or more subjects. For assistance in obtaining tutoring benefits, contact the Veterans' Affairs Office.

The veteran student who enrolls in college should be aware of some of the V.A. guidelines which are enforced. Violation of the following policies will cause complications in receiving or even loss of monthly benefits:

1. Class attendance is mandatory. Failure to attend class will result in suspension from class.
2. Veteran students who plan to enroll in developmental courses must be tested and show a need in basic skills before enrollment in these courses.
3. A veteran enrolled in T.V. courses must be pursuing more on-campus credit hours than hours taken by T.V.
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 will be evaluated and credit granted where applicable.
5. Only enroll in courses required for your degree program. Information on degree requirements may be obtained from the Registrar's Office.
6. A veteran who withdraws or who is dropped from all courses attempted during a semester will be 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 LISTED V.A. REGULATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. STUDENTS SHOULD CONTACT THE FINANCIAL AID OFFICE IN ORDER TO BE AWARE OF CURRENT REGULATIONS AND PROCEDURES.

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. For further information, contact Texas Rehabilitation Commission, 13612 Midway, Suite 530, Dallas, Texas 75234.

STUDENT EMPLOYMENT

The Financial Aid Office will assist any student desiring on-campus employment. Typically; this part-time employment is designed as a financial aid to assist students while they are in college through:

1. On-Campus placement
2. Work-study programs

Efforts are made by the Financial Aid Office for students to gain employment in cerlical work, library work, laboratories, custodial work, selling, etc.

GRANTS

Basic Educational Opportunity Grant (BEOG)

Students that enroll for at least 6 credit hours are eligible to apply for this "entitlement grant." Applications are available in many federal offices, as well as in the Financial Aid Office, and are mailed directly by the student to a central processing place indicated in the instructions. The student receives a student Eligibility Report which he brings to the Financial Aid Office for interpretation and determination of grant amount according to an objective table provided to them by the federal government for that purpose.

Supplemental Educational Opportunity Grant

This grant is authorized under the Higher Educational Amendments of 1965 and amended by the Educational Amendments of 1976. To be eligible students must demonstrate exceptional need and make satisfactory progress toward the completion of their educational goals. Legislation for the SEOG award includes a matching requirement which specifies that aid equal in amount to the SEOG must be provided to the student during the award period. The minimum SEOG award permitted is $200 to $1500 per academic year, depending on the needs, and the total number of applicants and funds available. Students must apply each academic year.

SCHOLARSHIPS.

Cedar Valley College offers a limited number of scholarships to students who exhibit scholastic ability and/or need. Individuals, private industries and groups make these scholarships available through the Office of Financial Aid.

Highest Ranking High School Graduate

The highest ranking high school graduate of each accredited high school in the state is exempted from the payment of tuition for two semesters of the first regular session following graduation.

LOANS

There are several loan funds for students needing long-term as well as short-term assistance.

Hinson-Hazelwood College Student Loan Program

The necessary requirements for this loan are:

- Legal residence in Texas.
- Enrolled or accepted for enrollment for at least a half-time course of study.
- Established financial need.

The amount of loan for which a student may qualify depends upon the income of his family. Married applicants are qualified by considering the income of both husband and wife.

Qualified students may receive up to $1,500 for the nine-month school session.

Repayment begins between 9 and 12 months after the student ceases to

be enrolled for at least half the normal course load. Repayment may extend up to 10 years; however, a minimum payment of $30 a month is required. Interest rate is 7% per year (adjusted).

Short Term Loans

A student may borrow up to $100 at no interest if funds are available. This loan must be repaid within 90 days or before the end of the semester in which the money is borrowed.

REVOCATION OF AID

The Financial Aid Office reserves the right to review and cancel awards at any time for the following reasons:

- Failure to maintain an acceptable academic record.
- Failure to meet the minimum course load requirements.
- Changes in the financial status of the student or his/her family.
- Any student in violation of any regulation governing the program from which he/she is receiving aid.

It is understood that the student is aware of the conditions under which aid is offered and agrees to meet all the necessary requirements.

ACADEMIC PROGRESS REQUIREMENT

I. The 2.0 Grade Point Average (GPA) Requirement

(1) Students funded for **full-time course loads** will be expected to complete a full-time course load with a minimum GPA of 2.0 each semester an award is made.

(2) Students funded for **part-time course loads** will be expected to achieve a minimum GPA of 2.0 on all courses funded each semester (no drops or withdrawals).

II. ACADEMIC COMPLIANCE

(1) If the 2.0 GPA requirement is not met **once,** a warning notice will be mailed to the student. Transfer students entering the DCCCD on probation will be considered to be in this category.

(2) If the 2.0 GPA requirement is not met **twice,** no award will be made for a period of six months.

(3) A **third** chance may be approved at the discretion of the Financial Aid Director after the six month suspension period. If approved, the student must sign a warning notice before award is disbursed. If the 2.0 GPA requirement is not met three times, no award will be made for a period of two years.

(4) 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 award is disbursed.

Students may make written appeal of the Financial Aid Director's decisions through the Vice President of Student Services.

CAREER INFORMATION

The Career Resources Center and the Career Center Outreach are designed to provide students, faculty and staff with current educational and career information. In the Career Resources Center, written and audio visual materials are readily available for use in the center. Whereas in the Career Center Outreach, written material is provided to be taken home. The Counseling Center Staff is on hand

to assist with the use of the material and with career decision-making.

PLACEMENT SERVICES

The Job Placement Office will assist any student desiring help in finding off-campus employment.

The Director of Cooperative Education/Job Placement coordinates the job placement program.

The job placement officer will work directly with students and community employers to locate jobs and students qualified to fill those jobs.

Career placement assistance is available for students nearing completion of their course of study. All students should register with the Job Placement Office at least one full semester before graduation.

STUDENT DEVELOPMENT AND ACTIVITIES

The office of Student Development is responsible for providing selected services and activities which enrich the experiences of students attending Cedar Valley College. The purpose of the various programs is to assist each student in achieving desired educational goals while providing opportunities for personal development. Students are encouraged to make suggestions for the expansion and improvement of the activities offered.

Services and programs include:
Programs by Guest Performers
Special Events
Lectures and Workshops
Films
Clubs and Organizations
Tournaments
Intramural Sports
Game Room
Campus Center

STUDENT ORGANIZATIONS

Information regarding participation in any organization may be obtained through the Office of Student Activities.

The development of student organizations will be determined by the number of students displaying an interest in the types of organizations available on campus. The Director of Student Activities will offer full assistance to interested students in the organizing process.

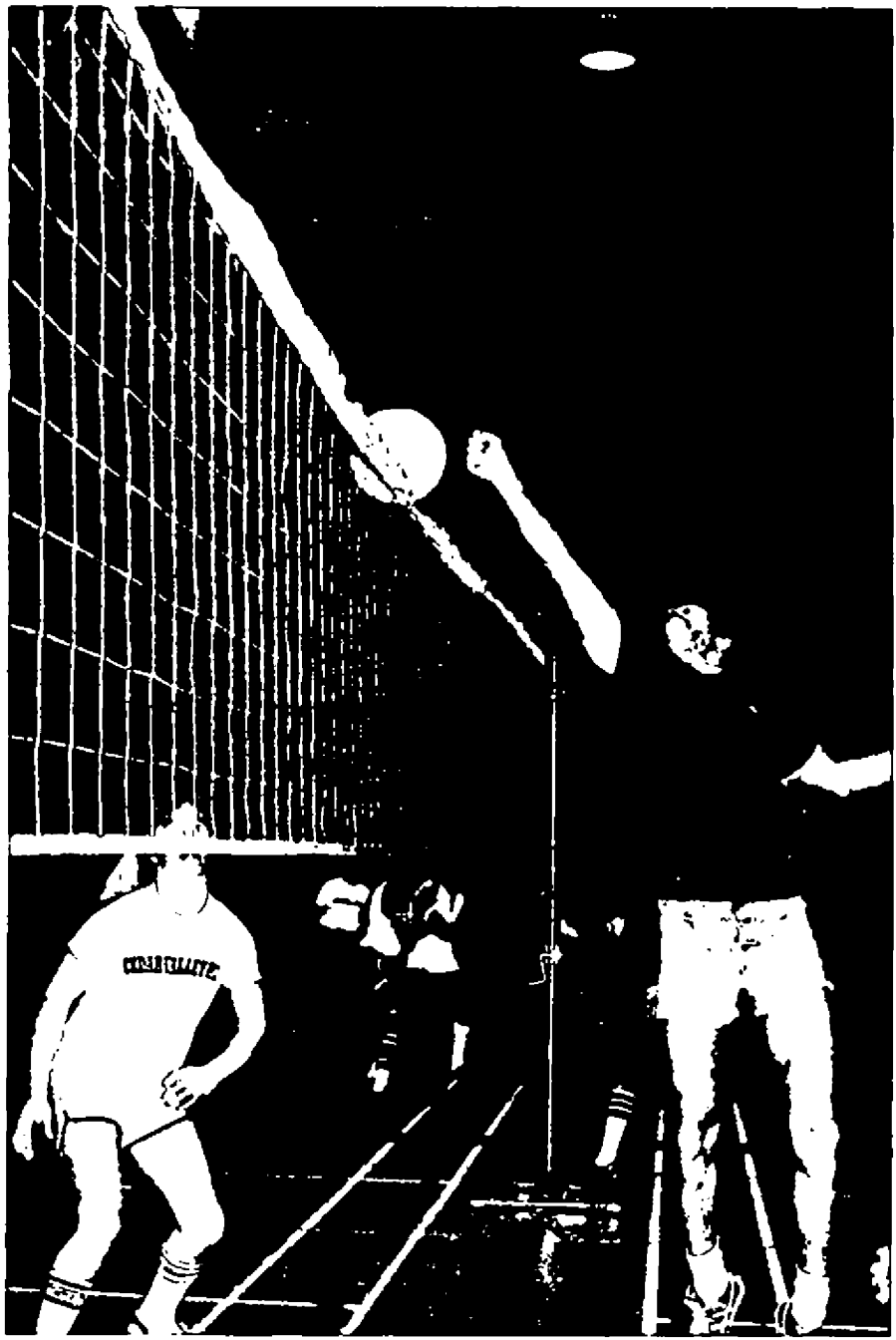
- Co-curricular Organizations are pertinent to the educational goals and purposes of the college.
- Social Organizations provide an opportunity for friendships and promote a sense of community among students.
- Service Organizations promote student involvement in the community.
- Pre-professional and Academic Organizations contribute to the development of students in their career fields.
- Scholastic Honorary Organizations offer membership to students on the basis of academic excellence and performance.
- Special Interest Organizations may be formed with the permission of the Vice President — Student Services.

INTRAMURALS

Intramurals provide not only team sports activities, but also offer other options such as dominoes, darts, and checkers. A wide range of intramural sports and activities are available. Interested students should contact the Student Activities Office.

INTERCOLLEGIATE ATHLETICS

Participation is available on athletic teams on a voluntary non-



scholarship basis for all full-time students who meet additional requirements established by the Metro Athletic Conference.

COLLEGE COUNCIL

The College Council includes students, faculty, staff, and administrators. All have a vested interest in the school and are therefore entitled and urged to participate in its operation.

The College Council allows the total college population to share in the decision-making process and it's composed of the following elements: President's Forum, Commissions, and Ad Hoc committees.

STANDARDS OF CONDUCT

The College student is considered a responsible adult. The student's enrollment indicates acceptance of those standards of conduct which appear in the Student Handbook.

HEALTH SERVICES

The Health Center provides health counseling and education as well as emergency and first aid care.

Confidentiality is maintained. No information is ever released without written permission from the student. The Health Center refers students to the approprpiate outside source for additional treatment if necessary. Students are responsible for their own transportation.

A small library is maintained containing health related materials not available in the main library.

The Health Center is staffed with registered nurses and a physician is on call at all times.

HANDICAP SERVICES

Program assistance is available to handicapped students through the office of the Coordinator of Handicap Services located in the Assessment Center. Permanent parking permits may be obtained at this location. A TTY (telephone for the deaf) is available in the Assessment Center for the deaf students. The TTY number is 746-4718.

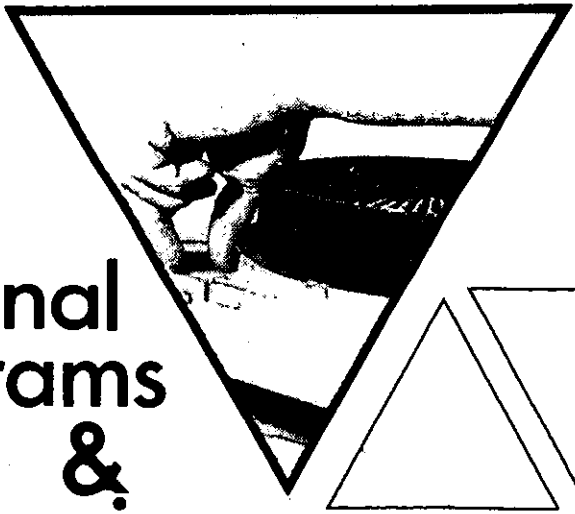
Services are available to handicapped students to enable students to participate in the full range of college experience. Students needing special services should contact the Coordinator of Handicap Services to discuss their unique needs, available services and obtain referral information on agencies that provide assistance to the handicapped.

HOUSING

Cedar Valley College does not operate dormitories of any kind nor 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." Since all of the general and criminal laws of the state are in full force and effect within the campus community, specially trained and educated personnel are commissioned to protect not only the physical property of the campus community but also to protect the person and the property of campus citizens. The Security Officers are responsible for enforcing rules, regulations, and Board policies of the College, including a Code of Conduct for students.



Educational Programs & Services

LOWER DIVISION TRANSFER STUDIES

Students whose educational objective is the bachelor's degree may complete their first two years at Cedar Valley 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

Cedar Valley College offers a variety of technical/occupational programs designed to enable students to enter their chosen field as skilled employees after one or two years of college work.

These programs are established only after studies verify that employment opportunities will exist at the time training is completed, matching the community's manpower requirements with the ambitions and goals of the student.

This realistic approach to occupational education is made possible by the excellent cooperation of local industry, business and public agencies who are looking increasingly to the District's colleges for skilled personnel.

A continuous liaison is maintained with prospective employers to assist in placement of graduates and to keep the training programs up-to-date with the current job requirements.

Recommendations of adding new programs to the college offerings will be made periodically based on community studies which identify additional training needs.

Technical/occupational courses carry college credit leading to a Certificate of Completion or an Associate in Applied Arts and Sciences Degree.

Some technical/occupational courses are transferable to area four-year colleges. For further information, contact the Associate Dean of Technical/Occupational Programs.

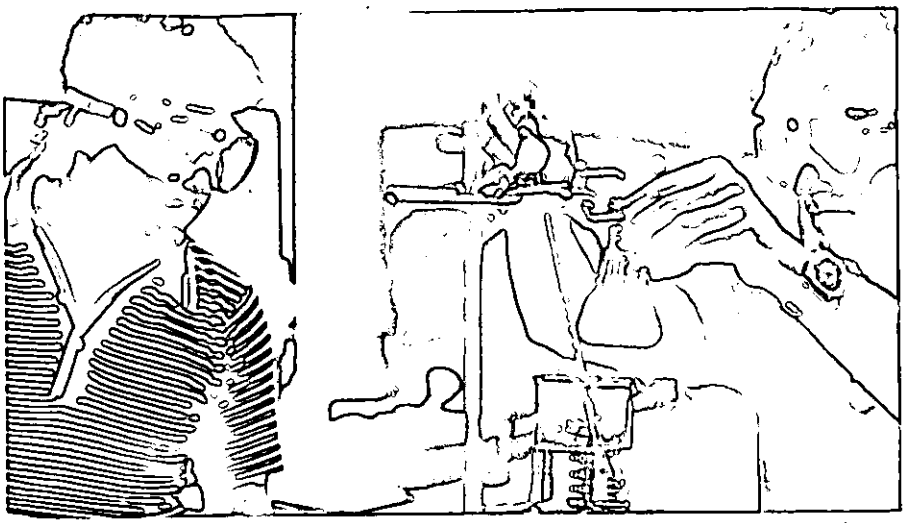
COOPERATIVE WORK EXPERIENCE EDUCATION

Students may enrich their education in certain technical/occupational programs by enrolling in Cooperative Work Experience education courses. These courses are designed to assist students in coordinating classroom study with related on-the-job experience.

Requirements:

- Students must have completed at least two courses in their occupational major to be eligible for Cooperative Work Experience.
- A full-time student must be enrolled in twelve credit hours or more; two courses must relate to the student's work experience, and up to four credit hours may be in Cooperative Work Experience.
- A part-time student may take up to four credit hours of work experience.
- Part-time students must be concurrently enrolled in a course related to their work experience.
- 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 one credit hour for each 80 hours of approved work experience accomplished during the semester, or approximately five hours of work experience a week during a sixteen week semester. The work ex-



perience credit hours available in selected career programs are listed in the curriculum pattern for that program.

EXTENDED DAY PROGRAM

In dynamic, growing communities such as those encompassing Cedar Valley College, people are involved. Their community involvement often creates a need for gaining and developing knowledge and skills. Because of their commitments it is often impossible for them to attend college during daytime hours. The evening program offers these people the same broad spectrum of educational programs that is available to day students.

Instructors in the evening program are selected from full-time staff and from among outstanding Dallas area educators and other professional specialists.

To enroll in the evening program call or write the Director of Admissions.

TELECOURSES

Cedar Valley College offers a variety of college credit courses via television. The schedule of telecourses, which varies each semester, may include courses in anthropology, astronomy, business, earth science, ecology, biology, English, economics, government, history, humanities, and psychology. 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 each week, 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 as appropriate for lab science courses during the semester. These visits to the campus are normally scheduled so that they may be attended at a time convenient to the student.

Telecourses may be taken in conjunction with on-campus courses or by persons who are taking no on-campus instruction. Registration for telecourses may be accomplished by mail or through the normal on-campus registration procedures.

Veterans enrolling in telecourses should consult with the Veteran's Advisor prior to enrollment.

COMMUNITY SERVICE

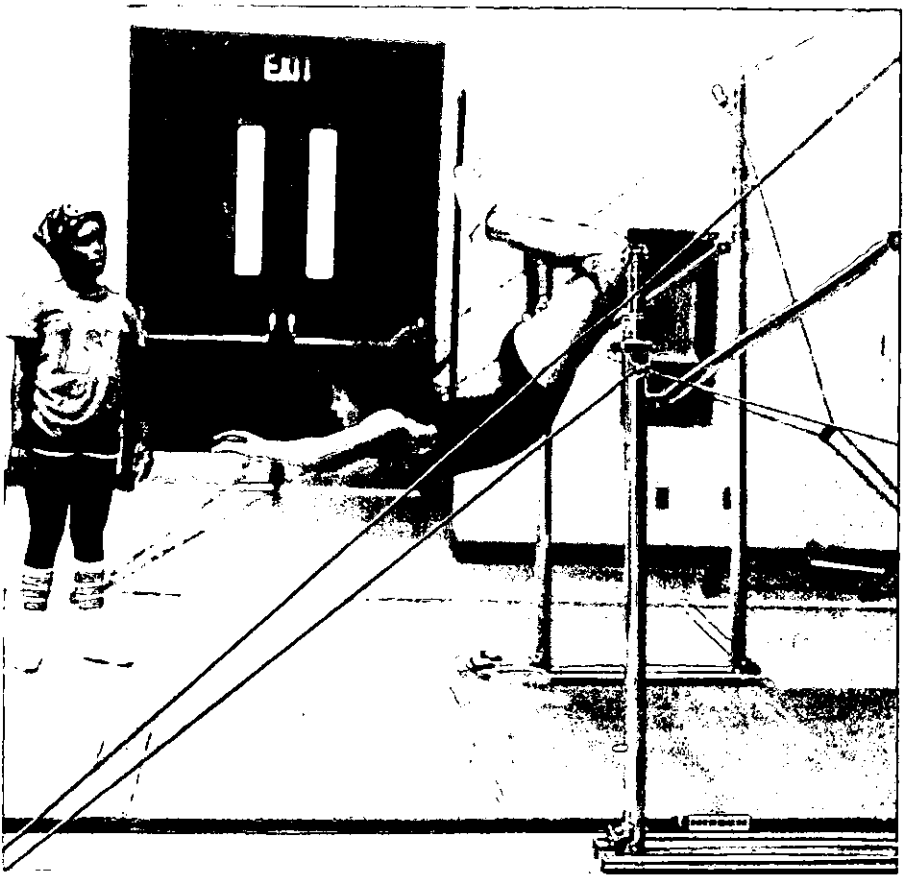
The Community Services Program offers a roster of non-credit courses in all areas of personal and professional development. These courses are designed for the individual who wants to sharpen an old skill, learn a new skill or merely broaden his/her cultural horizon without pursuing a degree.

The program consists of courses, seminars, lectures, institutes, workshops, demonstrations and performances. These activities are frequently referred to as continuing education, adult education, or non-credit courses, and they do not carry the traditional academic college credit designation.

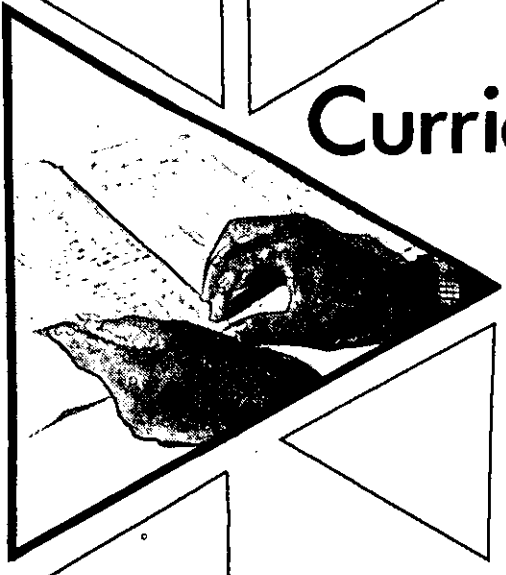
No entrance requirements or previous educational experience is needed. Admission is on a first-come/first-served basis, and registration consists of filling out a form and paying the fee. Continuing Education Unit (CEU) transcripts of Community Services courses successfully completed are available.

The Community Services Division offers programs for all interests and ages through the year in a variety of locations and times. If you or your group has a particular interest or educational need, contact the Community Services Office.

Community Services instructors possess high standards of professional preparation and experience in their career fields.



Curriculum



DIVISIONS OF THE COLLEGE

BUSINESS/SOCIAL SCIENCE DIVISION
- Accounting
- Anthropology
- Bookkeeping
- Economics
- General Business
- Government
- History
- Merchandising
- Mid-Management
- Office Occupations
- Psychology
- Religion
- Retail Distribution & Marketing
- Social Science
- Sociology

COMMUNICATIONS/ HUMANITIES DIVISION
- Art
- Commercial Music
- Communications
- Developmental Reading
- Developmental Writing
- English
- French
- German
- Humanities
- Journalism
- Music
- Philosophy
- Photography
- Spanish
- Speech
- Theater

HUMAN DEVELOPMENT DIVISION
- Human Development

INDUSTRIAL TECHNOLOGY DIVISION
- Air Conditioning & Refrigeration
- Automotive Technology
- Automotive Technology Apprenticeship
- Major Appliance Repair
- Motorcycle Mechanics
- Outboard Marine Engine
- Small Engine Mechanics

MATHEMATICS/SCIENCE/ PHYSICAL EDUCATION DIVISION
- Animal Medical Technology
- Astronomy
- Biology
- Chemistry
- Developmental Mathematics
- Ecology
- Geology
- Geography
- Mathematics
- Physical Education
- Physics

(Symbol Guide for Courses, p. 91)

AC 703 **3 Cr.**
(See Cooperative Work Experience)

AC 704 **4 Cr.**
(See Cooperative Work Experience)

AC 713 **3 Cr.**
(See Cooperative Work Experience)

AC 714 **3 Cr.**
(See Cooperative Work Experience)

AC 803 **3 Cr.**
(See Cooperative Work Experience)

AC 804 **4 Cr.**
(See Cooperative Work Experience)

AC 813 **3 Cr.**
(See Cooperative Work Experience)

AC 813 **4 Cr.**
(See Cooperative Work Experience)

AC 150 **3 Cr.**
Basic Principles of Electricity (90 Contact Hrs.)
A study of the principles of electricity as applied in simple circuits and circuit components including basic electrical units and test instruments. (A comprehensive course that includes AC 151, 152, and 153. The student may register in the comprehensive course — AC 150 — or any of the inclusive courses — AC 151, 152, 153.) Laboratory fee required.

AC 151 **1 Cr.**
Basic Electrical Units (30 Contact Hrs.)
Calculating and measuring volts, ohms, amperes and watts. Laboratory fee required.

AC 152 **1 Cr.**
Simple Circuits (30 Contact Hrs.
Interpretation of simple schematic diagrams and construction of series, parallel and

combination circuits with resistive loads. Laboratory fee required.

AC 153 **1 Cr.**
Circuit Components (30 Contact Hrs.)
Construction of circuits using switches, relays, solenoids, basic control and protective devices.

AC 155 **3 Cr.**
Advanced Electrical Circuits (90 Contact Hrs.)
Application of basic electrical principles in the construction and diagnosis of complex electrical circuits and alternating current motors commonly used in the air-conditioning and refrigeration industry. (A comprehensive course that includes AC 156 and 157. The student may register in the comprehensive course — AC 155 — or either of the inclusive courses — AC 156, 157.) Laboratory fee required.

AC 156 **2 Cr.**
Complex Circuits (60 Contact Hrs.)
Construction and interpretation of complex schematics; construction and diagnosis of complex electrical circuits with resistive, inductive and capacitive loads. Laboratory fee required.

AC 157 **1 Cr.**
A.C. Motor Fundamentals (30 Contact Hrs.)
Magnetic principles as applied in AC motors. Wiring, diagnosis, and service of AC motors; starting and protective devices commonly used in the air-conditioning industry.

AC 160 **3 Cr.**
Basic Principles of Refrigeration (90 Contact Hrs.)
A study of the principles of physics including thermodynamics, gas laws, and heat transfer as applied to refrigeration systems; includes a study of air and refrigerant properties. (A comprehensive course that includes AC 161, 162, and 163. The student may register in the comprehensive course — AC 160 — or any of the inclusive courses — AC 161, 162, 163.) Laboratory fee required.

AC 161 **1 Cr.**
Elementary Physics and Thermodynamics (30 Contact Hrs.)
Principles of thermodynamics, physics, and gas laws as applied to basic refrigeration systems. Laboratory fee required.

AC 162 **1 Cr.**
Heat Transfer and Air Properties (30 Contact Hrs.)
Principles of heat flow and heat transfer; simple load calculations, air properties, and basic psychrometric chart construction.

AC 163 **1 Cr.**
Refrigerant Properties (30 Contact Hrs.)
Identification of refrigerant types commonly used in air-conditioning and refrigeration; comparison of basic refrigerant properties and construction of the pressure-enthalpy diagram.

AC 165 **3 Cr.**
Vapor Compression Systems (90 Contact Hrs.)
The major components of vapor compression systems, their function, and relationship; the four processes of the vapor compression system; system service including evacuation and charging.

AC 170 **3 Cr.**
Pipefitting Procedures (90 Contact Hrs.)
Accepted piping practices and pipe size selection; soldering, silver-soldering, and silver-brazing techniques; leak detection, and repair methods. (A comprehensive course that includes AC 171 and 172. The student may register in the comprehensive course — AC 170 — or either of the inclusive courses — AC 171, 172.) Laboratory fee required.

AC 171 **2 Cr.**
Piping and Fittings (60 Contact Hrs.)
Identify and apply accepted piping practices; select the correct pipe size for the application; identify and select the correct fittings; construction of piping circuits using proper soft-solder, silver-solder, and silver-brazing techniques. Laboratory fee required.

AC 172 **1 Cr.**
Leak Detection and Repair (30 Contact Hrs.)
Locate and repair refrigeration system leaks using the correct repair methods and materials. Laboratory fee required.

AC 175 **3 Cr.**
Residential Load Calculations (90 Contact Hrs.)
Calculate residential heating and cooling loads including air properties, psychrometric chart construction and interpretation. (A comprehensive course that includes AC 176, 177, and 178. The student may register in the comprehensive course — AC 175 — or any of the inclusive courses — AC 176, 177, 178.) Laboratory fee required.

AC 176 **1 Cr.**
Cooling Load Calculations — Residential (30 Contact Hrs.)
Identify heat sources, calculate heat transfer coefficients and the cooling load on the system with emphasis on energy conservation. Laboratory fee required.

AC 177 **1 Cr.**
Heating Load Calculations — Residential (30 Contact Hrs.)
Identify sources of heat loss, calculate heat transfer coefficients and the heating load on the system with emphasis on energy conser-

vation. Laboratory fee required.

AC 178 **1 Cr.**
Air Properties —
Residential (30 Contact Hrs.)
Measurement of residential air properties; plot and interpret psychrometric charts; identify methods of humidity control. Laboratory fee required.

AC 180 **3 Cr.**
Residential Cooling
Systems (90 Contact Hrs.)
Principles of refrigeration as applied to residential cooling systems with emphasis on compressors, condensers, evaporators, and metering devices; cooling system electrical components, their function and relationship; the reverse cycle system (heat pump) as a summer/winter air-conditioning system. (A comprehensive course that includes AC 181, 182, and 183. The student may register in the comprehensive course — AC 180 — or any of the inclusive courses — AC 181, 182, 183.) Laboratory fee required.

AC 181 **1 Cr.**
Refrigeration Systems —
Residential (30 Contact Hrs.)
Types of cooling systems and major components including compressors, evaporators, condensers, and metering devices; applications of accepted piping practices. Laboratory fee required.

AC 182 **1 Cr.**
Electrical Systems —
Residential Cooling (30 Contact Hrs.)
The components of the electrical system including electrical control devices, protective devices and AC motors. Laboratory fee required.

AC 183 **1 Cr.**
Reverse Cycle
Systems (30 Contact Hrs.)
A study of the residential heat pump and its use in summer/winter air-conditioning including the electrical and mechanical system. Laboratory fee required.

AC 185 **3 Cr.**
Residential Heating
Systems (90 Contact Hrs.)
Principles and procedures used in residential heating systems with emphasis on the gas and electrical warm-air furnace; the mechanical and electrical components of the heating systems. (A comprehensive course that includes AC 186, 187, and 188. The student may register in the comprehensive course — AC 185 — or any of the inclusive courses — AC 186, 187, and 188.) Laboratory fee required.

AC 186 **1 Cr.**
Warm-Air Furnace —
Gas (30 Contact Hrs.)
Diagnose and service heat exchangers, burner assemblies and gas valves; a study of the combustion process, vent systems and safety procedures. Laboratory fee required.

AC 187 **1 Cr.**
Warm-Air Furnace —
Electric (30 Contact Hrs.)
Principles and practices of resistance heating, the components of the system, and their relationship. Laboratory fee required.

AC 188 **1 Cr.**
Electrical Systems —
Heating (30 Contact Hrs.)
Identify and diagnose individual components of the electrical system; the relationship of the components to the system. Laboratory fee required.

AC 190 **3 Cr.**
Commercial Refrigeration
Systems (90 Contact Hrs.)
A study of commercial refrigeration applications and methods common to the industry; system components including flow-control and pressure control devices; defrost systems and humidity control. (A comprehensive course that includes AC 191, 192, and 193. The student may register in the comprehensive course — AC 190 — or in any of the inclusive courses — AC 191, 192, and 193.) Laboratory fee required.

AC 191 **1 Cr.**
Introduction to
Commercial Refrigeration
Systems (30 Contact Hrs.)
A study of commercial refrigeration applications and methods with emphasis on those common to light commercial fixtures. Laboratory fee required.

AC 192 **1 Cr.**
System Components —
Commercial Refrigeration (30 Contact Hrs.)
Major components of commercial systems including compressors, flow control and pressure control devices; relationships of the components to the total system. Laboratory fee required.

AC 193 **1 Cr.**
Defrost Systems and
Humidity Control (30 Contact Hrs.)
Diagnosing, service, repair and/or replace components of defrost systems; air properties and humidity control. Laboratory fee required.

AC 195 **3 Cr.**
Commercial Refrigeration
Systems Service (90 Contact Hrs.)
Principles and practices for fixture installations including pipe-fitting procedures; leak detection and repair; evacuation and system charging for peak performance; system lubrication at low temperatures; diagnose and service electrical system components. (A comprehensive course that

includes AC 196, 197, and 198. The student may register in the comprehensive course — AC 195 — or in the inclusive courses — AC 196, 197, and 198.) Laboratory fee required.

AC 196 **1 Cr.**
Installation Procedures — Commercial Refrigeration (30 Contact Hrs.)
Principles and practices for fixture installation; pipe-fitting procedures with emphasis on oil return. Laboratory fee required.

AC 197 **1 Cr.**
System Service and Repair — Commercial Refrigeration (30 Contact Hrs.)
Locate and repair system leaks; system evacuation and the refrigerant charge for peak performance; diagnose and service system components including compressors, evaporators, condensers, metering devices, and defrost mechanisms. Laboratory fee required.

AC 198 **1 Cr.**
Electrical Systems Service — Commercial Refrigeration (30 Contact Hrs.)
Diagnose, service, repair and/or replace components of the electrical systems commonly used in commercial refrigeration. Laboratory fee required.

AC 240 **3 Cr.**
Air Distribution System — Residential (90 Contact Hrs.)
Identify principles and practices of acceptable air distribution systems including flow patterns, velocity, volume, and stratification for heating and cooling applications; filter service, electronic air cleaners and humidifiers. (A comprehensive course that includes AC 241, 242, and 243. The student may register in the comprehensive course — AC 240 — or any of the inclusive courses — AC 241, 242, and 243). Laboratory fee required.

AC 241 **1 Cr.**
Air Distribution — Cooling (30 Contact Hrs.)
Principles of air flow, velocity, volume, and flow patterns for residential cooling; methods of air distribution and system balance for best performance. Laboratory fee required.

AC 242 **1 Cr.**
Air Distribution — Heating (30 Contact Hrs.)
Principles of air flow, velocity, volume, and flow patterns for residential heating; methods of air distribution and system balance for best performance. Laboratory fee required.

AC 243 **1 Cr.**
Electronic Air Cleaners and Humidifiers (30 Contact Hrs.)
Principles of electronic air cleaners and humidifiers; their use in environmental conditioning; service and adjustment of air cleaners and humidifiers. Laboratory fee required.

AC 245 **3 Cr.**
Residential Systems Service (90 Contact Hrs.)
Diagnose, service, adjust, repair, and/or replace residential air-conditioning system components; installation procedures for residential air-conditioning systems. (A comprehensive course that includes AC 246 and 247. The student may register in the comprehensive course — AC 245 — or either of the inclusive courses — AC 246, 247.) Laboratory fee required.

AC 246 **2 Cr.**
Systems Service and Repair — Residential (60 Contact Hrs.)
Diagnosis, service, repair, and/or replace air-conditioning system components; leak detection and repair; evacuation and charging procedures; adjust systems for peak performance. Laboratory fee required.

AC 247 **1 Cr.**
Installation Procedures — Residential (30 Contact Hrs.)
Identify and develop skills required for installing air-conditioning system using correct techniques; includes application of correct piping principles. Laboratory fee required.

AC 250 **3 Cr.**
Air-Conditioning Equipment Selection (90 Contact Hrs.)
Calculate residential cooling and heating loads using approved forms; select the air-conditioning equipment required for the calculated loads. (A comprehensive course that includes AC 251 and 252. The student may register in the comprehensive course — AC 250 — or in either of the inclusive courses — AC 251, 252.) Laboratory fee required.

AC 251 **2 Cr.**
Advanced Load Calculations (60 Contact Hrs.)
Calculate residential cooling and heating loads using the approved forms. Laboratory fee required.

AC 252 **1 Cr.**
Process Equipment Selection (30 Contact Hrs.)
Select the condensing unit, evaporator coil, and warm-air furnace (or heat pump) as indicated by the calculated residential air-conditioning loads with an emphasis on energy conservation. Laboratory fee required.

AC 255 **3 Cr.**
Air Distribution Systems Design (90 Contact Hrs.)
Advanced psychrometrics used custom system design; custom design of air distribution systems, indicated by the particular need of the structure including duct design, diffuser selection and air-flow patterns. (A comprehensive course that includes AC 256 and 257. The student may register in the comprehensive course — AC 255 — or either of the inclusive courses — AC 256, and 257.) Laboratory fee required.

AC 256 **1 Cr.**
Advanced Psychrometrics — Residential (30 Contact Hrs.)
A use of the psychrometric chart in air mixtures problems, apparatus dew point and by-pass factor selection, leaving air properties and determining actual system performance. Laboratory fee required.

AC 257 **2 Cr.**
Air Distribution Equipment Selection (60 Contact Hrs.)
Selection of air distribution duct systems, diffusers and air-flow patterns for the structure as indicated by calculated heating and cooling loads; emphasis on energy conservation. Laboratory fee required.

AC 260 **3 Cr.**
Special Commercial Refrigeration Applications (90 Contact Hrs.)
Commercial refrigeration principles as applied to ice makers (flakers and cubers), beverage coolers and special display cases. (A comprehensive course that includes AC 261, 262, and 263. The student may register in the comprehensive course — AC 260 — or in any of the inclusive courses — AC 261, 262, and 263.) Laboratory fee required.

AC 261 **1 Cr.**
Ice Makers — Flakers (30 Contact Hrs.)
Diagnose, service, repair and/or replace components of ice makers (flakers) with emphasis on the mechanical and control systems. Laboratory fee required.

AC 262 **1 Cr.**
Ice Makers — Cubers (30 Contact Hrs.)
Diagnose, service, repair and/or replace components of ice makers (cubers) with emphasis on harvest methods and control systems. Laboratory fee required.

AC 263 **1 Cr.**
Beverage Coolers and Special Display Cases (30 Contact Hrs.)
Diagnose and service beverage coolers, water fountains, dairy cases, and special display cases that require close temperature and/or humidity ranges. Laboratory fee required.

AC 265 **3 Cr.**
Advanced Commercial Refrigeration Systems (90 Contact Hrs.)
Multiple compressors, evaporators, condensers, and metering devices; their function and relationship to the total system. Calculate and analyze product and structural loads. (A comprehensive course that includes AC 266 and 267. The student may register in the comprehensive course — AC 265 — or in either of the inclusive courses — AC 266 and 267.) Laboratory fee required.

AC 266 **1 Cr.**
Multiple Systems (30 Contact Hrs.)
Diagnose, service, repair and/or replace components of the multiple compressor, evaporator, condenser, metering device system with emphasis on control systems. Laboratory fee required.

AC 267 **2 Cr.**
Product and Structural Load Analysis (60 Contact Hrs.)
Calculate and analyze product and structural loads; the relationship of these loads to the total environmental system. Laboratory fee required.

AC 270 **3 Cr.**
Industrial Air-Conditioning Systems (90 Contact Hrs.)
Principles and operation of water-cooled condensing systems, water-treatment, water towers and piping; centrifugal and reciprocating compression systems; absorption system principles as applied to industrial aid-conditioning. (A comprehensive course that includes AC 271, 272, and 273. The student may register in the comprehensive course — AC 270 — or in any of the inclusive courses — AC 271, 272, and 273.) Laboratory fee required.

AC 271 **1 Cr.**
Water-Cooled Condensing System (30 Contact Hrs.)
Pipe-sizing, piping practices and principles of water-cooled condensing systems, water towers, and water treatment. Laboratory fee required.

AC 272 **1 Cr.**
Centrifugal and Reciprocating Compressor Systems (30 Contact Hrs.)
Principles and operation of centrifugal and large reciprocating compressor systems with emphasis on the compressor components. Laboratory fee required.

AC 273 **1 Cr.**
Principles of Absorption Systems (30 Contact Hrs.)
Identify components and operational theory of absorption systems; advantages and disadvantages of industrial absorption systems. Laboratory fee required.

AC 275 **3 Cr.**
Industrial Air-Conditioning Service (90 Contact Hrs.)
Service, repair and/or replace capacity control systems and lubrication systems; refrigerant circuit piping principles and practices, leak detection and repair; evacuation and system charging for best performance; preventative maintenance and schedules. (A comprehensive course that includes AC 276, 277, and 278. The student may register in the comprehensive course — AC 275 — or any of the inclusive courses — AC 276, 277, and 278.) Laboratory fee required.

AC 276 **1 Cr.**
Capacity Control and Lubrication Systems (30 Contact Hrs.)
Adjust, service, repair and/or replace components of capacity control systems; lubrication systems and oil pressure control devices. Laboratory fee required.

AC 277 **1 Cr.**
Refrigerant Circuit Service (30 Contact Hrs.)
Leak detection and repairs, evacuation, and charging procedures for best system performance; refrigerant circuit piping principles and practices. Laboratory fee required.

AC 278 **1 Cr.**
Preventative Maintenance Procedures (30 Contact Hrs.)
System components requiring preventative maintenance; preparation of preventative maintenance schedules. Laboratory fee required.

AC 280 **3 Cr.**
Hydronic Systems (90 Contact Hrs.)
Air-conditioning systems using water as a secondary medium of heat transfer; water chiller, and low-pressure boiler systems. (A comprehensive course that includes AC 281 and 282. The student may register in the comprehensive course — AC 280 — or in either of the inclusive courses — AC 281, and 282.) Laboratory fee required.

AC 281 **1 Cr.**
Water Chillers (30 Contact Hrs.)
Principles of operation and service on systems using water chillers as a secondary refrigerant including control and protective devices. Laboratory fee required.

AC 282 **2 Cr.**
Low-Pressure Boilers (60 Contact Hrs.)
The combustion process, burner assemblies, fuel circuit devices, heat exchanger control and protection devices including the electrical system. Laboratory fee required.

AC 285 **3 Cr.**
Advanced Industrial Air-Conditioning Systems (90 Contact Hrs.)
Applied psychrometrics in air mixtures, coil by-pass factors, evaporator coil dew point, total system load; multi-zone systems; air distribution systems and air balancing. (A comprehensive course that includes AC 286, 287, and 288. The student may register in the comprehensive course — AC 285 — or in any of the inclusive courses — AC 286, 287, and 288.) Laboratory fee required.

AC 286 **1 Cr.**
Advanced Psychrometrics — Industrial Air-Conditioning (30 Contact Hrs.)
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 required.

AC 287 **1 Cr.**
Multi-Zone Systems (30 Contact Hrs.)
Components of the multi-zone system, operational and diagnostic procedures, balancing system performance. Laboratory fee required.

AC 288 **1 Cr.**
Air Distribution Systems and Air Balancing (30 Contact Hrs.)
Principles of industrial air-conditioning distribution systems, flow patterns, face and by-pass dampers; air balancing for total system performance. Laboratory fee required.

AC 290 **3 Cr.**
Industrial Air-Conditioning Control Systems (90 Contact Hrs.)
Diagnose, service, repair and/or replace components of electrical, pneumatic, and electronic control systems with emphasis on control system principles. Laboratory fee required.

AMT 130 **4 Cr.**
Introduction to Animal Medical Technology (3 Lec., 3 Lab.)
An introduction to employment areas, ethical and professional requirements, terminology, basic animal handling and care associated with the field of animal medical technology. A survey of common breeds of domestic livestock, pets and research animals. Outline of sanitation and disease principles. Laboratories will provide experience and observation in restraint, behavior, grooming and basic animal nursing practices. Laboratory fee required.

AMT 137 **4 Cr.**
Comparative Mammalian Anatomy & Physiology I (3 Lec., 3 Lab.)
Mammalian structure is presented on a comparative basis by a histological and gross study of selected organ systems utilizing the dog, cat, monkey, pigeon and selected organs of the cow. Laboratory fee required.

AMT 138 **5 Cr.**
Applied Biochemistry (4 Lec., 3 Lab.)
A survey of animal cell structure and function emphasizing the relationship of carbohydrate, protein and lipid utilization employing physio-chemical laws involved in cellular homeostatic maintenance. Laboratory fee required.

AMT 139 **3 Cr.**
Pharmacology for Technicians (3 Lec.)
Prerequisite: Animal Medical Technology 138. A discussion and investigation of various chemicals and drugs used in veterinary practice, their measurement, common routes of administration, proper handling and storage. Principles of efficient ordering, dispensing and inventory control are covered. Requirements of narcotic, stimulant and depressant drug control are emphasized. Basic drug categories and their use in relation to disease treatment are outlined.

AMT 230 **4 Cr.**
Anesthetic and Surgical Assisting Techniques (3 Lec., 3 Lab.)
Prerequisite: Animal Medical Technology 138. An introduction to 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 will also be emphasized. Laboratory periods involve individual practice in anesthetizing and monitoring animal patients, preparing for and assisting the D.V.M. during surgery. Laboratory fee required.

AMT 231 **4 Cr.**
Comparative Mammalian Anatomy & Physiology II (3 Lec., 3 Lab.)
Continuation of AMT 137. Laboratory fee required.

AMT 237 **3 Cr.**
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 will 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 required.

AMT 238 **2 Cr.**
Animal Health (2 Lec.)
Prerequisite: Animal Medical Technology 230. Relationship between animal diseases and human health. Principles employed in meat inspection, waste sanitation and water treatment.

AMT 241 **5 Cr.**
Clinical Pathology Techniques & Practices I (3 Lec., 6 Lab.)
Prerequisite: Animal Medical Technology 231 or concurrent enrollment. A beginning course in clinical laboratory methods including: parasitological, microbiological and tissue sample collection, analysis, identification and reporting to the D.V.M. Laboratory emphasis on identification of common external and internal parasites, morphology, cultural and staining characteristics of pathogenic bacteria and preparation of routine microbiological culture media. Introduction to blood analysis, including preparation of blood smears, differential cell counts, hemoglobin and packed cell volume determinations. Importance of understanding parasite life cycles and spread of disease by bacteria as well as host tissue changes occurring will be stressed. Laboratory fee required.

AMT 242 **3 Cr.**
Exotic and Research Animal Care and Management (2 Lec., 3 Lab.)
Prerequisite: Animal Medical Technology 130 and 231. A basic introduction to handling, restraint, sexing and uses of the common research laboratory and exotic animal species. Investigation of methods of husbandry and management necessary to control or prevent diseases commonly occurring in each of the species considered. Techniques basic to rodent anesthesia and surgery will be presented and practiced. Basic purpose, concepts and theory of gnotobiotics and axenic techniques will be outlined and explained. The ethical differences in functional responsibilities occurring between animal medical technicians employed in research institutions as compared to employment in veterinary hospitals are emphasized. Laboratory fee required.

AMT 243 **5 Cr.**
Clinical Pathology Techniques & Practice II (3 Lec., 6 Lab.)
prinequisite: Animal Medical Technology 241. A continuation in the study and practice of lab methods for blood analysis including: red and white cell counts, reticulocyte counts, clotting time, sedimentation rates, cross-matching, serology and various blood chemistry analyses. Practice in urine collection, chemical analysis, and urinary sediment

and cellular identification. Emphasis will be placed on correlating sample data with changes in affected physiological parameters. Laboratory techniques learned earlier (AMT 241) will be reinforced through routine repetitive practice while mastering these new exercises, thus simulating clinical case studies. Laboratory fee required.

AMT 244 **3 Cr.**
Large Animal Assisting Techniques (2 Lec., 4 Lab.)
Designed to equip students with skills and knowledge needed to properly support and assist large animal practitioners. Theory and laboratory practice will emphasize principles and techniques in the following areas: basic large animal care and husbandry, restraint peculiar to the species, eliciting an accurage case history, assisting in conducting physical exams (T.P.R.), administration of drugs on D.V.M.'s prescription, surgical assisting, bleeding and fluid administration, mastitis control, foot and hoof care, reproductive management assisting and record keeping. Laboratory fee required.

AMT 249 **4 Cr.**
Animal Hospital Nursing (3 Lec., 3 Lab.)
Hospital nursing and mid-management responsibilities, under the direction of the D.V.M., require the animal medical technician to utilize his total resources. Therefore, this laboratory based course is offered purposely in the last semester of the curriculum with intent of integrating and bringing into sharper focus all of the skills, techniques and knowledge acquired in earlier courses. In addition, new material, concepts and methods will be presented and investigated in the areas of infectious and non-infectuous disease pet animal nursing, emergency first aid, intensive care techniques, dental problems and prophylaxis and client management and relations. Laboratory fee required.

AMT 250 **2 Cr.**
Special Projects In AMT (3 Lab.)
Individual study in some special interest area of the students' major field. The study to be under the guidance of a specific faculty member who will act 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 presentations to aid in discussion of the topic presented. It will be 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.

AMT 702 **2 Cr.**
(See Cooperative Work Experience)

AMT 703 **3 Cr.**
(See Cooperative Work Experience)

ANT 100 **3 Cr.**
Introduction to Anthropology (3 Lec.)
A survey of the origin of mankind involving the processes of physical and cultural evolution, ancient man, preliterate man today. Attention is centered on fossil evidence, physiology and family/group roles and status.

ANT 101 **3 Cr.**
Cultural Anthropology (3 Lec.)
A survey of the cultures of the world with emphasis on those of North America. The concept of culture, social and political organization, language, religion and magic, elementary anthropological theory. (This course is offered on campus and may be offered via television.)

ANT 104 **3 Cr.**
American Indian Culture (3 Lec.)
This course attempts to lead to a better understanding of native Americans 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.

ANT 110 **3 Cr.**
The Heritage of Mexico (3 Lec.)
This course (cross-listed as History 110) is taught in two parts each semester. The first segment 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 will be upon archaic cultures, the Maya, the Toltec, and Aztec empires. The student may register for either History 110 or Anthropology 110, but may receive credit for only one of the two.

ANT 208 **3 Cr.**
Multicultural Studies (3 Lec.)
Prerequisite: Anthropology 101 or consent of instructor. A multicultural approach to the study of modern Texas, with emphasis on African, Anglo and Hispanic cultures. Field experiences and interviews will be interspersed with lecture to provide opportunities for personal contact with various cultural behaviors.

ANT 210 **3 Cr.**
Language, Culture and
Personality (3 Lec.)
Prerequisite: Anthropology 101 or consent of instructor. A study of interrelated aspects of language, culture and personality. Special consideration is given to intellectual, social and behavioral problems characteristic of multi-lingual, multicultural societies.

ANT 231 **3 Cr.**
Introduction to
Archeology (3 Lec.)
The anthropological approach to archeology. An introduction to the study of humanity's past. How archeologists retrieve, process, analyze and interpret surviving prehistoric materials. A survey of world prehistory through neolithic times.

ART 103 **1 Cr.**
Introduction to Art (3 Lab.)
An introduction to materials and techniques of studio art for the non-major, involving basic design concepts and traditional media. Laboratory fee required.

ART 104 **3 Cr.**
Art Appreciation (3 Lec.)
Films, lectures, slides and discussions on the theoretical, cultural and historical aspects of the visual arts. Attempts to develop visual and aesthetic awareness, thus relating art to the student as an individual.

ART 105 **3 Cr.**
Survey of Art History (3 Lec.)
This course covers the chronological sequence of art from the pre-historic through the renaissance. Explores the cultural, geophysical and personal influences on art styles, offering the student a broader range of ideas which will enable him to relate the past to his own work and provide stimuli for his future works.

ART 106 **3 Cr.**
Survey of Art History (3 Lec.)
This course covers the chronological sequence of art from the baroque through the present. Explores the cultural, geophysical and personal influences on art styles, offering the student a broader range of ideas which will enable him to relate the past to his own work and provide stimuli for his future works.

ART 110 **3 Cr.**
Design I (2 Lec., 4 Lab.)
A study of basic concepts of design using two-dimensional materials. Use of line, color, illusion of space or mass, texture, value, shape and size in composition. Required of all art and interior design majors. Open to all interested students.

ART 111 **3 Cr.**
Design II (2 Lec., 4 Lab.)
A study of basic concepts of design with three-dimensional materials, using mass, space, movement and texture. Required of all art majors. Open to all interested students. Laboratory fee required.

ART 114 **3 Cr.**
Drawing I (2 Lec., 4 Lab.)
A beginning course investigating a variety of media, techniques and subjects which explores perceptual and descriptive possibilities with consideration of drawing as a developmental process as well as an end in itself. Required of all art majors. Open to others who are interested.

ART 115 **3 Cr.**
Drawing II (2 Lec., 4 Lab.)
Prerequisite: Art 114. Expansion of Drawing I stressing the expressive and conceptual aspects of drawing including the human figure within a spatial environment. Required of all art majors. Open to others who are interested.

ART 118 **3 Cr.**
Creative Photography for
The Artist I (2 Lec., 4 Lab.)
Prerequisites: Art 110, Art 114 or consent of the instructor. Creative use of the camera and photosensitive materials as a means of making expressive graphic images. Emphasis will be upon black and white processing and printing techniques. Laboratory fee required.

ART 119 **3 Cr.**
Creative Photography for
The Artist II (2 Lec., 4 Lab.)
Prerequisite: Art 118 or consent of instructor. A continuation of Art 118 with emphasis upon color processing and printing techniques. Laboratory fee required.

ART 122 **3 Cr.**
Advertising Design (2 Lec., 4 Lab.)
Prerequisite: Art 110, Art 111, Art 115, or consent of instructor. A study of the concepts involved in the creation of an advertising campaign. Emphasis will be placed on the development of logo designs, magazine ads, TV story boards, posters, letterheads, and envelopes.

ART 199 **1 Cr.**
Art Seminar (1 Lec.)
A one hour weekly lecture and seminar where area artists, critics and art educators speak with students about the work exhibited in the gallery and discuss current art styles and movements, as well as the specifics of being artists in our contemporary society.

ART 201 **3 Cr.**
Drawing III (2 Lec., 4 Lab.)
Prerequisites: Art 110, Art 111, Art 115, sophomore standing and/or permission of the division chair. Analytic and expressive drawing of the human figure, stressing study

of movement and volume. Laboratory fee required.

ART 202 **3 Cr.**
Drawing IV (2 Lec., 4 Lab.)
Prerequisites: Art 201, sophomore standing and/or permission of the division chair. A continuation of Art 201 with emphasis on individual expression. Laboratory fee required.

ART 203 **3 Cr.**
Art History (3 Lec.)
Prerequisites: Art 105 and Art 106. A chronological study of the development of the art of western man during the Renaissance period. Emphasis on development of Renaissance art in northern and southern Europe.

ART 204 **3 Cr.**
Art History (3 Lec.)
Prerequisites: Art 105 and Art 106. A chronological study of the development of the art of western man from late 19th century through today. Emphasis on development of modern art in Europe and America.

ART 205 **3 Cr.**
Painting I (2 Lec., 4 Lab.)
Prerequisites: Art 110, Art 111, Art 115 or permission of the instructor. A studio course stressing fundamental concepts of painting with acrylics and/or oils. Emphasis on painting from still life, models and the imagination.

ART 206 **3 Cr.**
Painting II (2 Lec., 4 Lab.)
Prerequisite: Art 205. Continuation of Art 205 with emphasis on individual expression.

ART 208 **3 Cr.**
Sculpture I (2 Lec., 4 Lab.)
Prerequisites: Art 110, Art 111, Art 115 or permission of the instructor. An exploration of various sculptural approaches in a variety of media and using different techniques. Laboratory fee required.

ART 209 **3 Cr.**
Sculpture II (2 Lec., 4 Lab.)
Prerequisite: Art 208. A continuation of sculpture I with emphasis on individual expression. Laboratory fee required.

ART 210 **3 Cr.**
Commercial Art I (2 Lec., 4 Lab.)
Prerequisites: Art 110, Art 111, Art 115 or consent of the instructor. An introduction to the working world of commercial art with emphasis on the acquisition of professional attitudes and basic studio skills through the working out of typical commercial assignments. Laboratory fee required.

ART 211 **3 Cr.**
Commercial Art II (2 Lec., 4 Lab.)
Prerequisite: Art 210. A continuation of Art 210 with added emphasis on layout and design concepts through increased individual assignments, work with simple art for reproduction techniques and the development of a professional portfolio. Laboratory fee required.

Art 212 **3 Cr.**
Advertising Illustration (2 Lec., 4 Lab.)
Prerequisite: Art 210. Problems of the illustrator are investigated while exploring the elements he uses. Projects involving basic solution to contemporary illustration are developed.

ART 213 **3 Cr.**
Commercial Design
Group (2 Lec., 4 Lab.)
Prerequisite: Art 210. Students will operate a design studio established to create graphic art products, such as brochures, identity programs, posters and other special problems. Printed samples for portfolios may be acquired. Students will work directly with clients to solve their particular visual communication needs.

ART 215 **3 Cr.**
Ceramics I (2 Lec., 4 Lab.)
Prerequisites: Art 110, Art 111, Art 115 or permission of instructor. Building of pottery forms by coil, slab and use of wheel; glazing and firing. Laboratory fee required.

ART 216 **3 Cr.**
Ceramics II (2 Lec., 4 Lab.)
Prerequisite: Art 215 or permission of instructor. A study of glaze technology and advanced problems in the creation of sculptural and utilitarian ceramic ware. Laboratory fee required.

ART 220 **3 Cr.**
Printmaking I (2 Lec., 4 Lab.)
Prerequisites: Art 110, Art 111, Art 115, or permission of the instructor. An elective introduction to the basic printmaking processes including planographic, intaglio, stencil and relief. Laboratory fee required.

ART 228 **3 Cr.**
Three Dimensional
Design (2 Lec., 4 Lab.)
Prerequisites: Art majors — Art 110, Art 111 and Art 114. Drafting technology majors — Drafting 183 and 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 aesthetic form. Laboratory fee required.

AST 101 **3 Cr.**
Descriptive Astronomy (3 Lec.)
A descriptive course consisting of a survey of

the fundamentals of astronomy. Emphasis on the solar system, including a 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.)

AST 102 **3 Cr.**
General Astronomy (3 Lec.)
A course emphasizing stellar astronomy which includes a study of the sun, the properties of stars, star clusters, nebulae, interstellar gas and dust, the Milky Way galaxy and external galaxies.

AST 103 **3 Cr.**
Astronomy Laboratory I (3 Lab.)
Prerequisite: Successful completion of or concurrent enrollment in Astronomy 101. Astronomy laboratory I gives the student an opportunity to make elementary astronomical observations, using simple equipment, of the motions of celestial objects. Also covered will be 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 required.

AST 104 **1 Cr.**
Astronomy Laboratory II (3 Lab.)
Prerequisite: Successful completion of or concurrent enrollment in Astronomy 102. Astronomy Laboratory II gives the student an opportunity to make and use elementary astronomical observations. Topics covered include timekeeping, the various uses of spectra, and the motions of stars and galaxies. This laboratory includes night observations. Laboratory fee required.

AST 111 **4 Cr.**
Fundamentals of
Astronomy (3 Lec., 3 Lab.)
A descriptive course concerning fundamental aspects of the solar system and the historical development of astronomical ideas. The course includes a study of the celestial sphere, motions of the earth, the moon, planets, and other minor bodies, and with the origin and evolution of the solar system. The laboratory will include outdoor viewing sessions as well as topics on celestial motions, elementary navigation, constellation identification, and telescope construction. Laboratory fee required.

AST 112

ATA 100 **3 Cr.**
Automotive
Fundamentals (48 Contact Hrs.)
An introduction course that includes shop safety, hand tools, shop equipment, use of shop manuals and schematics, and an introduction to general auto maintenance procedures. Apprentices who believe they are qualified by experience or previous training may take an examination to establish credit in this course.

ATA 101 **3 Cr.**
Basic Electrical
Systems (48 Contact Hrs.)
A course that includes basic electron theory, theory and principals of batteries, starters, charging systems, and ignition systems. Testing and basic service procedures also included.

ATA 102 **3 Cr.**
Automotive Service
Department Management (48 Contact Hrs.)
A course that includes organizational structure, service department operation, marketing and promotional methods, service department management, and the financial aspects of the automotive business.

ATA 103 **3 Cr.**
Suspension, Steering, and
Brake Systems (48 Contact Hrs.)
A course that includes disc and drum brakes systems, machining and measuring techniques, front and rear suspension systems, manual and power steering systems, tires and wheels, and alignment procedures. An emphasis is placed on inspection, diagnosis, and service techniques. Upon successful completion of this course, the apprentice will be prepared for the NIASE front end and brake systems examinations (2).

ATA 104 **3 Cr.**
Automotive Parts
Department Management (48 Contact Hrs.)
A course that includes organizational structure, catalog interpretation and nomenclature, inventory control, warehousing, and distribution principles and practices.

ATA 105 **3 Cr.**
Engine Tune-Up
Procedures (48 Contact Hrs.)
Prerequisite: ATA 101. A course that includes engine fuel system theory and testing, carburetor servicing, engine ignition system servicing, and emission control systems. An emphasis is placed on precision diagnosis by use of the engine analyzer as well as industry accepted troubleshooting procedures. Upon successful completion of this course, the apprentice will be prepared for the NIASE engine tune-up examination.

ATA 191 **3 Cr.**
Internship I (96 Contact Hrs.)
Supervised on-the-job training, coordinated with classroom activities.

ATA 192 **3 Cr.**
Internship II (96 Contact Hrs.)
Supervised on-the-job training, coordinated with classroom activities.

ATA 193 **3 Cr.**
Internship III (96 Contact Hrs.)
Supervised on-the-job training, coordinated with classroom activites.

ATA 200 **3 Cr.**
Advanced Electrical Systems (48 Contact Hrs.)
Prerequisite: ATA 101. An advanced electrical course that includes chassis electrical systems, integrated circuits, instrument panel controls, wiring vacuum systems, and accessory controls. An emphasis is placed on wiring diagram and schematic interpretation and systematic troubleshooting procedures. Upon successful completion of this course, the apprentice will be prepared for the NIASE electrical systems examination.

ATA 201 **3 Cr.**
Automotive Air Conditioning and Heating Systems (48 Contact Hrs.)
A course that includes basic thermodynamic principles, heating and air conditioning principles, system components, and system testing, diagnosis, and servicing. Also included are control systems and completion of this course, the apprentice will be prepared for the NIASE heating and air conditioning systems examination.

ATA 202 **3 Cr.**
Basic Engine Repair (48 Contact Hrs.)
A course that includes the study of the construction and basic principles of operation of four-cycle, two-cycle, rotary, and diesel engines. The principles, diagnosis, and servicing of cooling and lubricatiol systems, valves and valve trains, cylinder head reconditioning, and the diagnosis of engine problems are also included.

ATA 203 **3 Cr.**
Engine Overhaul Procedures (48 Contact Hrs.)
Prerequisite: ATA 202. A course that includes the procedures necessary to remove, disassemble, rebuild, assemble, and install the engine. An emphasis is placed on precision measuring techniques. Also included are tune-up and road testing. Upon successful completion of this course the apprentice will be prepared for the NIASE engine repair examination.

ATA 204 **3 Cr.**
Clutches, Differentials, and Drive Shafts (48 Contact Hrs.)
A course that includes the design, operation, diagnosis, and repair of release clutches, drive lines, and differential assemblies. An emphasis is placed on differential diagnosis and repair.

ATA 205 **3 Cr.**
Transmissions (48 Contact Hrs.)
A course that includes an introduction to transmissions and gear train fundamentals and design. Included are conventional 3-speed, synchronized 3, 4, and 5-speed transmissions, overdrive systems, and automatic transmissions. An emphasis is placed on diagnostic procedures and servicing. Upon successful completion of this course and ATA 204, the apprentice will be prepared for the NIASE automatic and standard transmissions examinations (2).

ATA 294 **3 Cr.**
Internship IV (96 Contact Hrs.)
Supervised on-the-job training, coordinated with classroom activities.

ATA 295 **3 Cr.**
Internship V (96 Contact Hrs.)
Supervised on-the-job training, coordinated with classroom activities.

ATA 296 **3 Cr.**
Internship VI (96 Contact Hrs.)
Supervised on-the-job training, coordinated with classroom activities.

AT 140 **6 Cr.**
Automotive Services (180 Contact Hrs.)
Includes automotive fundamentals, safety, hand tools, shop equipment and general auto maintenance procedures. This is a comprehensive course that incorporates the following courses: AT 141, 142, 143, 144. The student may enroll in the comprehensive course (AT 140) or any of the inclusive courses (AT 141, 142, 143, 144). Laboratory fee required.

AT 141 **1 Cr.**
Automotive Shop Safety (30 Contact Hrs.)
Includes general shop safety, vehicle lifting procedures, electrical and fire hazards, vehicle moving, and proper tools and equipment usage and storage. Laboratory fee required.

AT 142 **2 Cr.**
Automotive Fundamentals (60 Contact Hrs.)
An introduction to the engine, standard and automatic transmissions, drive line, front end, and the cooling, electrical, and fuel systems. Laboratory fee required.

at 143 **2 Cr.**
Shop Equipment and Procedures (60 Contact Hrs.)
Includes selection, use, and care of tools and equipment and use of service invoices, time and labor guides, and shop manuals. Also, basic arc welding and oxyacetylene welding, soldering, and brazing are introduced. Laboratory fee required.

AT 144 **1 Cr.**
Lubrication and Maintenance Procedures (30 Contact Hrs.)
Includes lubricants, vehicle lubrication re-

quirements and greasing procedures, battery servicing, and cooling system maintenance procedures. Laboratory fee required.

AT 150 **6 Cr.**
Front Suspension,
Steering and Brakes (180 Contact Hrs.)
Includes the diagnosis, service, and repair or replacement of component parts of the steering, front suspension, and disc or drum brake systems. Also, included are alignment and balancing procedures. This is a comprehensive course that incorporates the following courses: AT 151, 152, 153, 154. The student may enroll in the comprehensive course (AT 150) or any of the inclusive courses (AT 151, 152, 153, 154). Laboratory fee required.

AT 151 **2 Cr.**
Suspension, Steering and
Front End Alignment (60 Contact Hrs.)
Includes diagnosis and repair of defective suspension and steering parts and front end alignment procedures. Laboratory fee required.

AT 152 **2 Cr.**
Disc Brakes (60 Contact Hrs.)
Includes diagnosis and repair of disc brake systems, rotors, power brake boosters, master cylinders, control valves, and caliper rebuilding. Laboratory fee required.

AT 153 **3 Cr.**
Drum Brakes (30 Contact Hrs.)
Includes diagnosis and repair of drum brake systems, rebuilding wheel cylinders, machining brake drums, lining adjustment and emergency brake system. (Laboratory fee required.

AT 154 **1 Cr.**
Wheels and Tires (30 Contact Hrs.)
Includes wheels, tire design, tire wear patterns, mounting, repair, inflation and static and dynamic balancing procedures. Laboratory fee required.

AT 160 **6 Cr.**
Automotive Engines (180 Contact Hrs.)
Prerequisite: Automotive Technology 140. Includes the diagnosis of engine mechanical problems, and complete overhaul procedures. This is a comprehensive course that incorporates the following courses: AT 161, 162. The student may enroll for the comprehensive course (AT 160) or either of the inclusive courses (AT 161, 162). Laboratory fee required.

AT 161 **2 Cr.**
Engine Problem Diagnosis
(Mechanical) (60 Contact Hrs.)
Includes the diagnosis and troubleshooting of engine mechanical problems by use of shop test equipment, and proper testing procedures. Laboratory fee required.

AT 162 **4 Cr.**
Engine Overhaul (120 Contact Hrs.)
Includes engine removal, disassembly, cleaning, repair or replacement of parts as required, reassembly, and installation. Laboratory fee required.

AT 170 **6 Cr.**
Automotive Systems (180 Contact Hrs.)
Prerequisite: Automotive Technology 140. Includes diagnosis and repair of auto air conditioning, heating, electrical and exhaust systems. This is a comprehensive course that incorporates the following courses: AT 171, 172, 173, 174. The student may enroll in the comprehensive course (AT 170) or any of the inclusive courses (AT 171, 172, 173, 174). Laboratory fee required.

AT 171 **2 Cr.**
Automotive Air
Conditioning Systems (60 Contact Hrs.)
Includes diagnosis and repair, evacuation, and charging of air conditioning systems. Laboratory fee required.

AT 172 **1 Cr.**
Automotive Heating
Systems (30 Contact Hrs.)
Includes diagnosis and repair of heaters and heater control systems. Laboratory fee required.

AT 173 **2 Cr.**
Electrical Systems (60 Contact Hrs.)
Includes diagnosis and repair of starting systems, alternators and generators, lighting, and instruments. Also, interpretation of wiring diagrams and schematics. Laboratory fee required.

AT 174 **1 Cr.**
Exhaust Systems (30 Contact Hrs.)
Includes installation and/or repair of exhaust manifolds, gaskets, heat control valves, mufflers, and exhaust and tail pipes. Laboratory fee required.

AT 260 **6 Cr.**
Power Trains (180 Contact Hrs.)
Prerequisite: Automotive Technology 140. Includes the study of differential assemblies, standard transmissions and overdrives, clutches, and drive trains. This is a comprehensive course that incorporates the following courses: AT 261, 262, 263, 264. The student may enroll in the comprehensive course (AT 260) or any of the inclusive courses (AT 261, 262, 263, 264). Laboratory fee required.

AT 261 **2 Cr.**
Differential Assemblies (60 Contact Hrs.)
Includes diagnosis and repair or replacement of ring and pinion assemblies, bearings, seals and axles. Laboratory fee required.

AT 262 **2 Cr.**
Standard Transmissions and Overdrives (60 Contact Hrs.)
Includes diagnosis and repair of standard transmissions and overdrives. Laboratory fee required.

AT 263 **1 Cr.**
Clutches (30 Contact Hrs.)
Includes diagnosis, removal, replacement, repair and adjustment of clutch assemblies. Laboratory fee required.

AT 264 **1 Cr.**
Drive Trains (30 Contact Hrs.)
Includes diagnosis and repair and/or replacement of drive train components, universal joints, carrier bearings, and constant velocity joints. Laboratory fee required.

AT 270 **6 Cr.**
Automatic Transmissions (180 Contact Hrs.
Prerequisite: Automotive Technology 140.
Includes the study of the automatic transmissions used by General Motors, Ford Motor Company, and Chrysler Corp. This is a comprehensive course that incorporates the following courses: AT 271, 272, 273. The student may enroll in the comprehensive course (AT 270) or in any of the inclusive courses (AT 271, 272, 273). Laboratory fee required.

AT 271 **2 Cr.**
General Motors Automatic Transmissions (60 Contact Hrs.)
Includes problem diagnosis, removal, repair, replacement, and adjustment of General Motors automatic transmissions. Also, proper testing procedures by use of the automatic transmission tester. Laboratory fee required.

AT 272 **2 Cr.**
Ford Motor Company Automatic Transmissions (60 Contact Hrs.)
Includes problem diagnosis, removal, repair, replacement, and adjustment of Ford Motor Company automatic transmissions. Also, proper testing procedures by use of the automatic transmission tester. Laboratory fee required.

AT 273 **2 Cr.**
Chrysler Corp. Automatic Transmissions (60 Contact Hrs.)
Includes problem diagnosis, removal, repair, replacement and adjustment of Chrysler Corp. automatic transmissions. Also, proper testing procedures by use of the automatic transmission tester. Laboratory fee required.

AT 280 **6 Cr.**
Automotive Tune-Up (180 Contact Hrs.)
Prerequisite: Automotive Technology 140.
Includes diagnosis, repair and/or replacement, and adjustment of ignition, fuel, and emission control systems. This is a comprehensive course that incorporates the following courses: AT 281, 282, 283. The student may enroll in the comprehensive course (AT 280) or any of the inclusive courses (AT 281, 282, 283). Laboratory fee required.

AT 281 **2 Cr.**
Ignition Systems (60 Contact Hrs.)
Includes diagnosis, repair and adjustment of conventional and electronic ignition systems. Emphasis will be on tune-up procedures. Laboratory fee required.

AT 282 **2 Cr.**
Fuel Systems (60 Contact Hrs.)
Includes diagnosis, repair and adjustment of carburetors, fuel pumps, and other fuel system components. Carburetor rebuilding and tune-up procedures are emphasized. Laboratory fee required.

AT 283 **2 Cr.**
Emission Control Systems (60 Contact Hrs.)
Includes diagnosis, repair and adjustment of emission control systems. Also included is infra-red emission testing. Laboratory fee required.

AT 713, 813 **3 Cr.**
(See Cooperative Work Experience)

AT 714, 814 **4 Cr.**
(See Cooperative Work Experience)

BIO 101 **4 Cr.**
General Biology (3 Lec., 3 Lab.)
This course is a prerequisite for all higher level biology courses and should be taken in sequence. Recommended for science majors. Emphasis is structure and function at the cell, tissue and organ system levels of organization in both plants and animals. Laboratory fee required.

BIO 102 **4 Cr.**
General Biology (3 Lec., 3 Lab.)
This course is a continuation of Biology 101. Emphasis is mendelian and molecular genetics, evolutionary mechanisms, plant and animal development and the energetics and regulation of ecological communities. Laboratory fee required.

BIO 115 **4 Cr.**
Biological Science (3 Lec., 3 Lab.)
A presentation of selected topics in biological science for the non-science major including the cell concept, basic chemistry as it relates to biology, an introduction to genetics, cellular processes such as mitosis, meiosis, respiration, photosynthesis and plant and animal reproduction. Laboratory fee required. (This course is offered on campus and may be offered via television.)

BIO 116 **4 Cr.**
Biological Science (3 Lec., 3 Lab.)
No prerequisite. A study of selected topics of biological science for the non-science major including all systems of the human body, disease, drug abuse and aging, evolution, ecology and man in relation to his environment. Laboratory fee required.

BIO 120 **4 Cr.**
Introduction to Human Anatomy and Physiology (3 Lec., 2 Lab.)
The first of a two semester course in human anatomy and physiology serving as a foundation course for present and future specialization for students of A.D. nursing and allied health disciplines; other students interested in the study of structure and function of the human body should consult a counselor. No science background is presupposed. Major topics include cell structure and function, introductory physiological principles, organization of the body, its tissues, organs, and systems, blood and cardiovascular system, and the respiratory system. Homeostasis is emphasized throughout. Laboratory fee required.

BIO 121 **4 Cr.**
Introduction to Human Anatomy and Physiology (3 Lec., 2 Lab.)
Prerequisite: Biology 120. The second of a two semester course sequence in human anatomy and physiology. An understanding of the content of Biology 120 or its equivalent is presupposed. Major topics include the neuro-muscular systems, digestive systems, excretory system, and endocrine system. Emphasis toward students of A.D. nursing and other allied health disciplines is continued. Laboratory fee required.

BIO 203 **4 Cr.**
Intermediate Botany (3 Lec., 3 Lab.)
Prerequisites: Biology 101 and 102. A survey of the major plant groups with emphasis placed on morphology, physiology, classification, life cycles and evolutionary relationships to each other and their economic importance to man. Recommended for science majors. Laboratory fee required.

BIO 211 **4 Cr.**
Invertebrate Zoology (3 Lec., 3 Lab.)
Prerequisite: Eight hours of biological science. An intermediate level course surveying the major groups of animals below the level of chordates. Consideration is given to the phylogeny, taxonomy, morphology, physiology and biology of groups involved. Relationships and importance to higher animals and man are stressed. Recommended for science majors. Laboratory fee required.

BIO 216 **4 Cr.**
General Microbiology (3 Lec., 4 Lab.)
Prerequisite: Biology 102 or consent of instructor. A study of microbes with emphasis on growth, reproduction, nutrition, genetics and ecology of micro-organisms. Laboratory activities will constitute a major part of the course. Recommended for science majors and science related programs. Laboratory fee required.

BIO 217 **4 Cr.**
Field Biology (3 Lec., 4 Lab.)
Prerequisite: Eight hours of biological science. Survey of local plant and animal life in relationship to their environment. Aquatic and terrestrial communities will be studied with reference to basic ecological principles and techniques. Emphasis will be placed upon classification, identification and collection of specimens in the field. Laboratory fee required.

BIO 221 **4 Cr.**
Anatomy and Physiology I (3 Lec., 3 Lab.)
Prerequiisite: Biology 102 or approval of instructor. Recommended for science majors. First course of a two course sequence. Structure and function as related to the human skeletal, muscular and circulatory system. Emphasis placed on the inter-relationships of these systems. Laboratory fee required.

BIO 222 **4 Cr.**
Anatomy and Physiology II (3 Lec., 3 Lab.)
Prerequisite: Biology 221 or approval of instructor. Second course of a two course sequence. Structure and function as related to the human digestive, nervous, respiratory, reproductive and endocrine systems. Emphasis placed on the inter-relationships of these systems. Laboratory fee required.

BIO 224 **4 Cr.**
Environmental Biology (3 Lec., 3 Lab.)
Prerequisite: 6 hrs. biology. A one semester course dealing with the basic principles and techniques of aquatic and terrestrial communities and how these relate to the problems facing man in a modern technological society. Laboratory fee required.

BIO 230 **4 Cr.**
Mammalian Physiology (3 Lec., 3 Lab.)
Prerequisite: 12 hours of biology, 8 hours of inorganic chemistry, concurrent registration in organic chemistry, and consent of instructor. A study of the function of various mammalian systems with emphasis placed on

the interrelationships that exist. Utilization of instrumentation to measure various physiological parameters will be employed. Laboratory fee required.

BIO 235 **4 Cr.**
Comparative Anatomy of
the Vertebrates (3 Lec., 4 Lab.)
Prerequisites: Biology 101 and 102. A survey of the major groups of vertebrates from a comparative point of view. The lectures will involve an intensive study of each vertebrate class, with emphasis on morphology and evolutionary relationships. Representatives of each vertebrate class will be dissected and compared in sequence during laboratory sessions. For science majors, pre-medical and pre-dental students. Laboratory fee required.

BPR 177 **2 Cr.**
Blueprint Reading (1 Lec., 3 Lab.)
The description and explanation of engineering drawings is the content of the course. This includes multiview projection, sections, auxiliaries, bill of materials, symbols, notes, conventions, and standards. The skills of visualization, dimensioning, and sketching of machine parts are covered in the course.

BUS 103 **4 Cr.**
Speedwriting Theory (3 Lec., 2 Lab.)
Prerequisite: Credit or concurrent enrollment in Business 172 or one year of typing. Introduction of the fundamental principles of speedwriting, including development of the ability to read, write, and transcribe speedwriting notes and a review of basic spelling, grammar, and punctuation rules to aid in transcription.

BUS 104 **3 Cr.**
Speedwriting Dictation
and Transcription (3 Lec.)
Prerequisite: Business 103, Business 172 or one year of typing. Application of principles of speedwriting to build dictation speed and transcription rate. Special attention will be given to review of grammar, spelling, and punctuation rules to aid in transcription.

BUS 105 **3 Cr.**
Introduction to Business (3 Lec.)
Provides overall picture of business operation; includes analysis of specialized fields within business organization; identifies role of business in modern society. (This course is offered on campus and may be offered via television.)

BUS 106 **1 Cr.**
Professional Development
Orientation (1 Lec.)
Orientation to the retail distribution and marketing program and DECA, the professional organization. Preparation of the DECA calendar of events and the election of officers. Available to retail distribution and marketing students only.

BUS 107 **1 Cr.**
Professional Development
Local Organizations (1 Lec.)
Assignment of major DECA committees. Planning and partial completion of professional, promotional, civic, recreational and fund raising projects. Available to retail distribution and marketing students only.

BUS 131 **3 Cr.**
Bookkeeping I (3 Lec.)
The fundamental principles of double-entry bookkeeping as applied to practical business situations. Emphasis is given to the following: financial statements, trial balances, work sheets, special journals, adjusting and closing entries. A practice set covering the entire business cycle will be completed.

BUS 132 **3 Cr.**
Bookkeeping II (3 Lec.)
Prerequisite: Business 131. Attention will be given to accruals, bad debts, taxes, depreciation, controlling accounts and business vouchers. Bookkeeping for partnerships and corporations will be introduced.

BUS 136 **3 Cr.**
Principles of Management (3 Lec.)
A study of the process of management including the functions of planning, organizing, leading and controlling. Particular emphasis on policy formulation, decision making processes, operating problems, communications theory and motivation techniques.

BUS 137 **3 Cr.**
Principles of Retailing (3 Lec.)
The operation of the retail system of distribution. The inter-relationship of consumer demand, inventory control, the buying sequence, personnel requirements, use of computer in retailing, store location and layout and credit policies.

BUS 143 **3 Cr.**
Personal Finance (3 Lec.)
A study of everyday financial problems encountered in managing personal affairs. Includes financial planning, insurance, budgeting, use of credit, home ownership, savings, investment and tax problems. (This course is offered on campus and may be offered via television.)

BUS 150 **4 Cr.**
Management Training (20 Lab.)
Prerequisite: Concurrent enrollment in approved mid-management program. Supervised employment in the student's chosen field. Intended to provide practical experience for students preparing for careers in business management. Business 150 will be offered the first semester.

BUS 151 **4 Cr.**
Management Training (20 Lab.)
Prerequisite: Concurrent enrollment in approved mid-management program. A continuation of Business 150. Business 151 will be offered the second semester.

BUS 153 **3 Cr.**
Small Business Management (3 Lec.)
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.

BUS 154 **2 Cr.**
Management Seminar: Role of Supervision (2 Lec.)
Prerequisites: Concurrent enrollment in Business 150 and preliminary interviews by mid-management faculty. Problem analysis and project development for students majoring in mid-management. Special emphasis is placed upon the development of management, goal setting and planning, leadership, communication and motivation as applied to the student's work experiences.

BUS 155 **2 Cr.**
Management Seminar: Personnel Management (2 Lec.)
Prerequisites: Business 150, Business 154 and concurrent enrollment in Business 151. A study of the principles, policies and practices relating to the personnel functions of business as applied to the student's work experiences.

BUS 157 **3 Cr.**
Small Business Bookkeeping and Accounting Practices (3 Lec.)
The student will study basic bookkeeping and accounting techniques essential to small business financial management and be able to apply them to the analysis and preparation of basic financial statements such as profit and loss, cash flow and statements of financial worth all fundamental to small business operations.

BUS 157 **3 Cr.**
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 operations.

BUS 159 **4 Cr.**
Beginning Shorthand (3 Lec., 2 Lab.)
Prerequisite: Credit in or concurrent enrollment in Business 172 or one year of typing in high school. Introduction of fundamental principles of Gregg Shorthand, diamond jubilee series. Includes development of ability to read, write and transcribe shorthand outlines. Development of knowledge of mechanics of English.

BUS 160 **3 Cr.**
Office Machines (3 Lec.)
Office machines is designed to provide the student with a skill in the operation of such machines as adding machines, printing calculators, electronic display calculators and electronic printing calculators, Emphasis is placed on developing the touch system for both speed and accuracy. A review of the fundamental mathematics needed for successful machine use in the typical office situation is included in the course.

BUS 162 **3 Cr.**
Office Procedures (3 Lec.)
Prerequisite: Business 172 or one year of typing in high school. Duties, responsibilities and personal qualifications of the office worker are emphasized. Units of work include filing, reprographics, mail, telephone, financial transactions and job applications.

BUS 165 **3 Cr.**
Introduction to Word Processing (3 Lec.)
Prerequisite: Business 174 or concurrent enrollment in Business 174. Provides an overall picture of word processing and its effect on traditional office operations. A study of word processing terminology and word processing centers which combine up-to-date equipment with streamlined paper handling procedures. Training in the transcription and distribution of business communications. Reinforcement of English skills and English mechanics.

BUS 166 **4 Cr.**
Intermediate Shorthand (3 Lec., 2 Lab.)
(Formerly Business 164) Prerequisites: Credit in Business 159 or one year of shorthand in high school, credit in Business 172 or one year of typing in high school. Application of the principles of Gregg Shorthand to develop the following: Increased speed dictation, accuracy in typing from shorthand notes and emphasis on the beginning techniques of transcription skills. Included will be oral reading of shorthand outlines, speed building dictation and mailable copy. Special attention will be given to English fundamentals such as grammar, punctuation, etc.

BUS 167 **3 Cr.**
Legal Terminology and Transcription (3 Lec.)
Prerequisite: Completion of intermediate typewriting or typing speed of 50 words per minute; completion of introduction to word

processing. This course is designed to acquaint students with legal terminology, including correct spelling and use of legal terms and Latin words and phrases, and provides intensive practice in building speed and accuracy in the transcription of legal terms.

BUS 172 **3 Cr.**
Beginning Typing (2 Lec., 3 Lab.)
Fundamental techniques in typewriting are developed. The skills involved in typing manuscripts, business letters and tabulation are introduced. This course is for students with no previous training in typewriting.

BUS 174 **2 Cr.**
Intermediate Typing (1 Lec., 2 Lab.)
Prerequisite: Credit in Business 172 or one year of typing in high school. Further development of techniques. Emphasis will be placed on problem solving, increasing speed and accuracy in typing business forms, correspondence and manuscripts.

BUS 201 **3 Cr.**
Principles of
Accounting I (3 Lec.)
Theory and practice of measuring and interpreting financial data for business units; study of problems of income measurement, such as depreciation, inventory valuation and credit losses; the operating cycle and the preparation of financial statements. (This course is offered on campus and may be offered via television.)

BUS 202 **3 Cr.**
Principles of
Accounting II (3 Lec.)
Prerequisite: Business 201. Accounting procedures and practices applicable to partnerships and corporations; the use of cost data, budgetary controls, analysis and interpretation of financial reports for use by creditors, investors and management.

BUS 203 **3 Cr.**
Intermediate Accounting I (3 Lec.)
Prerequisite: Business 202. An intensive study of the concepts, principles, and practice of modern financial accounting. Included is a complete study of the purposes and procedures underlying the financial statements.

BUS 204 **3 Cr.**
Managerial Accounting (3 Lec.)
Prerequisite: Business 202. A study of accounting practices and procedures in providing information for business management. Emphasis is placed on the preparation and internal use of financial statements and budgets, types of accounting system and other accounting information and procedures used in management planning and control.

BUS 205 **3 Cr.**
Business Finance (3 Lec.)
Prerequisites: Economics 201 or 202 and Business 201. This course is designed to give the students a working knowledge of the financial system in the free enterprise system. Interest rates, value analysis, financing of business firms and government, security markets, analysis of financial requirements for decision making and capital requirements.

BUS 210 **3 Cr.**
Small Business Organization,
Acquisition and Finance (3 Lec.)
The student will study alternative strategies and procedures for organizing a business, the planning necessary for establishing a business, evaluation of a business for acquisition purposes, and how to prepare and present a loan proposal.

BUS 211 **3 Cr.**
Small Business Operations (3 Lec.)
The student will be introduced to problems associated with day to day operations of small business. Case studies and problem solving will be emphasized to prepare the student to cope with full range of operational management problems such as compliance with regulations, personnel administration, accounts receivable management, and business insurance.

BUS 230 **3 Cr.**
Salesmanship (3 Lec.)
A course in general salesmanship involving the factors of successful selling of goods and ideas. Buying motives, sales psychology, customer approach and sales techniques are studied.

BUS 231 **3 Cr.**
Business Correspondence (3 Lec.)
Prerequisites: Credit in Business 172 or one year of typing in high school; credit in Communications 131 or English 101. A practical course that includes a study of letter forms, the mechanics of writing and composing various types of communications. A critical analysis of the appearance and content of representative business correspondence is made.

BUS 234 **3 Cr.**
Business Law (3 Lec.)
This course is designed to acquaint the student with the historical and ethical background of the law and to familiarize him with present day principles of law. Particular emphasis on contracts, property (bailments, sales, leases, wills and estates) and torts.

BUS 237 **3 Cr.**
Organizational Behavior (3 Lec.)
This course endeavors to focus on the persisting human problems of administration

in modern organization as they relate to the theory and methods of behavioral science.

BUS 242 **3 Cr.**
Personnel Administration (3 Lec.)
Personnel Administration is a business course designed to provide a solid foundation in the fundamentals, theories, principles and practices of people management. Emphasis will be on people and the factors that are relevant to employment of people i.e., recruitment, selection, training, job development, interactions with others, labor management relations, government regulations, etc. The managerial functions of planning, organizing, staffing, directing and controlling will provide the framework for applying the principles which are significant in personnel interactions and management.

BUS 243 **1 Cr.**
Professional Development
Organizational Competition (1 Lec.)
Introduction to DECA competitive events. Preparation for and participation in local DECA competitive events. Continued participation in professional, promotional, civic, recreational and fund raising activities. Available to retail distribution and marketing students only.

BUS 244 **1 Cr.**
Professional Development
State and National
Organizations (1 Lec.)
Preparation for and participation in state and national DECA competition. Continued participation in professional, promotional, civic, recreational and fund raising activities. Available to retail distribution and marketing students only.

BUS 245 **3 Cr.**
Sales Management (3 Lec.)
Study of successful sales executive's qualities and characteristics. Emphasis on pricing, distribution, promotion and brand management; also managerial decisions involved in recruiting, selecting, training and motivating salesmen.

BUS 246 **3 Cr.**
Marketing and Management
Cases (3 Lec.)
Prerequisite: Business 136 and 206. Selected case studies in marketing and management to give you greater depth in business decision making.

BUS 247 **3 Cr.**
Simulated Business
Training I (3 Lec.)
Introductory job procedures involving job application and interview, employer-employee relations, customer relations, company policies, rules and regulations. Experience in introductory business responsibilities in related specialty.

BUS 248 **3 Cr.**
Simulated Business
Training II (3 Lec.)
Selected experiences involving job responsibilities in related specialty.

BUS 265 **3 Cr.**
Word Processing Practices
and Procedures (3 Lec.)
Prerequisite: Successful completion of Business 165. Theory and practice of translating ideas into words, putting those words on paper and turning that paper into communication. Emphasis on training in composing and dictating business communications, developing teamwork skills, setting priorities, scheduling, understanding procedures, researching, storing and retrieving documents and managing word processing systems. Further development of transcribing and magnetic keyboarding skills. Reinforcement of typing skills and English mechanics. Goal is development of employable skills in an office or word processing center.

BUS 266 **4 Cr.**
Advanced Shorthand (3 Lec., 2 Lab.)
Prerequisites: Credit in Business 166 or two years of shorthand in high school, credit in Business 174 or two years of typing in high school. Emphasis is on specialized speed building dictation, timed typewritten mailable transcription, additional vocabulary building and extensive production work capabilities. Continued development of this high level skill enables the student to meet the challenges presented in any office situation.

BUS 273 **2 Cr.**
Advanced Typing (1 Lec., 2 Lab.)
Prerequisite: Credit in Business 174 or two years of typing in high school. Decision making and timed production of all types of business material are emphasized. A continuation of skill developmnt and a review of typing techniques are also stressed. This course will demand accuracy at advanced speeds.

BUS 274 **3 Cr.**
Legal Secretarial
Procedures (3 Lec.)
Prerequisite: Completion of Intermediate Typewriting or typing speed of 50 words per minute; completion of Intermediate Shorthand or shorthand dictation speed of 80 words per minute. This course is designed for (1) the student who is training for a career as a legal secretary; (2) the secretary who wishes to train for a career as a legal secretary; (3) the legal secretary who desires a more com-

prehensive background in legal secretarial procedures. Specialized training is provided in knowledges and skills required of legal secretaries in the areas of reminder and filing systems, telephone usage, dictation and correspondence, preparation of legal documents, the court system, client contacts, use of the law library, research techniques, timekeeping, billing, law office bookkeeping, legal secretarial ethics, and how to obtain a legal secretarial position.

BUS 275 **3 Cr.**
Secretarial Procedures (3 Lec.)
Prerequisites: Completion of or concurrent enrollment in Business 174 and completion of or concurrent enrollment in either Business 166 or Business 265. This course is designed primarily to make the student think in terms of initiative, creative thinking, and follow-through within these units of work: in-basket exercises, decision-making problems, utilization of the shorthand/transcription skills, units on public and personal relations, supervisory principles, business ethics and organizing time and work.

BUS 290 **3 Cr.**
Fashion Buying (3 Lec.)
Comprehensive study of fashion buying principles designed to prepare the student for employment as an assistant buyer or buyer of fashion merchandise.

BUS 291 **3 Cr.**
Fashion Merchandising (3 Lec.)
Introduction to the field of fashion with emphasis on its historical development and trends, career opportunities, marketers, and merchandising methods.

BUS 292 **3 Cr.**
Fashion Design (3 Lec.)
Fashion design history, color theory, and styling terminology. Emphasis on silhouette, color and accessories.

CHM 101 **4 Cr.**
General Chemistry (3 Lec., 3 Lab.)
Prerequisite: Developmental Mathematics 093 or equivalent. Designed for science and science-related majors. The course includes the fundamental laws and theories dealing with the structure and interactions of matter and the use of these principles in understanding 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 required.

CHM 102 **4 Cr.**
General Chemistry (3 Lec., 3 Lab.)
Prerequisite: Chemistry 101. Designed for science and science-related majors, this course is a continuation of Chemistry 101. The fundamental concepts introduced previously, together with additional ones, are applied to a variety of topics, including solutions and colloids, chemical kinetics and equilibrium, electrochemistry and nuclear chemistry. Qualitative inorganic analysis is included in the laboratory work. Laboratory fee required.

CHM 115 **4 Cr.**
General Chemistry (3 Lec., 3 Lab.)
Prerequisite: Developmental Mathematics 091 or equivalent. Designed for non-science majors, the course traces the development of theoretical concepts and the evolution of these concepts in explaining various observations and laws relating to chemical bonding reactions, states of matter, solutions, electrochemistry and nuclear chemistry. The descriptive chemistry of some common elements and inorganic compounds is included. Laboratory fee required.

CHM 116 **4 Cr.**
General Chemistry (3 Lec., 3 Lab.)
Prerequisite: Chemistry 115. Designed for non-science majors, this course covers organic chemistry and biochemistry. The important classes of organic compounds are surveyed with the concept of structure providing the central theme. The biochemistry section includes carbohydrates, proteins, lipids, chemistry of heredity, disease and therapy and plant biochemistry. Laboratory fee required.

CHM 201 **4 Cr.**
Organic Chemistry I (3 Lec., 4 Lab.)
Prerequisite: Chemistry 102. Designed for science and science related majors. An integrated introductory course in organic chemistry dealing with the fundamental types of organic compounds, their nomenclature, classification, reactions and applications. The reactions of aliphatic and aromatic compounds are discussed in terms of modern electronic theory with emphasis on reaction mechanisms, stereo-chemistry, transition state theory and technique of organic synthesis. Laboratory fee required.

CHM 202 **4 Cr.**
Organic Chemistry II (3 Lec., 4 Lab.)
Prerequisite: Chemistry 201. Designed for science and science related majors, this course is a continuation of Chemistry 201. emphasis will be given to the further development of aliphatic and aromatic systems, polyfunctional compounds including amino acids, proteins, carbohydrates, sugars, heterocyclic and related compounds. Instrumental techniques will be used to identify compounds. Laboratory fee required.

CHM 203 **4 Cr.**
Quantitative Analysis (2 Lec., 6 Lab.)
Prerequisites: Chemistry 102, Mathematics 101 or Mathematics 104 or equivalent. This course includes the principles of chemistry as applied by the analytical chemist to quantitative determinations. Topics include gravimetry, oxidation-reduction, indicators and acid-base theory. Laboratory experience focuses on the fundamentals of gravimetric and volumetric analysis with an introduction to colorimetry. Laboratory fee required.

CHM 205 **2 Cr.**
Chemical Calculations (2 Lec.)
Prerequisite: Chemistry 102. Advanced review of chemical calculations of general chemistry with special emphasis on stoichiometry and chemical equilibrium.

CHM 234 **4 Cr.**
Instrumental Analysis (2 Lec., 6 Lab.)
Prerequisite: Chemistry 203 or permission of instructor. This course emphasizes the role of modern electronic instrumentation in analysis. Laboratory work includes infrared and ultraviolet spectroscopy, gas chromatography, potentiometric titration, electrochemistry, continuous flow analysis, scintillation counting, eletrophoresis, flame photometry, and atomic absorption spectrophotometry as analytical tools. Laboratory fee required.

CLS 100 **1 Cr.**
College Learning Skills (1 Lec.)
The course will provide individualized study and practice in reading, study skills and/or composition. It is designed for students who wish to extend their learning skills for academic or career programs. May be repeated for a maximum of three (3) credits.

COM 131 **3 Cr.**
Applied Composition and Speech (3 Lec.)
The study of communications skills as a practical means of preparing for successful performance in the student's chosen vocation. Practice in writing letters, applications, resumes and short reports.

COM 132 **3 Cr.**
Applied Composition and Speech (3 Lec.)
Prerequisite: Communications 131 or consent of instructor. The study of communication processes with emphasis on written persuasion directly related to occupational training and work experience. Use of expository techniques in business letters and documented reports. Practice in oral communications.

CS 175 **3 Cr.**
Introduction to Computing Science (3 Lec.)
Provides a basic understanding of the computer, cultural impact, history of computers, vocabulary, flow charts, data representation and an introduction to procedure-oriented languages with general applications.

Cooperative Work Experience
701, 711, 801, 811 **1 Cr.**
702, 712, 802, 812 **2 Cr.**
703, 713, 803, 813 **3 Cr.**
704, 714, 804, 814 **4 Cr.**
Prerequisite: Completion of two courses in the student's major or instructor/coordinator approval. These courses consist of a combination of seminars and on-the-job applications of theory and laboratory instruction received in the formal courses of the student's major curricula. The students will be placed in work-study positions in their technical occupational fields that will test their skills and abilities to function successfully in their respective occupations. The students' learning in these work internship courses will be guided by sets of learning objectives formulated at the beginning of each semester by the students, their instructors/coordinators and their supervisors at work. The instructors will determine if the learning objectives are valid and will give final approval for credit.

DC 095 **3 Cr.**
Communication Skills (3 Lec.)
A course designed for the student who needs grammar, paragraph structure, reading skills, and/or oral communication to enhance his proficiency in language communications. Students will be tested and given prescribed work in one or a combination of the elements of study as the individual needs indicate.

DC 120 **3 Cr.**
Communication Skills (2 Lec., 2 Lab.)
Designed for students with significant problems in communications development causing learning problems. Group sessions are supplemented with individual evaluations to provide a basis for the development of personalized programs based on needs. Inter-departmental planning provides alternative modes of learning. Special attention is given to oral language as the initial language form. The course is organized in terms of skills development in a competency-based mode and enrollment may be accepted on a flexible basis on instructor referral.

DL 094 **1 Cr.**
Learning Skills Improvement (2 Lab.)
A course designed for the student who needs improvement in developmental skills to enhance his performance in academic or career programs. Student will be assigned specific objectives as the individual needs indicate. May be repeated for a maximum of three (3) credits.

Developmental Mathematics
Developmental Mathematics courses may be taken for 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.

DM 062 **1 Cr.**
Pre Business (1 Lec.)
This course is designed to introduce students to business math by dealing with such selected topics and discounts and commissions, interest, metric and English measuring systems, area and volume.

DM 090 **3 Cr.**
Pre-Algebra Mathematics (3 Lec.)
This course is designed to develop an understanding of fundamental operations using whole numbers, fractions, decimals and percentages and to strengthen basic skills in mathematics. The course is planned primarily for students who need to review basic mathematical processes. It is the first step in the mathematics sequence and includes an introduction to algebra.

DM 091 **3 Cr.**
Elementary Algebra (3 Lec.)
Prerequisite: Developmental Mathematics 090 or equivalent. This course is designed to develop an understanding of first year algebra. It includes special products and factoring, fractions, equations, graphs, functions and an introduction to geometry.

DM 093 **3 Cr.**
Intermediate Algebra (3 Lec.)
Prerequisite: One year of high school algebra or Developmental Mathematics 091. Includes the terminology of sets, properties of real numbers, fundamental operations on polynomials and fractions, products, factoring, radicals and rational exponents. Also covered are solutions of linear, fractional, quadratic and systems of linear equations, coordinate systems and graphing.

Developmental Reading
Students can improve and refine their performance in the English sequence 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 catalogue description in reading for full course content.

DR 090 **3 Cr.**
Techniques of
Reading/Learning (3 Lec.)
Developmental Reading 090 is designed to meet individual needs for proficiency in reading comprehension, vocabulary development, study skills and reading for success in academic areas and career advancement. It emphasizes learning how to learn and includes reading/learning experiences developed to strengthen the total educational background of each student. Developmental Reading 090 and Developmental Reading 091 are offered in a laboratory setting employing varied instructional methods.

DR 091 **3 Cr.**
Techniques of
Reading/Learning (3 Lec.)
Developmental Reading 091 is designed to meet individual needs for proficiency in reading comprehension, vocabulary development, study skills and reading for success in academic areas and career advancement. It emphasizes learning how to learn and includes reading/learning experiences developed to strengthen the total educational background of each student. Developmental Reading 090 and Developmental Reading 091 are offered in a laboratory setting employing varied instructional methods.

Developmental Writing
Students can improve their level of success in all courses requiring writing assignments by registering for developmental writing. These courses, offered for one to three hours credit, consider organization skills and research paper styles, as well as individual writing weaknesses.

DW 090 **3 Cr.**
Writing (3 Lec.)
Developmental Writing 090 emphasizes the diagnosis and correction of deficiencies in basic writing skills. Spelling, grammar, vocabulary improvement and principles of sentence and paragraph structure (as well as experience in organization for composition) are taught in a laboratory utilizing individualized instruction techniques.

DW 091 **3 Cr.**
Writing (3 Lec.)
Developmental Writing 091 is a sequel to Writing 090 and concentrates on the composition process; therefore, it is important to develop the student's skills of organization, transition and revision. His program of composition will vary according to his individual needs, which may include brief, simple forms as well as more complex critical and research writing.

DW 092 **1 Cr.**
Writing Lab (3 Lab.)
Developmental Writing Lab 092 is a workshop to facilitate writing success for course work and other individual interests. Students are

given instruction and supervision in written assignments, including the research paper and in editing for mechanical effectiveness.

ES 117 **4 Cr.**
Earth Science (3 Lec., 3 Lab.)
The course encompasses the interaction of the earth sciences and man's physical world. Geology, astronomy, meteorology and space science are emphasized through the application of selected principles and concepts of the applied sciences. The course is directed toward the non-science major. Laboratory fee required. (This course is offered on campus and may be offered via television.)

ECY 291 **3 Cr.**
Man and His
Environment II (3 Lec.)
A course designed to increase environmental awareness and knowledge. Areas of study include pollution, erosion, land use, energy resource depletion, overpopulation and the effects of unguided technological development. Through documentaries and interviews with experts, an emphasis is placed on proper planning of societal and individual action in order to protect the natural environment. (This course may be offered via television.)

ECO 201 **3 Cr.**
Principles of Economics I (3 Lec.)
The fundamental principles of macroeconomics. Economic organization, national income determination, money and banking, monetary and fiscal policy, economic fluctuations and growth. Sophomore standing recommended. (This course is offered on campus and may be offered via television.)

ECO202 **3 Cr.**
Principles of Economics II (3 Lec.)
Prerequisite: Economics 201 or the consent of the instructor. The fundamental principles of microeconomics. Theory of demand, supply and price of factors; income distribution; theory of the firm. Emphasis also on international economics and contemporary economic problems.

EM 100 **3 Cr.**
Shop Practices (90 Contact Hrs.)
Includes tools and equipment and service department operation. This is a comprehensive course that incorporates EM 101, 102. The student may enroll in the comprehensive course (EM 100) or either of the inclusive courses (EM 101, 102). Laboratory fee required.

EM 101 **2 Cr.**
Tools and Equipment (60 Contact Hrs.)
Includes the safe and proper use of the tools and equipment used in the repair of small engines. Laboratory fee required.

EM 102 **1 Cr.**
Service Department
Operation (30 Contact Hrs.)
A survey of the principles which affect the successful operation of a service department. Laboratory fee required.

EM 110 **6 Cr.**
Engine Fundamentals (180 Contact Hrs.)
Prerequisite: Engine Mechanics 100. Includes two and four cycle engines, basic electrical systems and basic fuel systems. This is a comprehensive course that incorporates EM 111, 112, 113. The student may enroll in the comprehensive course (EM 110) or in any of the inclusive courses (EM 111, 112, 113). Laboratory fee required.

EM 111 **2 Cr.**
Two and Four Cycle
Engines (60 Contact Hrs.)
Includes the principles, theory of operation and failure analysis of two and four cycle engines. Laboratory fee required.

EM 112 **2 Cr.**
Basic Electrical Systems (60 Contact Hrs.)
Includes the principles of electricity as they relate to small engine electrical systems. Laboratory fee required.

EM 113 **2 Cr.**
Basic Fuel Systems (60 Contact Hrs.)
Includes the principles and theory of operation of basic fuel systems. Laboratory fee required.

EM 703 **3 Cr.**
(See Cooperative Work Experience)

EM 704 **4 Cr.**
(See Cooperative Work Experience)

EM 713 **3 Cr.**
(See Cooperative Work Experience)

EM 714 **4 Cr.**
(See Cooperative Work Experience)

EM 803 **3 cr**
(See Cooperative Work Experience)

EM 804 **4 Cr.**
(See Cooperative Work Experience)

EM 813 **3 Cr.**
(See Cooperative Work Experience)

EM 814 **4 Cr.**
(See Cooperative Work Experience)

EGR 101 **2 Cr.**
Engineering Analysis (2 Lec.)
Prerequisite: Two years of high school algebra or Developmental Mathematics 093 or consent of instructor. The role of the engineer in society; branches and specialties in engineering; introduction to engineering analysis affording practice in analyzing and solving engineering problems; com-

putational methods and devices with an introduction to computer programming.

EGR 105 **3 Cr.**
Engineering Design Graphics (2 Lec., 4 Lab.)
Provides the basic graphic fundamentals necessary for engineering communications and engineering design. Teaches standard engineering graphical techniques, auxiliaries, sections, graphical analysis, pictorial and working drawings in a framework which introduces the student to rational processes of creative engineering. Laboratory fee required.

EGR 106 **3 Cr.**
Descriptive Geometry (2 Lec., 4 Lab.)
Prerequisite: Drafting 183 or Engineering 105. Provides training in the visualization of three-dimensional structures and in accurately representing these structures in drawings by analyzing the true relationship between points, lines and planes. Attention is given to the generation and classification of lines and surfaces, as well as intersections, developments, auxiliaries and revolutions. Laboratory fee required.

EGR 107 **3 Cr.**
Engineering Mechanics I (3 Lec.)
Prerequisite: Mathematics 126 or registration therein. A study of the statics of particles and rigid bodies with vector mathematics in three-dimensional space. Principles of the equilibrium of forces and force systems, resultants, free body diagrams, friction, centroids and moments of inertia, virtual work and potential energy are used. Distributed forces, centers of gravity, analysis of structures, beams and cables are treated.

EGR 108 **3 Cr.**
Computer Methods in Engineering (3 Lec.)
Prerequisite: Mathematics 126 or registration therein. A study of fundamental methods of numerical analysis with applications by computer programming. Topics taught are computer programming, recursion formulas, successive approximations, error analysis, non-linear equations, systems of linear equations and matrix methods, probabilistic models, interpolation, determination of parameters, numerical integration and solution of ordinary differential equations.

EGR 201 **3 Cr.**
Engineering Mechanics II (3 Lec.)
Prerequisites: Engineering 107, Mathematics 227, or registration therein. Dynamics — the study of constrained and general motions of particles and rigid bodies interacting with applied forces; space, time, mass, velocity, acceleration, work and energy, impulse and momentum.

EGR 202 **3 Cr.**
Engineering Mechanics of Materials (3 Lec.)
Prerequisites: Engineering 107, Mathematics 227 or registration therein. A study of forces, deformation and material properties of simple structural elements. 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.

EGR 204 **3 Cr.**
Electrical Systems Analysis (3 Lec.)
Prerequisite: Mathematics 227 or registration therein. Introduction to electrical science; fundamental electrical systems and signals; basic concepts of electricity and magnetism with mathematical representation and computation.

ENG 101 **3 Cr.**
Composition and Expository Reading (3 Lec.)
A course designed to develop the student's skills in writing and in the critical analysis of prose. (This course is offered on campus and may be offered via television.)

ENG 102 **3 Cr.**
Composition and Literature (3 Lec.)
Prerequisite: English 101. Writing and Reading activities in poetry, drama, the short story and the novel. Designed to increase the student's understanding and enjoyment of good literature. (This course is offered on campus and may be offered via television.)

ENG 201 **3 Cr.**
British Literature (3 Lec.)
Prerequisite: English 102. A study of significant works of British literature from the Old English period through the eighteenth century.

ENG 202 **3 Cr.**
British Literature (3 Lec.)
Prerequisite: English 102. Study of important works from the Romantic period to the present.

ENG 203 **3 Cr.**
World Literature (3 Lec.)
Prerequisite: English 102. Reading and analysis of significant Continental European works from the Greek Classical period through the Renaissance.

ENG 204 **3 Cr.**
World Literature (3 Lec.)
Prerequisite: English 102. Study of ten to twelve important post-Renaissance works of Continental Europe, England and America.

ENG 205 **3 Cr.**
American Literature (3 Lec.)
Prerequisite: English 102. Study of the works of the important writers before Whitman in the context of their times.

ENG 206 **3 Cr.**
American Literature (3 Lec.)
Prerequisite: English 102. Reading and analysis of representative works from Whitman to the present.

ENG 209 **3 Cr.**
Creative Writing (3 Lec.)
Prerequisite: English 102. Writing of fiction: short story, poetry and short drama.

ENG 210 **3 Cr.**
Technical Writing (3 Lec.)
Prerequisite: English 101 and 102; or Communications 131 and 132. Elective course. Introduction to the technical style of writing with emphasis on the writing of technical papers, reports, proposals, progress reports and descriptions.

ENG 215 **3 Cr.**
Studies in Literature (3 Lec.)
Prerequisite: English 102. The student will read, analyze and discuss selections in literature organized by genre, period or geographical region. Course titles and descriptions will be available each semester prior to registration. May be repeated for credit.

ENG 216 **3 Cr.**
Studies in Literature (3 Lec.)
Prerequisite: English 102. The student will read, analyze and discuss selections in literature organized by theme, interdisciplinary content or major author. Course titles and descriptions will be available each semester prior to registration. May be repeated for credit.

FR 101 **4 Cr.**
Beginning French (3 Lec., 2 Lab.)
Essentials of grammar, easy idiomatic prose, stress on pronunciation, comprehension and oral expression. Laboratory fee required.

FR 102 **4 Cr.**
Beginning French (3 Lec., 2 Lab.)
Prerequisite: French 101 or equivalent. Continuation of French 101 with emphasis on idiomatic language and complicated syntax. Laboratory fee required.

FR 201 **3 Cr.**
Intermediate French (3 Lec.)
Prerequisite: French 102 or equivalent. Reading, composition, grammar review and intense oral practice.

FR 202 **3 Cr.**
Intermediate French (3 Lec.)
Prerequisite: French 201 or equivalent. Continuation of French 201 with reading selections drawn more directly from contemporary literary sources. Composition.

FR 203 **3 Cr.**
Introduction to French Literature (3 Lec.)
Prerequisite: French 202 or consent of the instructor. Readings in French literature, history, culture, art and civilization.

FR 204 **3 Cr.**
Introduction to French Literature (3 Lec.)
Prerequisite: French 202 or consent of the instructor. Readings in French literature, history, culture, art and civilization.

GPY 101 **3 Cr.**
Physical Geography (3 Lec.)
A survey of the physical makeup of the earth: weather and climate, topography, plant and animal life, land and sea. Attention is directed toward the earth in space, use of maps and charts and place geography.

GPY 102 **3 Cr.**
Economic Geography (3 Lec.)
A study of the relation of man to his environment and his utilization of natural resources, dealing with problems of production, manufacture and distribution of goods throughout the world. The aspects of primitive subsistence and degrees of commercialism are considered.

GPY 103 **3 Cr.**
Cultural Geography (3 Lec.)
Development of regional variations of culture, including the distribution of races, religions, languages and aspects of material culture, with emphasis on origins and diffusion.

GEO 101 **4 Cr.**
Physical Geology (3 Lec., 3 Lab.)
Study of earth materials and processes for science and non-science majors. Includes introduction to geochemistry, geophysics, examination of the earth's interior, magnetism, setting in space, minerals, rocks, structure and geologic processes. Laboratory fee required.

GEO 202 **3 Cr.**
Introduction to Rock and Mineral Identification (1 Lec., 3 Lab.)
Prerequisites: Geology 101 and Geology 102. This is an introductory course in crystallography, geochemistry, descriptive mineralogy, petrology and phase equilibria. The student will study crystal models and hand specimens in the laboratory as an aid to rock and mineral identification. Laboratory fee required.

GEO 205 **4 Cr.**
Field Geology (3 Lec., 3 Lab.)
Survey of geological features, landforms,

rocks, minerals, and fossils in areas of geological interest. Map reading and interpretation will also be included. Emphasis will be placed on identification, classification and collection of specimens in the field. Laboratory fee required.

GER 101 **4 Cr.**
Beginning German (3 Lec., 2 Lab.)
Essentials of grammar, easy idiomatic prose, stress on pronunciation, comprehension and oral expression. Laboratory fee required.

GER 102 **4 Cr.**
Beginning German (3 Lec., 2 Lab.)
Prerequisite: German 101 or equivalent. Continuation of German 101 with emphasis on idiomatic language and complicated syntax. Laboratory fee required.

GER 201 **3 Cr.**
Intermediate German (3 Lec.)
Prerequisite: German 102 or equivalent or consent of the instructor. Reading, composition, grammar review and intense oral practice.

GER 202 **3 Cr.**
Intermediate German (3 Lec.)
Prerequisite: German 201 or equivalent. Continuation of German 201 with reading selections drawn more directly from contemporary literary sources. Composition.

GVT 201 **3 Cr.**
American Government (3 Lec.)
Prerequisite: Sophomore standing recommended. An introduction to the study of political science; origin and development of constitutional democracy (United States and Texas); federalism and intergovernmental relations; local government; parties, politics and political behavior. Satisfies requirements for Texas State Teacher's Certification. (This course is offered on campus and may be offered via television.)

GVT 202 **3 Cr.**
American Government (3 Lec.)
Prerequisites: Government 201 and sophomore standing recommended. A study of the United States and Texas legislative process, the executive and the bureau structure, the judicial process, civil rights and liberties, domestic policies. Other topics include foreign relations and national defense. Satisfies requirements for Texas State Teacher's Certification. (This course is offered on campus and may be offered via television.)

GVT 205 **3 Cr.**
Studies in Government (3 Lec.)
Prerequisites: Sophomore standing and six hours of history or government. A treatment of selected topics in government. As topics change, course may be repeated once for credit.

GVT 231 **3 Cr.**
Municipal and County
Government (3 Lec.)
A study of the government structure of the municipality and county including organs of government, administration, court system, taxation, utilities and public works, education, welfare and other public services. Presentations by local officials and surveys of area problems are stressed.

HST 101 **3 Cr.**
History of the
United States (3 Lec.)
A general presentation of United States history, commencing 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.)

HST 102 **3 Cr.**
History of the
United States (3 Lec.)
Prerequisite: History 101 recommended. A survey of the unfolding of United States history from the Reconstruction era to the present day. The study includes social, economic and political aspects of American life and follows the development of the United States as a world power. (This course is offered on campus and may be offered via television.)

HST 105 **3 Cr.**
Western Civilization (3 Lec.)
A survey of the background for development of civilization in the West from ancient time through the Enlightenment; the Mediterranean world including Greece and Rome; the Middle Ages and the beginnings of modern history. Particular attention is paid to Renaissance, Reformation, the rise of the national state, the development of parliamentary government, and the influence of European colonization.

HST 106 **3 Cr.**
Western Civilization (3 Lec.)
The unfolding of the pattern of modern Western civilization from the Enlightenment to current times. A study of the age of Revolution and the beginning of industrialism; the nineteenth century and the social, economic and political factors of recent world history.

HST 110 **3 Cr.**
The Heritage of Mexico (3 Lec.)
This course (cross-listed as Anthropology 110.) is taught in two parts each semester. The first segment 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 will be upon archaic cultures, the Maya, the Toltec, and Aztec empires. The student may register for either History 110 or Anthropology 110 but may receive credit for only one of the two.

HST 112 **3 Cr.**
Latin American History (3 Lec.)
This course presents major historical developments and personalities which have influenced the course of Latin American History, with examination of Indian cultures, the Conquistadors, Spanish administration, the wars of independence, relations with the United States and concludes with a brief survey of relevant contemporary problems.

HST 120 **3 Cr.**
Afro-American History (3 Lec.)
A study of the role of the Negro in American History; overview of the slave trade and slavery in the United States; focus on contributions of the Negro in the U.S. from Colonial times. Emphasis on political, economic and sociological factors of the 20th century.

HST 204 **3 Cr.**
American Minorities (3 Lec.)
Prerequisites: Sociology 101 and/or six hours of U.S. History recommended. The principal minority groups in American society; their sociological significance and historic contributions. An emphasis will be placed on problems of intergroup relations, social movements and related social changes occurring on the contemporary American scene. The student may register for either History 204 or Sociology 204, but may receive credit for only one of the two.

HST 205 **3 Cr.**
Studies in U.S. History (3 Lec.)
Prerequisite: Sophomore stnading and six hours of American History. A treatment of selected topics in the history of the United States. As topics change, course may be repeated once for credit.

HE 101 **3 Cr.**
Basic Design (2 Lec., 4 Lab.)
A study of the fundamental principles of art, design, and color as basis for developing originality and art appreciation in the home and in clothing. Laboratory experiences enhance the development of creative abilities by the application of the fundamental principles. This course is for students interested in home economics.

HE 102 **3 Cr.**
Food Selection and
Preparation (2 Lec., 4 Lab.)
A study of basic nutrition involving the function and value of various foods and the factors related to food selection and preparation such as cost, availability, and time and methods required for preparation. Laboratory experiences relate the application of the fundamental principles of food selection, preparation and service to the problem of providing attractive, nutritious meals for the individual and family. Laboratory fee required.

HE 110 **3 Cr.**
Clothing and
Home Design (2 Lec., 4 Lab.)
Prerequisite: Home Economics 101 or Art 101. The study and advanced application of color and design to the costume and in the home. Designed for students interested in home economics.

HD 102 **1 Cr.**
Orientation (1 Lec.)
This is a course to help the student be successful in college. The student will make an individual contract with the instructor. Student experiences will include appropriate subject 'packages' such as 'improving your vocabulary', 'how to take notes', 'study skills', and 'listening skills'. Also, an evaluation session with a counselor is included. A 'package' may be made up of programmed materials, filmstrips, tapes, slides, seminars, learning activities, or other appropriate materials.

HD 104 **3 Cr.**
Educational and Career
Planning (3 Lec.)
A course in human development designed to identify problem areas of concern to the student who is entering college for the first time and to develop approaches to problem solving in relation to educational and career decisions through the process of group counseling. Activities are planned to promote mature interpersonal involvement through an understanding of the causes and effects of one's own behavior in relation to himself and others.

HD 105 **3 Cr.**
Basic Processes of
Interpersonal Relationships (3 Lec.)
A course in human development designed to explore interpersonal relations through a study of theory and concepts of small group processes and actual participation in the human experience. Students will be given an opportunity to participate in experiences planned to increase one's sensitivity to self and to others. A variety of activities is planned, partly by each class, designed to meet certain specific human needs of the students in the class.

HD 106 **3 Cr.**
Personal and
Social Growth (3 Lec.)
A course which deals with human develop-

ment from the standpoint of the interaction between a person and his society. Understanding of self, the influences of society contributing to the development of self and the success of the individual within a society are investigated. Adjustment to family, school and society is developed.

HD 107 **3 Cr.**
Developing Leadership Behavior (3 Lec.)
A course in human development designed to meet specific needs of students through participation in activities. The focus of this course will be on the development of group dynamics, leadership and human relations skills. Students will be required to participate in the management experience of planning, execution and evaluation of activities. The theoretical body of knowledge regarding leadership development and growth in group dynamics and management skills will be emphasized.

HUM 101 **3 Cr.**
Introduction to the Humanities (3 Lec.)
Through an examination of interrelated examples of man's creative achievements, the humanities course attempts to enlarge awareness and increase understanding of the nature of man and the values of human life. (This course is offered on campus and may be offered via television. Laboratory fee required for television course.)

HUM 102 **3 Cr.**
Advanced Humanities (3 Lec.)
Prerequisite: Humanities 101 and/or permission of instructor. Humanities 102 is an in-depth and critical clarification of human value choices through the context of the humanities. It is designed to explore universal concerns such as man's relationship to himself and to others, the search for meaning, and man as a loving, believing and hating being as revealed by artists, playwrights, filmmakers, musicians, dancers, philosophers and theologians. The intent is to provide a sense of the commonality of human experience across cultures and civilizations and an understanding of the premises on which value choices are made.

JN 101 **3 Cr.**
Introduction to Mass Communications (3 Lec.)
A survey course designed to provide students with a panoramic view of the field of mass communications and an understanding of the role of mass media in modern society. Not restricted to journalism majors.

JN 102 **3 Cr.**
News Gathering and Writing (2 Lec., 3 Lab.)
Prerequisite: Typing ability. Beginning reporting, study of types of news, leads, body treatment of story, feature in lead, facts, background and practice in writing straight news story. Required for all journalism majors.

JN 103 **3 Cr.**
News Gathering and Writing (2 Lec., 3 Lab.)
Prerequisite: Journalism 102. Required for all journalism majors. A continuation of Journalism 102. The writing of more complex types of news stories. Specialized writing in the fields of sports, police news, markets, finance, society, amusements, government and news of interest to women. Additional laboratory work on the student newspaper.

JN 104 **1 Cr.**
Student Publications (3 Lab.)
Individual staff assignments on the student newspaper in one of the following journalistic fields: writing, advertising, photography, cartooning, editing. Students are required to work at prescribed periods under supervision and must attend staff meetings. This course may not be taken for credit concurrently with Journalism 102 or 103. Credit limited to one unit per semester. May be repeated for a total of three units credit.

JN 105 **1 Cr.**
Student Publications (3 Lab.)
Individual staff assignments on the student newspaper in one of the following journalistic fields: writing, advertising, photography, cartooning, editing. Students are required to work at prescribed periods under supervision and must attend staff meetings. This course may not be taken for credit concurrently with Journalism 102 or 103. Credit limited to one unit per semester.

JN 201 **3 Cr.**
Editorial and Feature Writing (3 Lec.)
Prerequisites: 6 hours of journalism or consent of instructor. Emphasis is on handling of difficult news stories, editorial matter, and feature material. Research and interviewing techniques are emphasized with careful attention to development of feature stories for use in newspapers and magazines.

JN 202 **1 Cr.**
Student Publications (3 Lab.)
Prerequisite: Permission of instructor. Individual staff assignments on the student newspaper in one of the following journalistic fields: writing, advertising, photography, cartooning, editing. Students are required to work at prescribed periods under supervision and must attend staff meetings. This course may not be taken for credit concurrently with Journalism 102 or 103. Credit limited to one unit per semester.

JN 203 **1 Cr.**
Student Publications (3 Lab.)
Individual staff assignments on the student newspaper in one of the following journalistic fields: writing, advertising, photography, cartooning, editing. Students are required to work at prescribed periods under supervision and must attend staff meetings. This course may not be taken for credit concurrently with Journalism 102 or 103. Credit limited to one unit per semester.

JN 204 **3 Cr.**
News Editing and Copy Reading (3 Lec.)
Prerequisite: Journalism 102. A detailed course in editing news for presentation in the newspaper and on radio and television. Special emphasis on writing headlines and laying out pages.

MAR 200 **6 Cr.**
Domestic Refrigerators (180 Contact Hrs.)
Prerequisites: Air Conditioning 400 and 410. Includes diagnosis, service, repair and/or replacement of component parts of domestic refrigerator and freezer mechanical and electrical systems. This is a comprehensive course that incorporates the following courses: MAR 201, 202, 203, 204, 205. The student may enroll in the comprehensive course (MAR 200) or any of the inclusive courses (MAR 201, 202, 203, 204, 205). Laboratory fee required.

MAR 201 **1 Cr.**
Motors and Motor Circuits (30 Contact Hrs.)
Includes identification, diagnosis, repair, and/or replacement of motors and motor circuits used in domestic refrigeration systems. Laboratory fee required.

MAR 202 **1 Cr.**
Defrost Circuits and Components (30 Contact Hrs.)
Includes identification, diagnosis, and repair of manual defrost, off-cycle defrost, semi-automatic defrost and frost-free defrost systems. Laboratory fee required.

MAR 203 **2 Cr.**
Sealed System Repair and Compressor Replacement (60 Contact Hrs.)
Includes leak detection and repair, compressor replacement, evacuation and charging, and system performance evaluation of sealed systems. Laboratory fee required.

MAR 204 **1 Cr.**
Domestic Ice Makers (30 Contact Hrs.)
Includes diagnosis, repair, and adjustment of flex tray and rigid mold domestic ice makers. Laboratory fee required.

MAR 205 **1 Cr.**
Troubleshooting and Diagnosis, Domestic Refrigerators and Freezers (30 Contact Hrs.)
Emphasizes the development of proper techniques in troubleshooting and diagnosis of component failures and performance complaints in domestic refrigeration systems. Laboratory fee required.

MAR 210 **6 Cr.**
Domestic Dishwasher, Disposers, and Trash Compactors (180 Contact Hrs.)
Prerequisite: Air Conditioning 400. Includes diagnosis, service, repair and/or replacement of component parts of domestic dishwashers, disposers, and trash compactors. This is a comprehensive course that incorporates the following courses: MAR 211, 212, 213, 214. The student may enroll in the comprehensive course (MAR 210) or any of the inclusive courses (MAR 211, 212, 213, 214). Laboratory fee required.

MAR 211 **1 Cr.**
Electrical Systems — Dishwashers (30 Contact Hrs.)
Includes diagnosis and repair and/or replacement of motors, water valves, heaters, timers, and dispensing electrical circuits. Laboratory fee required.

MAR 212 **1 Cr.**
Mechanical Systems and Washability (30 Contact Hrs.)
Includes adjustment, repair and/or replacement of water valve assemblies, pumps, water seals, and water/detergent relationships (washability). Laboratory fee required.

MAR 213 **2 Cr.**
Disposers and Trash Compactors (60 Contact Hrs.)
Includes diagnosis, servicing, and repair and/or replacement of electrical and mechanical components of domestic disposers and trash compactors. Laboratory fee required.

MAR 214 **2 Cr.**
Troubleshooting and Diagnosis — Dishwashers, Disposers, and Trash Compactors (60 Contact Hrs.)
Emphasizes the development of proper techniques in troubleshooting and diagnosis of component failures and system performance complaints in domestic dishwashers, disposers, and trash compactors. Laboratory fee required.

MAR 220 **6 Cr.**
Domestic Laundry Equipment (180 Contact Hrs.)
Prerequisite: Air Conditioning 400. Includes diagnosis, service, repair and/or replacement

of component parts of domestic washers and dryers. This is a comprehensive course that incorporates the following courses: 221, 222, 223, 224, 225, 226. The student may enroll in the comprehensive course (MAR 220) or any of the inclusive courses (MAR 221, 222, 223, 224, 225, 226). Laboratory fee required.

MAR 221 **1 Cr.**
Electrical Systems and Motors — Washers (30 Contact Hrs.)
Includes diagnosis and repair of motors and motor circuits, water valve circuits, timers, and bleach, softener and detergent dispensing circuits. Laboratory fee required.

MAR 222 **1 Cr.**
Water Systems — Washers (30 Contact Hrs.)
Includes diagnosis, adjustment and repair of water valve, pump, and inlet and drain assemblies. Laboratory fee required.

MAR 223 **1 Cr.**
Drive Systems — Washers (30 Contact Hrs.)
Includes diagnosis, adjustment, repair and/or replacement of clutch and belt assemblies, transmissions, drive shafts, and inner and outer tub assemblies. Laboratory fee required.

MAR 224 **1 Cr.**
Electrical Systems and Motors — Dryers (30 Contact Hrs.)
Includes diagnosis and repair of motors and motor circuits, heating elements, gas valve circuits, and timers. Laboratory fee required.

MAR 225 **1 Cr.**
Mechanical Systems — Dryers (30 Contact Hrs.)
Includes diagnosis, adjustment, repair and/or replacement of blowers, venting assemblies, belts and pulleys, bearings, and drum assemblies. Laboratory fee required.

MAR 226 **1 Cr.**
Troubleshooting and Diagnosis — Washers and Dryers (30 Contact Hrs.)
Emphasizes the development of proper techniques in troubleshooting and diagnosis of component failures and system performance complaints in domestic washers and dryers. Laboratory fee required.

MAR 230 **6 Cr.**
Domestic Cooking Equipment (180 Contact Hrs.)
Prerequisite: Air Conditioning 400. Includes diagnosis, service, repair and/or replacement of component parts of domestic cooking equipment. This is a comprehensive course that incorporates the following courses: MAR 231, 232, 233, 234, 235. The student may enroll for the comprehensive course (MAR 230) or any of the inclusive courses (MAR 231, 232, 233, 234, 235). Laboratory fee required.

MAR 231 **1 Cr.**
Gas Cooking Equipment (30 Contact Hrs.)
Includes diagnosis, service, repair and/or replacement of manual, hydraulic, and electrical controls, and burner adjustment of gas ranges and ovens. Laboratory fee required.

MAR 232 **2 Cr.**
Electric Cooking Equipment (60 Contact Hrs.)
Includes diagnosis, wiring, repair and/or replacement of heating elements, switches, thermostats, timers and cook top and oven circuits. Laboratory fee required.

MAR 233 **1 Cr.**
Self-Cleaning Ovens (30 Contact Hrs.)
Includes diagnosis, service, repair and/or replacement of electronic and hydraulic controls and principles of self-cleaning ovens. Laboratory fee required.

MAR 234 **1 Cr.**
Microwave Ovens (30 Contact Hrs.)
Includes principles of microwave cooking, diagnosis and troubleshooting of magnetrons and associated microwave circuitry. Laboratory fee required.

MAR 235 **1 Cr.**
Troubleshooting and Diagnosis — Domestic Cooking Equipment (30 Contact Hrs.)
Emphasizes the development of proper techniques in troubleshooting and diagnosis of component failures and system performance complaints in domestic cooking equipment. Laboratory fee required.

MAR 240 **3 Cr.**
Professional Service Skills (48 Contact Hrs.)
Emphasis on the professional skills needed to be successful in the service industry. Includes invoices, service records, maintenance agreements, customer relations, inventory, salaries, working conditions, and advancement opportunities.

MTH 101 **3 Cr.**
College Algebra (3 Lec.)
Prerequisite: Two years of high school algebra or Developmental Mathematics 093. 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.

MTH 102 **3 Cr.**
Plane Trigonometry (3 Lec.)
Prerequisite: Mathematics 101 or equivalent.

A study of angular measure, functions of angles, identities, solution of triangles, equations, inverse trigonometric functions, logarithms and complex numbers.

MTH 104 **5 Cr.**
Elementary Functions and Coordinate Geometry I (5 Lec.)
Prerequisites: Two years of high school algebra or Developmental Mathematics 093. A study of the concept of function, polynomials of one variable, arithmetic and geometric sequences, combinations and the binomial theorem, rational functions, polynomials of more than one variable, 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.

MTH 105 **5 Cr.**
Elementary Functions and Coordinate Geometry II (5 Lec.)
Prerequisite: Mathematics 104. A continuing study of the topics of Mathematics 104.

MTH 106 **5 Cr.**
Elementary Functions and Coordinate Geometry III (5 Lec.)
Prerequisites: Two years of high school algebra and one semester of trigonometry. A study of the algebra of functions to include the following: polynomial, rational, exponential, logarithmic and trigonometric functions, functions of two variables, complex numbers, vectors and anlytic geometry to include conics, transformation of coordinates, polar coordinates, parametric equations and three dimensional space.

MTH 107 **3 Cr.**
Fundamentals of Computing (3 Lec.)
Prerequisite: Two years of high school algebra or Developmental Mathematics 093. An introductory course designed primarily for students desiring credit toward a minor or major in computer science. The content of this course includes a study of logarithms and an introduction to a procedure-oriented language with general applications.

MTH 111 **3 Cr.**
Mathematics for Business and Economics I (3 Lec.)
Prerequisite: Two years of high school algebra or Developmental Mathematics 093. A study of equations, inequalities, matrices, linear programming and linear, quadratic, polynomial, rational, exponential and logarithmic functions. Applications to business and economic problems are emphasized.

MTH 112 **3 Cr.**
Mathematics for Business and Economics II (3 Lec.)
Prerequisite: Mathematics 111. Study of sequences and limits, differential calculus, integral calculus, optimization and appropriate applications.

MTH 115 **3 Cr.**
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. A course designed for liberal arts students which includes the study of logic, mathematical patterns, mathematical recreations, systems of numeration, mathematical systems, sets and statements and sets of numbers. Historical aspects of the above topics will also be emphasized.

MTH 116 **3 Cr.**
College Mathematics II 3 Cr.
Prerequisite: Mathematics 115. A course designed for liberal arts students which includes the study of algebra, linear programming, permutations, combinations, probability and geometry. Historical aspects of the above topics will also be emphasized.

MTH 117 **3 Cr.**
Fundamental Concepts of Mathematics for Elementary Teachers (3 Lec.)
A study of the structure of the real number system, geometry and mathematical analysis with emphasis on the development of basic concepts in mathematical thinking needed for elementary teachers.

MTH 121 **3 Cr.**
Analytic Geometry (3 Lec.)
Prerequisite: Mathematics 102 or equivalent. A study of the real numbers, distance, the straight line, conics, transformation of coordinates, polar coordinates, parametric equations and three-dimensional space.

MTH 126 **5 Cr.**
Introductory Calculus (5 Lec.)
Prerequisite: Mathematics 105 or 106 or 121 or equivalent. A study of limits, continuity, derivatives, slopes, tangents, chain rule, implicit differentiation, higher derivatives, differentials, integration, applications of differential and integral calculus and trigonometric and inverse trigonometric functions.

MTH 130 **3 Cr.**
Business Mathematics (3 Lec.)
Prerequisite: One year of high school algebra or Developmental Mathematics 091 or the equivalent. A study of simple and compound interest, bank discount, payrolls, taxes, insurance, markup and markdown, cor-

porate securities, depreciation and purchase discounts. This course is intended primarily for specialized occupational programs.

MTH 139 **3 Cr.**
Applied Mathematics (3 Lec.)
Prerequisite: One year of high school algebra or Developmental Mathematics 091 or equivalent. A study of commercial, technical and other applied uses of mathematics. An effort will be made to tailor the course to fit the needs of the students enrolled in each section.

MTH 195 **3 Cr.**
Technical Mathematics (3 Lec.)
Prerequisite: Developmental Mathematics 091 or the equivalent. A course designed for technical students covering a general review of arithmetic; a treatment of the basic concepts and the fundamental facts of plane and solid geometry, computational techniques and devices, units and dimensions, a treatment of the terminology and concepts of elementary algebra, functions, coordinate systems, simultaneous equations, and stated problems.

MTH 196 **3 Cr.**
Technical Mathematics (3 Lec.)
Prerequisite: Mathematics 195. A course for technical students which includes a study of the following: the trigonometric functions of angles, trigonometric identities, inverse trigonometric functions, trigonometric equations, complex numbers, logarithms, vectors and the solutions of triangles.

MTH 202 **3 Cr.**
Introductory Statistics (3 Lec.)
Prerequisite: Two years of high school algebra or consent of instructor. 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 applications to various fields.

MTH 207 **3 Cr.**
Fortran Programming with Applications (3 Lec.)
Prerequisites: Mathematics 107 or equivalent and Mathematics 101 or Mathematics 111 or Mathematics 104 or its equivalent. Study of Fortran language with emphasis on applications and programming of algorithmic language to solve numerical problems. Writing, testing and executing of typical Fortran programs will be stressed. Emphasis on applications for majors and minors in engineering, the sciences, mathematics or business.

MTH 209 **3 Cr.**
Introductory APL Programming (3 Lec.)
Prerequisites: Mathematics 101 or Mathematics 104 or Mathematics 111 and Mathematics 107 or consent of instructor. A study of APL language with emphasis on applications. This course is designed for partial fulfillment of degree requirements in computer science.

MTH 221 **3 Cr.**
Linear Algebra (3 Lec.)
Prerequisite: Mathematics 126 or equivalent. A study of matrices, linear equations, dot products, cross products, geometrical vectors, determinants, n-dimensional space and linear transformation.

MTH 222 **3 Cr.**
Calculus I (3 Lec.)
Prerequisite: Mathematics 121. Limits, continuity, differentiation of algebraic and transcendental functions, and applications, maxima and minima, antiderivatives and indeterminate forms.

MTH 223 **3 Cr.**
Calculus II (3 Lec.)
Prerequisite: Mathematics 222. The indefinite integral, definite integral, and applications, techniques of integration, improper integrals, and infinite series.

MTH 224 **3 Cr.**
Advanced Calculus (3 Lec.)
Prerequisite: Mathematics 223. Multiple integrals, partial differentiation, vector analysis, series, and hyperbolic functions.

MTH 227 **4 Cr.**
Mathematical Analysis I (4 Lec.)
Prerequisite: Mathematics 126 or equivalent. A continued study of techniques of differendtiation and integration. This will include logarithmic and exponential functions, parametric equations, polar coordinates, hyperbolic functions and vectors.

MTH 228 **3 Cr.**
Mathematical Analysis II (3 Lec.)
Prerequisite: Mathematics 227 or equivalent. A continued study of vectors, functions of several variables, partial derivatives, multiple integrals, indeterminate forms, infinite series, and an introduction to differential equations.

MTH 230 **3 Cr.**
Differential Equations (3 Lec.)
Prerequisite: Mathematics 227 or consent of instructor. A study of ordinary differential equations. The course treats linear eguations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, boundary value problems and applications.

MM 120 **3 Cr.**
Motorcycle Carburetion (90 Contact Hrs.)
Prerequisite: Engine Mechanics 100, 110. Includes "Amal" type carburetor service, constant velocity type carburetor service, and

fixed venturi type carburetor service. This is a comprehensive course that incorporates following courses: MM 121, 122, 123. The student may enroll in the comprehensive course (MM 120) or any of the inclusive courses (MM 121, 122, 123). Laboratory fee required.

MM 121 **1 Cr.**
"Amal" Type Carburetor Service (30 Contact Hrs.)
Includes the theory of operation, overhaul and tuning of the "Amal" type carburetor. Laboratory fee required.

MM 122 **1 Cr.**
Constant Velocity Type Carburetor Service (30 Contact Hrs.)
Includes the theory of operation, overhaul and tuning of the constant velocity type carburetor. Laboratory fee required.

MM 123 **1 Cr.**
Fixed Venturi Type Carburetor Service (30 Contact Hrs.)
Includes the theory of operation, overhaul and tuning of the fixed venturi type carburetor. Laboratory fee required.

MM 130 **3 Cr.**
Motorcycle Ignition Systems (90 Contact Hrs.)
Prerequisite: Engine Mechanics 100, 110. Includes ignition system theory and diagnosis. This is a comprehensive course that incorporates the following courses: MM 131, 132. The student may enroll in the comprehensive course (MM 130) or any of the inclusive courses (MM 131, 132). Laboratory fee required.

MM 131 **1 Cr.**
Ignition System Theory (30 Contact Hrs.)
Includes theory of operation of motorcycle ignition systems. Laboratory fee required.

MM 132 **2 Cr.**
Ignition System Diagnosis (60 Contact Hrs.)
Includes the diagnosis, repair and adjustment of motorcycle ignition systems. Laboratory fee required.

MM 140 **3 Cr.**
Motorcycle Electrical Systems (90 Contact Hrs.)
Prerequisite: Engine Mechanics 100, 110. Includes motorcycle electrical systems theory, motorcycle charging systems, and motorcycle electrical system diagnosis. This is a comprehensive course that incorporates the following: MM 141, 142, 143. The student may enroll in the comprehensive course (MM 140) or any of the inclusive courses (MM 141, 142. 143). Laboratory fee required.

MM 141 **1 Cr.**
Motorcycle Electrical Systems Theory (30 Contact Hrs.)
Includes the theory of operation of all motorcycle electrical systems except the ignition systems. Laboratory fee required.

MM 142 **1 Cr.**
Motorcycle Charging Systems (30 Contact Hrs.)
Includes diagnosis and repair of motorcycle charging systems. Laboratory fee required.

MM 143 **1 Cr.**
Motorcycle Electrical System Diagnosis (30 Contact Hrs.)
Includes troubleshooting and repair of the motorcycle electrical systems other than the charging and ignition systems. Laboratory fee required.

MM 200 **3 Cr.**
Motorcycle Drive Systems (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes the theory of operation and overhaul of the various components of motorcycle drive systems. Laboratory fee required.

MM 205 **3 Cr.**
Two Stroke Engines (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes the complete overhaul and tune-up of two stroke motorcycle engines. Also, cylinder boring and single cylinder crankshaft rebuilding. Laboratory fee required.

MM 210 **3 Cr.**
Four Stroke Single and Twin Cylinder Engines (90 Contact Hrs.)
Prerequisite: Engine Mechanics 100, 110. Includes the complete overhaul and tune-up of single and twin cylinder motorcycle engines. Laboratory fee required.

MM 215 **3 Cr.**
Four Stroke Multi-Cylinder Engines 90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110, Motorcycle Mechanics 210. Includes the overhaul and tune-up of four stroke multi-cylinder motorcycle engines. Laboratory fee required.

MM 220 **3 Cr.**
Motorcycle Chassis Systems (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes motorcycle wheels, motorcycle brake systems, and motorcycle suspension systems. This is a comprehensive course that incorporates the following courses: MM 221, 222, 223. The student may enroll in the comprehensive course (MM 220) or in any of the inclusive courses (MM 221, 222, 223). Laboratory fee required.

MM 221 **1 Cr.**
Motorcycle Wheels (30 Contact Hrs.)
Includes disassembly, assembly, truing and

balancing of motorcycle wheels. Laboratory fee required.

MM 222 **1 Cr.**
Motorcycle Brake Systems (30 Contact Hrs.)
Includes theory of operation and proper servicing of motorcycle brake system. Laboratory fee required.

MM 223 **1 Cr.**
Motorcycle Suspension Systems (30 Contact Hrs.)
Includes theory of operation and proper servicing of motorcycle suspension systems. Laboratory fee required.

MUS 101 **4 Cr.**
Freshman Theory (3 Lec., 3 Lab.)
Development and cultivation of musicianship skills, especially in the areas of tonal and rhythmic perception and articulation. Presentation of the essential elements of music; introduction to sightsinging, keyboard, and notation.

MUS 102 **4 Cr.**
Freshman Theory (3 Lec., 3 Lab.)
Prerequisite: Music 101 or consent of instructor. Introduction to part-writing and harmonization with triads and their inversions; classification of chords; seventh chords, sightsinging, dictation and keyboard harmony.

MUS 103 **1 Cr.**
Guitar Ensemble (3 Lab.)
A course designed to develop musical awareness and musicianship by performing music composed and arranged for guitar ensemble as well as works for guitar and a different instrument or voice and guitar. May be repeated for credit.

MUS 104 **3 Cr.**
Music Appreciation (3 Lec.)
A concise survey of the basic elements of music and their application in the music literature of western civilization, particularly from the baroque to the present. Relevant cultural influences upon the music of each era and observed.

MUS 110 **3 Cr.**
Music Literature (3 Lec.)
A course dealing with the characteristics of sound, the elements of music, performance media and musical texture as seen in the music of recognized composers in the major periods of music history. Special emphasis is given to the music of the late gothic, renaissance and baroque eras.

MUS 111 **3 Cr.**
Music Literature (3 Lec.)
Prerequisite: Music 110. A continuation of the studies introduced in Music 110. A study of the compositional procedures and forms employed by the creators of music. Attention is focused upon the music of the classical, romantic and modern periods.

MUS 113 **3 Cr.**
Foundations in Music I (3 Lec.)
Emphasis upon participation and the necessary skills for satisfactory performance in singing, playing an instrument, listening, creating rhythmic responses. Development of increasing ability to manage notation (Music Reading).

MUS 114 **3 Cr.**
Foundations in Music II (3 Lec.)
Prerequisite: Music 113. Designed to help prepare students with limited music training for Music 101 or to further their general music understanding. Course emphasis will include rythmic and melodic training, understanding of basic chord functions, melody, textures and basic analysis of music.

MUS 117 **1 Cr.**
Piano Class I (2 Lab.)
Class instruction in the areas of basic musicianship and piano skills designed primarily for those with no knowledge in piano skills. Open to all students. May be repeated for credit.

MUS 118 **1 Cr.**
Piano Class II (2 Lab.)
Includes techniques, skills, harmonization, transposition, improvisation, accompanying, sightreading and performing various styles of repertoire. Open to all students. May be repeated for credit.

MUS 119 **1 Cr.**
Guitar Class I (2 Lab.)
Class instruction covering the basics of guitar skill, designed primarily for those with limited knowledge in the reading of music or playing the guitar. Open to all students. May be repeated for credit.

MUS 120 **1 Cr.**
Guitar Class II (2 Lab.)
Prerequisite: Music 119 or the equivalent. A continuation of the skills introduced in Music 119 with emphasis on perfecting classical guitar techniques and music reading skills. May be repeated for credit.

Applied Music
Subject to enrollment, students may receive private instruction in the following courses: piano, organ, voice, violin, viola, cello, double bass, flute, oboe, clarinet, bassoon, saxophone, trumpet, French horn, trombone, baritone, tuba, percussion, guitar, electric bass and drum set. Private music may be repeated for credit.

MUS 121-143 **1 Cr.**
Applied Music-Minor (1 Lec.)
Private instruction in the student's secondary area. One half hour lesson a week. Open to

students registered in music theory, ensembles and other music major or minor courses. Fee required. Private music may be repeated for credit.

MUS 221-243 **2 Cr.**
Applied
Music-Concentration (1 Lec.)
Private instruction in the area of the student's concentration. Two half hour lessons a week. Open to students registered in music theory, ensembles and other music major or minor courses. Fee required. Private music may be repeated for credit.

MUS 150 **1 Cr.**
Chorus (3 Lab.)
Prerequisite: Consent of instructor. Open to all students of the college, the chorus studies and performs a wide variety of music representing the literature of the great eras of music history. May be repeated for credit.

MUS 151 **1 Cr.**
Voice Class I (2 Lab.)
A course teaching the principles of breathing, voice production, tone control, enunciation and phrasing. Two group lessons a week. Open to all non-voice majors. May be repeated for credit.

MUS 152 **1 Cr.**
Voice Class II (2 Lab.)
A continuation of Music 151 with emphasis on solo singing, appearance in studio recital, stage deportment and personality development. Open to all non-voice majors. Two group lessons a week. May be repeated for credit.

MUS 155 **1 Cr.**
Vocal Ensemble (3 Lab.)
A select group for mixed voices concentrating upon excellence of performance. Membership is open to any student by audition, who, in the opinion of the director, possesses special interest and skills in performance of advanced choral literature. May be repeated for credit.

MUS 160 **1 Cr.**
Band (3 Lab.)
Prerequisite: Non-wind instrument majors, consent of the instructor. The band studies and performs a wide variety of music in all areas of band literature. Required of all wind instrument majors. May be repeated for credit.

MUS 171 **1 Cr.**
Woodwind Ensemble (3 Lab.)
Select group of instrumentalists offering experience in the reading and performance of literature for small ensembles. Membership through audition with the appropriate director. May be repeated for credit.

MUS 172 **1 Cr.**
Brass Ensemble (3 Lab.)
Select group of instrumentalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director. May be repeated for credit.

MUS 173 **1 Cr.**
Percussion Ensemble (3 Lab.)
Select group of instrumentalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director. May be repeated for credit.

MUS 174 **1 Cr.**
Keyboard Ensemble (3 Lab.)
Select group of instrumentalists offering experience in the reading and performing of literature for small ensembles. Membership through audition with the appropriate director. May be repeated for credit.

MUS 176 **1 Cr.**
Symphonic Wind Ensemble (3 Lab.)
The symphonic wind ensemble functions as a group in which students study and perform stylistic literature of all periods. Required of all wind and percussion instrumental music majors. May be repeated for credit.

MUS 181 **1 Cr.**
Lab Band (3 Lab.)
Prerequisite: Permission of the instructor. The lab band functions as a group in which students study and perform all forms of commercial music; i.e. jazz, pop, avant-garde, and soul. Student arranging, composing, and conducting is encouraged. May be repeated for credit.

MUS 185 **1 Cr.**
Stage Band (3 Lab.)
Prerequisite: Consent of instructor. The stage band studies and performs a wide variety of music with emphasis on the jazz-oriented big-band styles of the 1960's. May be repeated for credit.

MUS 192 **3 Cr.**
Music in America (3 Lec.)
A survey of American music and musicians from early times to the present. Includes styles, periods, religious, folk, jazz, rock, musical theatre and contemporary developments.

MUS 193 **3 Cr.**
Improvisation (3 Lec.)
Developing the student's ability to create spontaneous melodic and harmonic ideas and to translate these ideas into notation. Using scales and modes, the instrumentalist will improvise on his major instrument; the vocalist will use scat singing techniques. Analysis of transcribed solos as well as student

transcriptions will be an important part of the student's experience.

MUS 194 **3 Cr.**
Jazz Workshop (3 Lec.)
Designed for the advanced instrumentalist/vocalist. Discussion, analysis, writing, rehearsing, improvising and style resulting in jazz performance on recitals and schedules functions during the semester will be a major objective. Articulation, phrasing and conducting jazz oriented compositions will be discussed with guest artists who will work and perform with the group periodically.

MUS 195 **2 Cr.**
Introduction to
Synthesizer (2 Lec.)
A study of the elements of electronically produced music. Emphasis is on the musical aspects of synthesized sound through the theory is taught. Includes basic waveforms, frequency and frequency modulation, aplitude and amplitude modulation, envelope generators, filters, white noise, pink noise, patch diagramming, etc.

MUS 196 **3 Cr.**
Business of Music (3 Lec.)
A guide to the real world of the music industry including panels, guest artists and consultants discussing: careers in the recording and performing fields, retail music business, publishing, copyrights and other legalities, agents, managers plus showmanship and conducting techniques necessary for small and large ensemble work.

MUS 199 **1 Cr.**
Recital (2 Lab.)
One period per week designed to allow students of private lessons an opportunity to perform before an audience. Required for all music majors and open to all other students. Credit for this course does not apply to the associate degree. May be repeated for credit.

MUS 201 **4 Cr.**
Sophomore Theory (3 Lec., 3 Lab.)
Prerequisite: Music 101-102 or consent of instructor. A continuation of freshman theory, including a study of larger forms, thematic development, chromatic chords including the neapolitan sixth and augmented sixth chords, diatonic seventh chords with advanced sightsinging, keyboard harmony and ear training.

MUS 202 **4 Cr.**
Sophomore Theory (3 Lec., 3 Lab.)
Prerequisite: Music 201 or equivalent or by consent of instructor. A continuation of Music 201, including a study of sonata-allegro form, ninth, eleventh and thirteenth chords, exploration of new key schemes, impressionism, melody, harmony, tonality and formal processes as they apply to twentieth century music with a comparable advance in sightsinging, keyboard harmony and ear training.

MUS 203 **3 Cr.**
Composition (3 Lec.)
Prerequisite: Music 101 and 102. Composition in small forms for simple media in both traditional styles and styles of the student's choice. May be repeated for credit.

MUS 290 **2 Cr.**
Recording Techniques (2 Lec.)
A course designed to develop competency in tape recording, mixing, studio management, record engineering and production with 'hands-on' experience recording ensembles and solos.

MUS 291 **2 Cr.**
Advanced Recording
Techniques (2 Lec.)
For the advanced recording arts student. Includes indoor and outdoor public address and music amplification. The student will be responsible for a number of on-campus public address assignments.

MUS 292 **3 Cr.**
Arranging/Orchestration (3 Lec.)
Designed to build competency in: knowledge of ranges and transposition for instruments, writing for voices, planning and executing an arrangement, standard copying techniques, chord voicings, large ensemble writing and combo writing, use of strings (here simulated by string synthesizer).

MUS 293 **3 Cr.**
Independent Study (3 Lec.)
Designed for advanced work in music, meeting specific needs of the student. The student will, by approval of the instructor and division chairperson, prepare and execute a written contract (proposal for learning). Upon completion of all aspects of the contract, credit will be given by approval of the department. May be repeated for credit.

MUS 295 **2 Cr.**
Advanced Synthesizer
Techniques (2 Lec.)
Limited to students who display promise in synthesizer composition and/or performance. Two major compositions are required for synthesizer plus one for synthesizer and traditional media.

MUS 803 **3 Cr.**
(See Cooperative Work Experience)

MUS 804 **4 Cr.**
(See Cooperative Work Experience)

MUS 813 **3 Cr.**
(See Cooperative Work Experience)

MUS 814 **4 Cr.**
(See Cooperative Work Experience)

OE 150 **3 Cr.**
Marine Engine Fuel Systems (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes marine engine fuel theory and service. This is a comprehensive course that incorporates the following courses: OE 151, 152. The student may enroll in the comprehensive course (OE 150) or any of the inclusive courses (OE 151, 152). Laboratory fee required.

OE 151 **1 Cr.**
Marine Engine Fuel System Theory (30 Contact Hrs.)
Includes the theory of operation and tuning methods used on the various types of marine engine fuel systems. Laboratory fee required.

OE 152 **2 Cr.**
Marine Engine Fuel System Service (60 Contact Hrs.)
Includes the overhaul, adjustment and troubleshooting of marine engine fuel systems. Laboratory fee required.

OE 160 **3 Cr.**
Marine Engine Ignition Systems (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes marine engine system theory and service. This is a comprehensive course that incorporates the following courses: OE 161, 162. The student may enroll in the comprehensive course (OE 160) or any of the inclusive courses (OE 161, 162). Laboratory fee required.

OE 161 **1 Cr.**
Marine Engine Ignition System Theory (30 Contact Hrs.)
Includes theory of operation of ignition systems used on outboard marine engines. Laboratory fee required.

OE 162 **2 Cr.**
Marine Engine Ignition System Service (60 Contact Hrs.)
Includes troubleshooting and service of ignition systems used on outboard marine engines. Laboratory fee required.

OE 170 **3 Cr.**
Marine Engine Electrical Systems (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes electrical system theory and service. This is a comprehensive course that incorporates the following courses: OE 171, 172. The student may enroll in the comprehensive course (OE 170) or any of the inclusive courses (OE 171, 172). Laboratory fee required.

OE 171 **2 Cr.**
Electrical System Theory and Service (60 Contact Hrs.)
Includes theory of operation and methods of troubleshooting marine engine electrical systems. Laboratory fee required.

OE 172 **1 Cr.**
Electrical System Service (30 Contact Hrs.)
Includes advanced troubleshooting and service of marine engine electrical systems. Laboratory fee required.

OE 230 **3 Cr.**
Single and Twin Cylinder Powerheads (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes the overhaul and service of twin cylinder outboard marine engines. Laboratory fee required.

OE 235 **3 Cr.**
In Line Multi-Cylinder Powerheads (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes the overhaul and service of in line multi-cylinder outboard marine engine power heads. Laboratory fee required.

OE 240 **3 Cr.**
"B" Multi-Cylinder Powerheads (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes the overhaul and service of multi-cylinder "V" configuration outboard marine engines. Laboratory fee required.

OE 245 **3 Cr.**
Manual Shift Lower Units (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes the proper overhaul and service of manual shifting outboard marine engine lower units. Laboratory fee required.

OE 250 **3 Cr.**
Electric Shift Lower Units (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes the proper overhaul and service of electric shifting outboard marine engine lower units. Laboratory fee required.

OE 255 **3 Cr.**
Marine Engine Auxiliary System (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes proper boat rigging, power trim, and power tilt systems. Laboratory fee required.

PHI 102 **3 Cr.**
Introduction to Philosophy (3 Lec.)
A survey course designed to acquaint the student with some of the fundamental problems in philosophy and with methods used to deal with them. Some principle views, both ancient and modern, are examined as possible solutions.

PHI 105 **3 Cr.**
Logic (3 Lec.)
An analysis of the principles of logical thinking. An effort is made to apply logic's methods and tools to real life situations. Fallacies, definitions, analogies, syllogisms, venn diagrams and other topics are discussed.

PHO 110 **3 Cr.**
Introduction to
Photography and
Photo-Journalism (2 Lec., 4 Lab.)
Introduction to photography and photojournalism. The general mechanics of camera lenses and shutters, general characteristics of the photographic films, papers and chemicals. Proper photographic darkroom procedures including enlarging, processing, contact printing and exposing of photographic films and papers. Study of artificial lighting. Laboratory fee required.

PHO 111 **3 Cr.**
Advanced Photography and
Photo-Journalism (2 Lec., 4 Lab.)
Advanced photography and photojournalism. Utilization of everything taught in 110, with emphasis on refining techniques. Special emphasis on photographic communication. Laboratory fee required.

PHO 120 **4 Cr.**
Commercial Photography I (3 Lec., 3 Lab.)
Commercial/contract photography including field, studio and darkroom experience associated with social photography, portraiture and studio photography, fashion and theatrical portfolio and publicity photography and convention photography. Includes use of natural, stationary, flash and strobe artificial lights. Laboratory fee required.

PHO 121 **4 Cr.**
Commercial Photography II (3 Lec., 3 Lab.)
Further commercial/contract assignments including publicity photography, architectural photography, interior photography and produce advertising photography. Advanced exploration in latest equipment, papers, films, print and presentation techniques. Additional exchange with sample clients, employers studios and agencies. Laboratory fee required.

PEH
Activity Courses

One of the main objectives of the physical education division is to provide the opportunity for each student to become skilled in at least one physical activity which will prepare him for personal enjoyment of leisure time. Students are urged to take advantage of the program by registering for a physical education activity course each semester.

PEH 100 **1 Cr.**
Lifetime Sports
Activities (3 Lab.)
Students are provided an opportunity for participation and instruction in various lifetime sports. Selection may be made from archery, badminton, bowling, golf, handball, racquetball, softball, swimming, tennis and other sports. Activities may be offered singularly or in combinations. Instruction shall be presented at the beginner and advanced-beginner levels. The course is designed for male and female students and may be repeated for credit providing students select different activities. Laboratory fee required.

PEH 104 **1 Cr.**
Touch Football/Soccer (2 Lab.)
A course designed for those students desiring instruction and skill development in touch football and soccer. Uniform required. Laboratory fee required.

PEH 112 **1 Cr.**
Softball and Soccer (2 Lab.)
Designed to provide the student an opportunity for instruction and participation in softball and soccer. Uniform required. Laboratory fee required.

PEH 115 **1 Cr.**
Physical Fitness (3 Lab.)
This course is designed to diagnose and measure the student's physical condition and prescribe a program of exercise to carry with him through life. Much of the course work will be carried on in the physical performance laboratory. Co-educational. May be repeated for credit. Uniform required. Laboratory fee required.

PEH 116 **1 Cr.**
Intramural Athletics (2 Lab.)
A co-educational activity course designed to offer intramural competition in a variety of co-educational activities. May be repeated for credit. Uniform required. Laboratory fee required.

PEH 117 **1 Cr.**
Beginning Archery (2 Lab.)
Co-educational course in beginning archery. Equipment furnished. No uniform required. Laboratory fee required.

PEH 118 **1 Cr.**
Beginning Golf (2 Lab.)
A co-educational course in beginning golf. Equipment furnished. No uniform required. Laboratory fee required.

PEH 119 **1 Cr.**
Beginning Tennis (2 Lab.)
A co-educational course designed for the beginner. Basic tennis fundamentals will be stressed. Uniform required. Laboratory fee required.

PEH 120 **1 Cr.**
Beginning Bowling (2 Lab.)
A co-educational course in beginning bowling. Equipment furnished. No uniform required. Laboratory fee required.

PEH 122 **1 Cr.**
Beginning Gymnastics (2 Lab.)
A co-educational course in beginning gymnastics, emphasizing basic skills in tumbling and in the various apparatus events. Uniform required. Laboratory fee required.

PEH 123 **1 Cr.**
Beginning Swimming (2 Lab.)
A co-educational course designed to teach a non-swimmer to survive in the water. Uniform required. Laboratory fee required.

PEH 124 **1 Cr.**
Social Dance (2 Lab.)
Students who have limited experience in dance will find this course beneficial. Ballroom and social dance includes fundamental steps and rhythms of the fox-trot, waltz, tango, and recent dance steps. 'Country' dancing includes reel, square dance, and other related dances. No uniform required. Laboratory fee required.

PEH 125 **1 Cr.**
Conditioning Exercise (3 Lab.)
Enables the student to develop an understanding of exercise and its effect on the body and improve physical fitness through a variety of conditioning activities. Uniform required. Laboratory fee required.

PEH 127 **1 Cr.**
Basketball and Volleyball (2 Lab.)
Techniques, rules and strategy of the game will be taught and the emphasis will be on playing the game. Uniform required. Laboratory fee required.

PEH 129 **1 Cr.**
Modern Dance (2 Lab.)
A co-educational, beginning class in modern dance. Uniform required. Laboratory fee required.

PEH 131 **1 Cr.**
Weight Training and
Conditioning (3 Lab.)
A course designed for those students who desire instruction and participation in weight training and conditioning techniques. May be repeated for credit. Uniform required. Laboratory fee required.

PEH 132 **1 Cr.**
Self-Defense (3 Lab.)
To introduce the student to various forms of self-defense in which the history and philosophy of the martial arts will be explored. The student should progress from no previous experience in self-defense to an adequate skill level covering basic self-defense situations. The mental, as well as the physical aspects of the arts will be stressed.

PEH 134 **1 Cr.**
Outdoor Education (3 Lab.)
A co-educational course designed to provide students with the opportunity to gain knowledge and skills in outdoor eduation and camping activities through planned and incidental experiences. Including a week end camp-out. No uniform required. Laboratory fee required.

PEH 200 **1 Cr.**
Lifetime Sports
Activities II (3 Lab.)
A continuation of Physical Education 100. Students are provided an opportunity for participation and instruction in selected activities. Activities shall be presented at the intermediate and intermediate/advanced levels. For male and female students. Laboratory fee required. May be repeated for credit.

PEH 218 **1 Cr.**
Intermediate Golf (2 Lab.)
Prerequisite: Permission of instructor. A course designed to develop skills and techniques beyond the 'beginner' stage. Laboratory fee required.

PEH 219 **1 Cr.**
Intermediate Tennis (2 Lab.)
Prerequisite: Permission of instructor. A course designed to develop skills and techniques beyond the 'beginner' stage. Uniform required. Laboratory fee required.

PEH 222 **1 Cr.**
Intermediate Gymnastics (2 Lab.)
Prerequisite: Physical Education 122. A course designed to develop skills and techniques beyond the 'beginner' stage. Uniform required. Laboratory fee required.

PEH 236 **3 Cr.**
The Coaching of Football
and Basketball (2 Lec., 2 Lab.)
An elective course designed for all students who desire a broader knowledge of the skills and techniques involved in football and basketball coaching; history, theories, philosophies, rules, terminology, and the finer points of the sports are studied. Emphasis directed toward coaching techniques.

PEH 257 **3 Cr.**
Advanced First Aid and
Emergency Care (3 Lec.)
The theory and practice in the advanced first aid and emergency care course of the American Red Cross. The course will also include various aspects of safety education.

Physical Education
Non-Activity Courses

PEH 101 **3 Cr.**
Fundamentals of Health (3 Lec.)
A study of personal and community health. Emphasis placed on causative factors of

mental and physical health and the means of disease transmission and prevention. For majors, minors, and students with specific interest.

PEH 110 **3 Cr.**
Community Recreation (3 Lec.)
Principles, organization and the function of recreation in American society. Designed for students planning a major or minor in health, physical education or recreation.

PEH 144 **3 Cr.**
Introduction to Physical Education (3 Lec.)
Designed for professional orientation in physical education, health and recreation. Brief history, philosophy and modern trends of physical education, teacher qualification, vocational opportunities, expected competencies and skill testing comprise the contents of the course. For students majoring in physical education.

PEH 147 **3 Cr.**
Sports Officiating I (2 Lec., 2 Lab.)
This course is especially designed for those students who would like to choose sports officiating for an avocation and/or to increase knowledge in and appreciation of sports. Sports covered in this course will be football and basketball. As part of the course requirement, students will be expected to officiate intramural games.

PEH 148 **3 Cr.**
Sports Officiating II (2 Lec., 2 Officiating)
This course is especially designed for those students who would like to choose sports officiating for an avocation and/or to increase knowledge in and appreciation of sports. Sports covered in this course will be softball, track and field and baseball.

PEH 210 **3 Cr.**
Sports Appreciation for The Spectator
A course specifically designed as an elective course for all students who desire a broader knowledge of major and minor sports. Rules, terminology, and philosophies of many sports are studied. Special emphasis shall be directed toward football and basketball.

PSC 118 **4 Cr.**
Physical Science (3 Lec., 2 Lab.)
A study of the basic principles and concepts of physics, chemistry and nuclear science. The course relates these basic sciences to man's physical world at an introductory level. This course is intended primarily for the non-science major. Laboratory fee required.

PSC 119 **4 Cr.**
Physical Science (3 Lec., 2 Lab.)
The course encompasses the interaction of the earth sciences and man's physical world, geology, astronomy, meteorology and space science are emphasized through the application of selected principles and concepts of the applied sciences. The course is directed toward the non-science major. Laboratory fee required.

PHY 111 **4 Cr.**
Introductory General Physics (3 Lec., 3 Lab.)
Prerequisite: Two years high school algebra, including trigonometry or equivalent. The first semester of a two semester course designed for pre-dental, biology, pre-medical, pre-pharmacy, and pre-architecture majors and other students who require a two-semester technical course in physics. This course includes a study of mechanics and heat. Laboratory includes one hour problem session. Laboratory fee required.

PHY 112 **4 Cr.**
Introductory General Physics (3 Lec., 3 Lab.)
Prerequisite: Physics 111. A continuation of Physics 111 which includes the study of electricity, magnetism, light, and sound. Laboratory includes one hour problem session. Laboratory fee required.

PHY 117 **4 Cr.**
Concepts in Physics (3 Lec., 3 Lab.)
An essentially non-mathematical introduction to the principles of physics intended to satisfy laboratory science requirements for the non-science major. Emphasis is placed on the historical developments of classical mechanics and thermodynamics, and the effects discoveries in these areas have on day to day experiences. Especially emphasized is the principle of conservation of energy, and the current difficulties encountered in solving the pressing problems of world-wide energy production. Laboratory fee required.

PHY 118 **4 Cr.**
Concepts in Physics (3 Lec., 3 Lab.)
An essentially non-mathematical introduction to the principles of physics intended to satisfy laboratory science requirements for the non-science major. Emphasis is placed on modern developments in physics, and the effects these discoveries have on present day problems. Course content is purposely made flexible to permit discussion of new developments in physics. The course is structured around topics in acoustics, electricity and magnetism light and the electromagnetic spectrum, atomic physics, and relativity. Laboratory fee required.

PHY 131 **4 Cr.**
Applied Physics (3 Lec., 3 Lab.)
Prerequisite: Mathematics 195 or concurrent enrollment in Mathematics 195. The first half of a one year course designed to explain the basic concepts of the properties of matter, mechanics, and heat. Emphasis will be placed

on applications and problem solving. Designed primarily for students enrolled in technical programs. Laboratory fee required.

PHY 132 **4 Cr.**
Applied Physics (3 Lec., 3 Lab.)
Prerequisite: Physics 131. A continuation of Physics 131 designed to explain basic concepts in the areas of sound, light, electricity, magnetism and atomic theory. Laboratory fee required.

PHY 201 **4 Cr.**
General Physics (3 Lec., 3 Lab.)
Prerequisite: Credit or concurrent registration in Mathematics 126. Principles and applications of mechanics, wave motion, and sound emphasizing fundamental concepts, problem solving, notation, and units. Designed primarily for physics, chemistry, mathematics and engineering majors. Laboratory includes a one hour problem session. Laboratory fee required.

PHY 202 **4 Cr.**
General Physics (3 Lec., 3 Lab.)
Prerequisites: Physics 201 and credit or concurrent registration in Mathematics 227. Principles and applications of heat, electricity, magnetism and optics emphasizing fundamentals, concepts, problem solving, notation and units. Laboratory includes a one hour problem session. Laboratory fee required.

PHY 203 **4 Cr.**
Introduction to Modern Physics (3 Lec., 3 Lab.)
Prerequisite: Physics 202. Principles of relativity, atomic and nuclear physics with emphasis on fundamental concepts, problem solving, notation and units. Laboratory includes a one hour problem session. Laboratory fee required.

PSY 103 **3 Cr.**
Sex Roles in American Society (3 Lec.)
A study of the physiological, psychological and sociological aspects of human sexuality. The student may register for either Psychology 103 or Sociology 103, but may receive credit for only one of the two.

PSY 105 **3 Cr.**
Introduction to Psychology (3 Lec.)
A study of basic problems and principles of human experience and behavior; such areas as heredity and environment, the nervous system, motivation, learning, emotions, thinking and intelligence are included. (This course is offered on campus and may be offered via television.)

PSY 131 **3 Cr.**
Human Relations (3 Lec.)
A study involving the direct application of psychological principles to human relations problems in business and industry. Consideration is given to group dynamics and adjustment factors related to employment and advancement. The presentation will be tailored to fit the needs of the students enrolled in each section.

PSY 201 **3 Cr.**
Developmental Psychology (3 Lec.)
Prerequisite: Psychology 105. A study of human growth, development and behavior, emphasizing the psychological changes which occur during the life pattern. The processes of life from prenatal beginnings to adulthood are treated in an integrated manner. Due attention is given to aging and its place in the developmental sequence. (This course is offered on campus and may be offered via television.)

PSY 202 **3 Cr.**
Applied Psychology (3 Lec.)
Prerequisite: Psychology 105. A course designed for the application of psychological facts and principles to problems and activities of life. Special emphasis will be placed on observing, recording and modifying human behavior. Some off-campus work may be required.

PSY 205 **3 Cr.**
Psychology of Personality (3 Lec.)
Prerequisite: Psychology 105. A consideration of the important factors involved in successful human adjustment including child-parent relationships, adolescence, anxiety states, mechanisms of defense and psychotheraputic concepts. The course includes a survey of methods of personality measurement.

RD 101
Effective College Reading (3
Reading 101 emphasizes comprehension techniques in reading fiction and nonfiction. Improved critical reading skills including analysis, critique and evaluation of written material are explored. Reading comprehension and flexibility of reading rate are stressed. In addition, advanced learning techniques in listening, note-taking, underlining, concentration and reading in specialized academic areas are developed.

RD 102 **3 Cr.**
Speed Reading/Learning (3 Lec.)
This course emphasizes improved critical reading/learning skills utilizing an aggressive, dynamic approach. Reading comprehension is stressed using speed reading techniques. Learning and memory depth skills are taught. Offered in a laboratory setting.

REL 101 **3 Cr.**
Religion in American Culture (3 Lec.)
This course deals with the nature of religion

as it is practiced in America. It covers some of the important influences from the past and the characteristics of current religious groups and movements. Students in this course attempt to understand the role of religion in American life.

REL 102 **3 Cr.**
Contemporary Religious Problems (3 Lec.)
Deals with both classic and recent issues such as the nature of religion itself, the existence of God, the encounter of world religions, mysticism, sexuality and religion and the interpretation of death. Sometimes offered with emphasis on a limited topic such as death and dying.

REL 201 **3 Cr.**
Major World Religions (3 Lec.)
This course surveys the major world religions such as Hinduism, Buddhism, Judaism, Islam, and Christianity. It includes a study of historical background, but the major emphasis is on present day beliefs. Some time may be devoted to topics such as the nature of religion, tribal religion, and alternatives to religion.

Secretarial Training
(See Business 162)

Shorthand
(See Business 159, 166, 266)

SE 180 **3 Cr.**
Small Engine Carburetion (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes small engine carburetor theory and repair. This is a comprehensive course that incorporates the following courses: SE 181, 182. The student may enroll in the comprehensive course (SE 180) or either of the inclusive courses (SE 181, 182). Laboratory fee required.

SE 181 **2 Cr.**
Small Engine Carburetor Theory (60 Contact Hrs.)
Includes theory of operation of the types of carburetors commonly used on small engines. Laboratory fee required.

SE 182 **1 Cr.**
Small Engine Carburetor Repair (30 Contact Hrs.)
Includes disassembly, inspection, repair and assembly of carburetors commonly used on small engines. Laboratory fee required.

SE 260 **3 Cr.**
Small Engine Electrical Systems (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes small engine ignition and electrical system theory and repair. This is a comprehensive course that incorporates the following courses: SE 261, 262. The student may enroll in the comprehensive course (SE 260) or either of the inclusive courses (SE 261, 262). Laboratory fee required.

SE 261 **2 Cr.**
Small Engine Ignition and Electrical System Theory (60 Contact Hrs.)
Includes theory of operation of the types of ignition systems commonly found on small engines. Laboratory fee required.

SE 262 **1 Cr.**
Small Engine Ignition and Electrical System Repair (30 Contact Hrs.)
Includes troubleshooting repair of ignition systems commonly found on small engines. Laboratory fee required.

SE 270 **6 Cr.**
Engine Overhaul and Tune-up (180 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes overhaul and tune-up of two stroke engines and four stroke engines. This is a comprehensive course that incorporates the following courses: SE 271, 272. The student may enroll in the comprehensive course (SE 270) or any of the inclusive courses (SE 271, 272). Laboratory fee required.

SE 271 **3 Cr.**
Two Stroke Engines (90 Contact Hrs.)
Includes the overhaul and tune-up of small two stroke engines. Laboratory fee required.

SE 272 **3 Cr.**
Four Stroke Engines (90 Contact Hrs.)
Includes the overhaul and tune-up of small four stroke engines. Laboratory fee required.

SE 2800 **3 Cr.**
Power Transfer Systems (90 Contact Hrs.)
Prerequisites: Engine Mechanics 100, 110. Includes both drive and cutting systems used with small engines. This is a comprehensive course that incorporates the following courses: SE 281, 282. The student may enroll in the comprehensive course (SE 280) or either of the inclusive courses (SE 281, 282). Laboratory fee required.

SE 281 **2 Cr.**
Drive Systems (60 Contact Hrs.)
Includes theory of operation and overhaul of belt, chain and direct drive systems used on mowers, edgers, tillers, tractors, and other small equipment. Laboratory fee required.

SE 282 **1 Cr.**
Cutting Systems (30 Contact Hrs.)
Includes theory of operation and overhaul of cutting systems used with small engines with emphasis on chain saws. Laboratory fee required.

SS 131 **3 Cr.**
American Civilization (3 Lec.)
A course designed to provide an introductory

survey of the psychological, historical/sociocultural, and political/economic theories and institutions of modern society. Both the nature of man and the relationships of the individual within the cultural framework are examined. Emphasis is placed on the national, state, and local experiences which affect daily life.

SS 132 **3 Cr.**
American Civilization (3 Lec.)
Prerequisite: Social Science 131. A course designed to provide topical studies of the psychological, historical/sociocultural, and political/economic theories and institutions of modern society. Emphasis is placed on analysis and application of theory to life experiences.

SOC 101 **3 Cr.**
Introduction to Sociology (3 Lec.)
An inquiry into the nature of society and the foundations of group life, including institutions, with a broad presentation of the basis of social change, processes and problems.

SOC 102 **3 Cr.**
Social Problems (3 Lec.)
Prerequisite: Sociology 101 or consent of instructor. A study of the background, emergence and scope of current group relationships in our society, emphasizing topics as they apply to the total community environment.

SOC 103 **3 Cr.**
Sex Roles in American Society (3 Lec.)
A study of the physiological, psycholoogical and sociological aspects of human sexuality. The student may register for either Sociology 103 or Psychology 103, but may receive credit for only one of the two.

SOC 203 **3 Cr.**
Marriage and Family (3 Lec.)
Prerequisite: Sociology 101 recommended. An analysis of courtship patterns, marriage and family forms, relationships and functions and sociocultural differences in family behavior.

SOC 204 **3 Cr.**
American Minorities (3 Lec.)
Prerequisite: Sociology 101 and/or six hours of U.S. history recommended. The principal minority groups in American society; their sociological significance and historic contributions. An emphasis will be placed on problems of intergroup relations, social movements and related social changes occurring on the contemporary American scene. The student may register for either History 204 or Sociology 204, but may receive credit for only one of the two.

SOC 205 **3 Cr.**
Introduction to Social Research (3 Lec.)
Prerequisites: Sociology 101, Developmental Math 091, or equivalent. Principles and procedures in social research; sources of data and techniques of collection and analysis, including statistical description. Commonly required of sociology and nursing majors. Useful to students of all behavioral sciences.

SOC 206 **3 Cr.**
Introduction to Social Work (3 Lec.)
In this course the student will examine the development of the field of social work. The student will be introduced to the techniques of social work and special attention will be given to requirements for training in social work.

SOC 207 **3 Cr.**
Social Psychology (3 Lec.)
Prerequisites: Psychology 105 and/or Sociology 101. Same as Psychology 207. The student may elect the subject area heading appropriate to his major. The student may register for either Psychology 207 or Sociology 207 but may receive credit in only one of the two.

SOC 210 **3 Cr.**
Field Studies in American Minorities (3 Lec.)
Prerequisite: Sociology 101 or Sociology 204. Assignment on a rotating basis to Indian, Black, and Mexican-American community centers to work under professional supervision in a task-oriented setting.

SOC 231 **3 Cr.**
Urban Social Problems (3 Lec.)
The sociology of social institutions; urbanization as a process; theories of formation; and the impact of urbanization on the individual.

SPA 101 **4 Cr.**
Beginning Spanish (3 Lec., 2 Lab.)
Essentials of grammar, easy idiomatic prose, stress on pronunciation, comprehension and oral expression. Laboratory fee required.

SPA 102 **4 Cr.**
Beginning Spanish (3 Lec., 2 Lab.)
Prerequisite: Spanish 101 or equivalent. Continuation of Spanish 101 with emphasis on idiomatic language and complicated syntax. Laboratory fee required.

SPA 201 **3 Cr.**
Intermediate Spanish (3 Lec.)
Prerequisite: Spanish 102 or equivalent or consent of the instructor. Reading, composition, grammar review and intense oral practice.

SPA 202 **3 Cr.**
Intermediate Spanish (3 Lec.)
Prerequisite: Spanish 201 or equivalent.

Continuation of Spanish 201 with reading selections drawn more directly from contemporary literary sources. Composition.

SPA 203 **3 Cr.**
Introduction to Spanish Literature (3 Lec.)
Prerequisite: Spanish 202 or equivalent or consent of the instructor. Readings in Spanish literature, history, culture, art and civilization.

SPA 204 **3 Cr.**
Introduction to Spanish Literature (3 Lec.)
Prerequisite: Spanish 202 or equivalent or consent of the instructor. Readings in Spanish literature, history, culture, art and civilization.

SPE 100 **1 Cr.**
Speech Laboratory (3 Lab.)
A laboratory course for the preparation of speeches, reading of dialogue from literature and debate propositions which will be presented throughout the community. May be repeated for one additional hour of credit each semester.

SPE 105 **3 Cr.**
Fundamentals of Public Speaking (3 Lec.)
An introductory course in public speaking. Principles of reasoning. Emphasis upon the delivery of carefully prepared speeches. Special attention to audience analysis, collection of materials and outlining.

SPE 109 **3 Cr.**
Voice and Articulation (3 Lec.)
A study of the mechanics of speech applied to the improvement of the individual's voice and pronunciation.

SPE 110 **1 Cr.**
Reader's Theatre Workshop (2 Lab.)
A laboratory course for the preparation and presentation of scripts, readings, and book reviews, collecting and arranging all types of literature for group interpretation and performance. May be repeated once for credit.

SPE 201 **1 Cr.**
Forensic Workshop (2 Lab.)
A laboratory course for the preparation of speeches, readings, and debate propositions which will be presented in competition and before select audiences. May be repeated for one additional unit of credit.

SPE 205 **3 Cr.**
Discussion and Debate (3 Lec.)
A study of theories and application of techniques of public discussion and argumentation. Special emphasis on development of ability to evaluate, analyze and think logically through application to current problems.

SPE 206 **3 Cr.**
Oral Interpretation (3 Lec.)
A study of fundamental techniques of analyzing various types of literature and practice in preparing and presenting selections orally. Emphasis on individual improvement.

SPE 207 **3 Cr.**
Advanced Oral Interpretation (3 Lec.)
Prerequisites: Speech 105 and 206. Application of basic principles of interpretation to longer selections of literature; more detailed analysis and arranging of poetry and prose for various types of multiple reading situations including choral speaking and reader's theatre. Investigation of all types of literature which are suited to group interpretation work.

THE 100 **1 Cr.**
Rehearsal and Performance (4 Lab.)
Prerequisite: Acceptance as a member of the cast or crew of a major production. Participation in the class includes the rehearsal and performance of the current theatrical presentation of the division. May be repeated for credit. Credit limited to one hour per semester.

THE 101 **3 Cr.**
Introduction to the Theatre (3 Lec.)
A general survey designed to acquaint the student with the various aspects of theatre, plays and playwrights, directing and acting, theatres, artists and technicians.

THE 102 **3 Cr.**
Contemporary Theatre (3 Lec.)
A study of the modern theatre and cinema as art forms, with attention to the historical background and traditions of each. Emphasis is placed on a better understanding of the social, cultural and aesthetic significance of these media in today's life. Includes the reading of a number of modern plays and the viewing of specially selected films.

THE 103 **3 Cr.**
Stagecraft I (2 Lec., 3 Lab.)
A study of the technical aspects of play production including set design and construction, stage lighting, make-up, costuming and related areas.

THE 104 **3 Cr.**
Stagecraft II (2 Lec., 3 Lab.)
Prerequisite: Theatre 103 or consent of instructor. A continuation of Theatre 103 with emphasis on individual projects in set and lighting design and construction, including further exploration of the technical aspects of play production.

THE 105 **3 Cr.**
Make-up for the Stage (3 Lec.)
Theory and practice of the craft of make-up. Laboratory fee required.

THE 106 **3 Cr.**
Acting I (2 Lec., 3 Lab.)
Individual and group activity with theory and exercises in body control, voice, pantomine, interpretation, characterization and stage movement. Analysis and study of specific roles for stage presentation.

THE 107 **3 Cr.**
Acting II (2 Lec., 3 Lab.)
Prerequisite: Theatre 106 or consent of instructor. Continuation of Theatre 106 with emphasis on problems of complex characterization, ensemble acting, stylized acting and acting in period plays.

THE 108 **3 Cr.**
Movement for the Stage (2 Lec., 3 Lab.)
A study of movement as both a pure form as well as its relation and integration with the theatre arts. The course will include movement as a technique to control balance, rhythm, strength, and flexibility. Movement will be explored as it is used in all the theatrical forms and in development of characterization. May be repeated for credit.

THE 109 **3 Cr.**
Voice and Articulation (3 Lec.)
Same as Speech 109. The student may not receive credit for both Theatre 109 and Speech 109.

THE 110 **3 Cr.**
History of Theatre I (3 Lec.)
Survey of theatre from its beginning through the sixteenth century. Study of the theatre in each period as a part of the total culture of the period.

THE 111 **3 Cr.**
History of Theatre II (3 Lec.)
Development of the theatre from the seventeenth century through the twentieth century.

THE 112 **3 Cr.**
Beginning Dance Technique
In Theatre (2 Lec., 3 Lab.)
Course designed to promote body balance, improve manipulation of trunk and limbs, and facilitate the rhythmic flow of physical energy. Exploration of basic movements of the dance with emphasis on swing movements, circular motion, fall and recovery, contraction and relese, and contrast of literal and abstract movements.

THE 113 **3 Cr.**
Intermediate Dance (2 Lec., 3 Lab.)
Prerequisite: Theatre 112 or permission of instructor. A general survey to acquaint the student with the various aspects of dance and its role in total theatre, including the evolution of dance styles. Exploration of jazz style emphasizing flow of movement, body placement, dynamic intensity, level, focus, and direction.

THE 115 **2 Cr.**
Mime (1 Lec., 2 Lab.)
Prerequisite: Stage movement, Theatre 106. Exploration of the expressive significance and techniques of mime.

THE 199 **1 Cr.**
Demonstration Lab (1 Lab.)
One hour a week course designed to allow the theatre student an opportunity to practice the theory learned in specific theatre classes before an audience. Scenes studied in various drama classes will show contrast and the different perspectives. Required of all drama students — open to all students.

THE 207 **3 Cr.**
Scene Study II (2 Lec., 3 Lab.)
Prerequisite: Theatre 205. Continuation and intensification of Theatre 205 with concentration upon individual needs of the performer. Conference and scheduled rehearsals in preparation for scene work.

THE 208 **3 Cr.**
Introduction to Technical
Drawing (2 Lec., 3 Lab.)
Basic techniques of drafting dealing with isometrics, orthographic projections and other standard procedures. The emphasis is placed on theatrical drafting including groundplans, vertical sections, construction elevations and spider perspective.

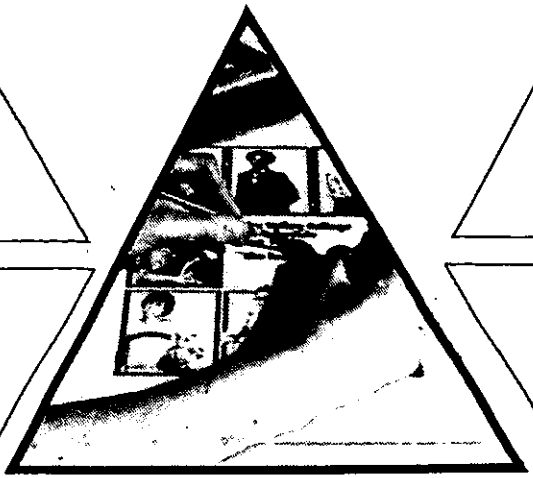
THE 209 **3 Cr.**
Lighting Design (2 Lec., 3 Lab.)
Prerequisites: Theatre 103 and 104. A study of design and techniques of lighting in the theatre. Practical experience in departmental productions required for one semester.

THE 235 **3 Cr.**
Costume History (3 Lec.)
A study of fashion costume, people and social customs throughout history. This includes the Egyptian, Greek, Roman, Gothic and Elizabethan periods through the 1890's and into modern styles.

TYP
(See Business 172, 174, 273)

Word Processing
(See Business 165 and 265)

Work Experience
(See Cooperative Work Experience)



Technical & Occupational Programs

BROOKHAVEN

Accounting Associate
Accounting Technician
Auto Body Repair & Painting
Automotive Machinist
Automotive Mechanics
Automotive Parts Counter Assistant
Automotive Parts Sales & Service
Child Development Adm. Assistant
Child Development Assistant
Child Development Associate
Mid-Management
Retail Distribution & Marketing
  Commercial Design & Advertising
  Fashion Merchandising
  Retail Management
Secretarial Careers

EASTFIELD

Accounting Assistant
Accounting Associate
Air Conditioning & Refrig. Tech.
Auto Body
Automotive Technology
Child Development Assistant
Child Development Associate
Digital Electronics
Drafting & Design Technology
Graphic Arts
Graphic Communications
Mid-Management
  Small Business Management
Office Careers
  Administrative Secretary
  General Secretary
  Office Skills & Systems
  Professional Secretary
Social Work Associate
Training Paraprofessionals for the Deaf
Transportation Technology
Welding Technology

El Centro

Accounting Associate
Accounting Technician
Apparel Design
Architecture Technology
Banking & Finance
  Banking Option
  Credit and Financial Mgmt.
  Savings and Loan Option
Data Processing
  Data Processing Operator
  Data Processing Programmer
  Information Systems
  Key Entry/Data Control
  Small Computer Systems
    Information Specialist
Drafting & Design Technology
Educational Paraprofessional
Fire Protection Technology
Food Service
  Dietetic Assistant
  Dietetic Technician
  Food Service Operations
  School Food Service
Hotel/Motel Operations
Interior Design
Legal Assistant
Medical
  Associate Degree Nursing
  Dental Assistant Technology
  Long Term Health Care
  Medical Assistant Technology
  Medical Lab Technician
  Medical Transcriptionist
  Radiologic Technology
  Respiratory Therapy Assistant
  Respiratory Therapy Technology
  Surgical Technology
  Vocational Nursing
Mid-Management
  Small Business Management
Office Careers
  General Office Occupations
  General Secretary
  Professional Secretary
Pattern Design
Police Science

MOUNTAIN VIEW

Accounting Associate
Accounting Technician
Aviation Maintenance Technology
  Airframe
  Powerplant
Aviation Technology
  Air Cargo Transport
  Aircraft Dispatcher
  Airline Marketing
  Career Pilot
  Fixed Base Oprs/Airport Mgmt.
Avionics Technology
Drafting & Design Technology
Educational Paraprofessional
Electronics Technology
Horology
Machine Shop
Mid-Management
  Small Business Management
Office Careers
  General Office Occupations
  General Secretary
  Office Skills & Systems
  Professional Secretary
Welding Technology

NORTH LAKE

Accounting Associate
Accounting Technician
Air Conditioning & Refrigeration
  Commercial
  Residential
Banking & Finance
  Banking Option

- Credit and Financial Mgmt.
- Savings and Loan Option

Building Trades
- Carpentry
- Electricity

Diesel Mechanics
Distribution Technology
Mid-Management
- Small Business Management

Office Careers
- General Office Careers
- Legal Secretary
- Secretarial Careers

Optical Technology
Real Estate
Solar Energy Technology

RICHLAND

Accounting Associate
Accounting Technician
Banking & Finance
- Banking Option
- Credit and Financial Mgmt.
- Savings & Loan Option

Construction Mgmt. & Technology
Educational Paraprofessional
Engineering Technology
- Electric Power
- Electro-Mechanical
- Fluid Power
- Quality Control

Human Services Associate
Mental Health Assistant
Social Worker Assistant
Mid-Management
- Small Business Management

Office Careers
- Administrative Secretary
- Educational Secretary
- General Office Occupations
- General Secretary
- Office Skills & Systems
- Professional Secretary

Ornamental Horticulture Technology
- Florist
- Greenhouse Florist
- Landscape Gardener
- Landscape Nursery

Real Estate

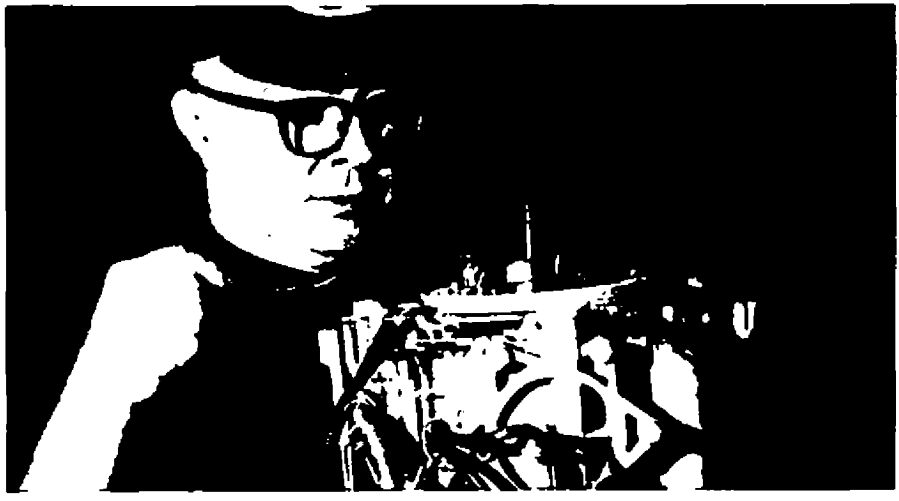
Technical/Occupational Programs Offered by Tarrant County Junior Colleges Available to Dallas County Residents

Dallas County residents may enroll in the programs listed below at the appropriate Tarrant County Junior College at the Tarrant County resident's tuition rate. This reciprocal arrangement does not apply to programs of instruction which are filled to capacity with Tarrant County students.

Northeast Campus Courses
- Civil Technology
- Dental Hygiene
- Emergency Medical Technician
- Food Marketing
- Labor Studies
- Media Technology
- Physical Therapy Assistant

Northwest Campus Courses
- Agribusiness
- Postal Servcice Administration

South Campus Courses
- Industrial Supervision
- Mechanical Technology



CEDAR VALLEY COLLEGE CAREER PROGRAMS

An important function of Cedar Valley College is the offering of technical/occupational career programs.

The purpose of these programs is to meet the needs of students who desire to enter immediately into technical/occupational employment areas. All career programs offered at Cedar Valley College are designed to meet job entry level skills as determined by consultation with occupational advisory committees. Members of these committees are leaders in business and industry in the metroplex area. The career programs reflect the needs of business and industry in the Dallas area for trained personnel and the desire of students in the area for specific career programs.

Several options are available to students. They may take those courses that lead to a Certificate of Completion or to an Associate of Applied Arts and Sciences Degree. Another option may be to take one course or a sequence of courses within a career program that would result in job upgrading, skill improvement, or simply personal satisfaction. Students should consult with a faculty advisor for more specific information about particular career programs.

The career programs available at Cedar Valley College and the certificate and/or degree requirements for each program follow.

CEDAR VALLEY

Accounting Associate
Accounting Technician
Air Conditioning & Refrigeration
  Commercial
  Residential
Animal Medical Technology
Automotive Apprenticeship
Automotive Technology
Commercial Music
  Arranger/Composer/Copyist
  Music Retailing
  Performing Musician
Major Appliance Repair
Mid-Management
  Small Business Management
Motorcycle Mechanics
Office Careers
  General Office Occupations
  Legal Secretary
  Secretarial Careers
Outboard Marine Engine Mechanics
Retail Distribution & Mktg. Tech.
  Commercial Design & Advertising
  Fashion Merchandising
  Retail Management
Small Engine Mechanics

SYMBOL GUIDE

PROGRAM OR COURSE	PREFIX
Air Conditioning & Refrigeration	AC
Animal Medical Technology	AMT
Anthropology	ANT
Art	ART
Astronomy	AST
Automotive Technology	AT
Automotive Technology Apprenticeship	ATA
Biology	BIO
Blueprint Reding	BPR
Business	BUS
Chemistry	CHM
College Learning Skills	CLS
Communications	COM
Computing Science	CS
Cooperative Work Experience	Program Prefix Used
Design	DES
Developmental Communications	DC
Developmental Learning	DL
Developmental Mathematics	DM
Developmental Reading	DR
Developmental Writing	DW
Drafting	DFT
Earth Science	ES
Ecology	ECY
Economics	ECO
Engine Mechanics	EM
English	ENG
French	FR
Geography	GPY
Geology	GEO
Government	GVT
History	HST
Human Development	HD
Humanities	HUM
Journalism	JN
Major Appliance Repair	MAR
Mathematics	MTH
Motorcycle Mechanics	MM
Music	MUS
Outboard Engines	OE
Photography	PHO
Physical Education	PEH
Physical Science	PSC
Physics	PHY
Psychology	PSY
Reading	RD
Religion	REL
Small Engines	SE
Sociology	SOC
Spanish	SPA
Speech	SPE
Theatre	THE

ACCOUNTING ASSOCIATE

This two-year program is designed to prepare the students for a career as a junior accountant in business, industry, and government. Emphasis will be place on internal accounting procedures and generally accepted principles.
ACCOUNTING ASSOCIATE

ASSOCIATE DEGREE PROGRAM

		Credit Hrs.
1st Semester		
BUS 105	Introduction to Business	3
BUS 160	Office Machines	3
BUS 201	Principles of Accounting I	3
MTH 130	Business Mathematics	3
or		
MTH 111	Mathematics for Business & Economics I	3
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
		15
2nd Semester		
BUS 136	Principles of Management	3
BUS 202	Principles of Accounting II	3
CS 175	Introduction to Computer Sciences	3
COM 132	Applied Composition and Speech	3
or		
ENG 102	Composition and Literature	3
BUS 172	Beginning Typewriting	3
or		
BUS 703	Work Experience	3
or		
BUS 704	Work Experience	4
		15-16
3rd Semester		
BUS 203	Intermediate Accounting	3
BUS 238	Cost Accounting	3
or		
BUS 239	Income Tax Accounting	3
GVT 201	American Government	3
ECO 201	Principles of Economics I	3
	*Elective	3-4
		15-16
4th Semester		
BUS 204	Managerial Accounting	3
BUS 231	Business Correspondence	3
BUS 234	Business Law	3
BUS 237	Organizational Behavior	3
ECO 202	Principles of Economics II	3
	*Elective	3-4
		18-19

***Electives**
Following is a list of suggested electives.

BUS 143	Personal Finance	3
BUS 205	Business Finance	3
BUS 206	Principles of Marketing	3

PSY	105	Introduction to Psychology	3
PSY	131	Human Relations	3
BUS	803	Cooperative Work Experience	3
BUS	804	Cooperative Work Experience	4
BUS	813	Cooperative Work Experience	3
BUS	814	Cooperative Work Experience	4

ACCOUNTING TECHNICIAN

This program will provide students with a knowledge of bookkeeping procedures which are currently used in business. Students will also be introduced to accounting principles which support bookkeeping procedures, and acquire practical bookkeeping experience through problem solving.

ACCOUNTING TECHNICIAN

CERTIFICATE PROGRAM

1st Semester			**Credit Hrs.**
BUS	105	Introduction to Business	3
BUS	131	Bookkeeping I	3
BUS	172	Beginning Typewriting	3
	or		
BUS	174	Intermediate Typewriting	2
COM	131	Applied Composition and Speech	3
MTH	130	Business Mathematics	3
			14-15

2nd Semester			
BUS	160	Office Machines	3
BUS	132	Bookkeeping II	3
COM	132	Applied Composition and Speech	3
CS	175	Introduction to Computer Sciences	3
		*Elective	3
			15

***Electives**
Three hours of electives are required. Following is a list of suggested electives.

			Credit Hrs.
BUS	162	Office Procedures	3
BUS	231	Business Correspondence	3
BUS	234	Business Law	3
PSY	131	Human Relations	3

AIR CONDITIONING RESIDENTIAL

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.

RESIDENTIAL AIR CONDITIONING

CERTIFICATE PROGRAM

			Credit Hrs.
1st Semester			
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
2nd Semester			
AC	155	Advanced Electrical Circuits	3
AC	165	Vapor Compression Systems	3
AC	170	Pipefitting Procedures	3
AC	175	Residential Load Calculations	3
			12
3rd Semester			
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	3
or			
ACR	704	Cooperative Work Experience	4
or			
*Elective			3-4
			15-16

RESIDENTIAL AIR-CONDITIONING

ASSOCIATE DEGREE PROGRAM

			Credit Hours
1st Semester			
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
2nd Semester			
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
3rd Semester			
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 Communications & Speech	3
MAR 235	Professional Service Skills	
or		
PSY 131	Human Relations	3
		17

4th Semester

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	3
or		
AC 704	Cooperative Work Experience	4
*Elective		3-4
		15-17

***Electives**

Three hours of electives are required for the Residential AC Certificate, Residential AC Associate Degree and the Commercial Refrigeration and Industrial AC Certificate. Following is a list of recommended electives.

		Credit Hrs.
AC 280	Industrial Air-Conditioning Systems	3
ACR 803	Cooperative Work Experience	3
ACR 804	Cooperative Work Experience	4
BUS 105	Introduction to Business	3
BUS 131	Bookkeeping	3
BUS 136	Principles of Management	3
COM132	Applied Communications & Speech	3
*MAR 235	Professional Service Skills	3
*PSY 131	Human Relations	3

*MAR 235 or PSY 131 required in the Associate Degree Program.

COMMERCIAL REFRIGERATION AND INDUSTRIAL AIR CONDITIONING

CERTIFICATE PROGRAM

1st Semester

		Credit Hrs.
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

2nd Semester

AC 155	Advanced Electrical Circuits	3
AC 165	Vapor Compression Systems	3
AC 170	Pipefitting Procedures	3
AC 190	Commercial Refrigeration Systems	3
AC 195	Commercial Refrigeration Systems Service	3
		15

3rd Semester

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
AC 703	Cooperative Work Experience	3
or		
AC 704	Cooperative Work Experience	4
or		
*Elective		3
		15-16

ANIMAL MEDICAL TECHNOLOGY

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 technician 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.

ANIMAL MEDICAL TECHNOLOGY

ASSOCIATE DEGREE PROGRAM

		Credit Hrs.
1st Semester		
AMT 130	Introduction to Animal Medical Technology	4
AMT 138	Applied Biochemistry	5
AMT 137	Comparative Mammalian Anatomy and Physiology I	4
MTH 139	Applied Mathematics	3
		16
2nd Semester		
AMT 231	Comparative Mammalian Anatomy and Physiology II	4
AMT 241	Clinical Pathology Techniques and Practice I	5
AMT 139	Pharmacology for Technicians	3
COM 131	Applied Composition and Speech	3
		15
Summer Session		
AMT 703	Cooperative Work Experience	3
3rd Semester		
AMT 243	Clinical Pathology Techniques and Practice II	5
AMT 230	Anesthetic and Surgical Assisting Techniques	4
AMT 244	Large Animal Assisting Techniques	3
BUS 153	Small Business Management	3
		15
4th Semester		
AMT 237	Principles and Practice of Radiography	3
AMT 249	Animal Hospital Nursing	4
AMT 242	Exotic and Research Animal Care and Management	3
PSY 131	Human Relations	3
	*Electives	2-4
		15-17

***Electives**		**Credit Hrs.**
Following is a list of suggested electives.		
AMT 245	Senior Clinical Seminar	2
AMT 250	Special Projects in AMT	2
BUS 172	Beginning Typing	3
BUS 131	Bookkeeping I	3
HUM 101	Introduction to Humanities	3
SS 131	American Civilization	3
SS 132	American Civilization	3

Physical Education

AMT 702	Cooperative Work Experience	2
AMT 703	Cooperative Work Experience	3

AUTOMOTIVE TECHNOLOGY

This program is designed to train students to meet entry level requirements in the field of Automotive Technology. This will include theory, diagnosis, repair, overhaul, and maintenance of automobiles. Included in this program is the study of automotive engines, front suspension, steering, brakes, power trains, standard and automatic transmissions, electrical and ignition systems, and tune-up procedures. Throughout the entire program an emphasis is placed on accepted shop techniques used throughout the automotive service industry.

AUTOMOTIVE TECHNOLOGY

CERTIFICATE PROGRAM

		Credit Hrs.
1st Semester		
AT 140	Automotive Services	6
MTH 195	Technical Mathematics	3
		9
2nd Semester		
AT 150	Front Suspension, Steering & Brakes	6
AT 160	Automotive Engines	6
		12
3rd Semester		
AT 170	Automotive Systems	6
AT 260	Power Trains	6
		12
4th Semester		
AT 270	Automatic Transmissions	6
AT 280	Automotive Tune-up	6
		12

AUTOMOTIVE TECHNOLOGY

ASSOCIATE DEGREE PROGRAM

		Credit Hrs.
1st Semester		
AT 140	Automotive Services	6
MTH 195	Technical Mathematics	3
	*Elective	3
		12
2nd Semester		
AT 150	Front Suspension, Steering & Brakes	6
AT 160	Automotive Engines	6
COM 131	Applied Communications & Speech	3
		15
Summer Session		
PSY 131	Applied Physics	4
3rd Semester		
AT 170	Automotive Systems	6
AT 260	Power Trains	6
	*Elective	3
		15

4th Semester

AT	270	Automatic Transmissions	6
AT	280	Automotive Tune-up	6
SS	131	American Civilization	3
			15

***Electives**

Six hours of electives are required and shall be selected from the following list of courses:

			Credit Hrs.
COM	132	Applied Composition & Speech	3
PSY	131	Human Relations	3
BPR	177	Blueprint Reading	2
BUS	105	Introduction to Business	3
BUS	131	Bookkeeping	3
BUS	136	Principles of Management	3
BUS	153	Small Business Management	3
AT	713	Work Experience	3
AT	714	Work Experience	4
AT	813	Work Experience	3
AT	814	Work Experience	4

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP PROGRAM

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.

For further information on this program, contact:
Division of Industrial Technology 746-4790

AUTOMOTIVE TECHNOLOGY APPRENTICESHIP

ASSOCIATE DEGREE PROGRAM

		Credit Hrs.
1st Semester		
ATA 100	Automotive Fundamentals	3
MTH 195	Technical Mathematics	3
ATA 191	Internship I	3
		9
2nd Semester		
ATA 101	Basic Electrical Systems	3
ATA 102	Automotive Service Department Management	3
ATA 192	Internship II	3
		9
1st Summer Session		
PHY 131	Applied Physics I	4
COM 131	Applied Composition & Speech	3
		7
3rd Semester		
ATA 103	Suspension, Steering, & Brake System	3
ATA 104	Automotive Parts Department Management	3
ATA 193	Internship III	3
		9
4th Semester		
ATA 105	Engine Tune-up Procedures	3
ATA 200	Advanced Electrical Systems	3
ATA 294	Internship IV	3
		9
2nd Summer Session		
ATA 201	Automotive Air Conditioning & Heating System	3
SS 131	American Civilization	3
		6
5th Semester		
ATA 202	Basic Engine Repair	3
ATA 203	Engine Overhaul Procedures	3
ATA 295	Internship V	3
		9

6th Semester

ATA 204	Clutches, Differentials, Drive Shafts	3
ATA 205	Transmissions	3
ATA 296	Internship VI	3
		9

AC 280	Industrial Air-Conditioning Systems	3
ACR 803	Cooperative Work Experience	3
ACR 804	Cooperative Work Experience	4
BUS 105	Introduction to Business	3
BUS 131	Bookkeeping	3
BUS 136	Principles of Management	3
COM132	Applied Communications & Speech	3
*MAR 235	Professional Service Skills	3
*PSY 131	Human Relations	3

*MAR 235 or PSY 131 required in the Associate Degree Program.

COMMERCIAL MUSIC — ARRANGER/COMPOSER/COPYIST

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.

COMMERCIAL MUSIC — ARRANGER/COMPOSER/COPYIST

ASSOCIATE DEGREE PROGRAM

		Credit Hrs.
1st Semester		
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 121-270	Applied Music	1-3
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 192	Music in America	3
MUS 193	Improvisation	3
MUS 199	Recital	1
		14-17
2nd Semester		
MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 121-270	Applied Music	1-3
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 194	Jazz Workshop	3
MUS 196	Business of Music	3
MUS 199	Recital	1
BUS 105	Introduction to Business	3
		17-19
Summer Sessions		
COM 131	Applied Composition & Speech	3
or		
ENG 101	Composition & Expository Reading	3
COM 132	Applied Composition & Speech	3
or		
ENG 102	Composition & Literature	3
		6
3rd Semester		
MUS 221-270	Applied Music	2-3
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 195	Introduction to Synthesizer	2
MUS 199	Recital	1
MUS 290	Recording Technique	2
MUS 292	Arranging/Orchestration	3
MUS 293	Independent Study	3-4
or		
MUS 803	Work Experience	3-4
or		
MUS 804	Work Experience	3-4
	*Elective	2-4
		16-20

4th Semester

MUS 221-270	Applied Music	2-3
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 199	Recital	1
MUS 203	Composition	3
MUS 293	Independent Study	3-4
or		
MUS 813	Work Experience	3-4
or		
MUS 814	Work Experience	3-4
	*Elective	2-4
		12-16

***Electives**

Following is a list of suggested electives.

		Credit Hrs.
MUS 291	Advanced Recording Techniques	2
MUS 295	Advanced Synthesizer Techniques	2
BUS 234	Business Law	3
BUS 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

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.

COMMERCIAL MUSIC — MUSIC RETAILING

CERTIFICATE PROGRAM

1st Semester		**Credit Hrs.**
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 121-143	Applied Music	1
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 192	Music in America	3
MUS 199	Recital	1
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
BUS 105	Introduction to Business	3
		17

2nd Semester		
MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 121-143	Applied Music	1
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 199	Recital	1
COM 132	Applied Communication and Speech	3
or		
MUS 181	Lab Band	1
MUS 199	Recital	1
COM 132	Applied Communication and Speech	3
or		
ENG 102	Composition and Literature	3
BUS 137	Principles of Retailing	3
BUS 153	Small Business Management	3
BUS 230	Salesmanship	3
		20

COMMERCIAL MUSIC — MUSIC RETAILING

ASSOCIATE DEGREE PROGRAM

1st Semester		**Credit Hrs.**
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 121-143	Applied Music	1
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 192	Music in America	3
MUS 199	Recital	1
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
BUS 105	Introduction to Business	3
		17

2nd Semester

MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 121-143	Applied Music	1
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 199	Recital	1
BUS 137	Principles of Retailing	3
BUS 230	Salesmanship	3
BUS 153	Small Business Management	3
COM 132	Applied Communication and Speech	3
or		
ENG 102	Composition and Literature	3
		20

3rd Semester

		Credit Hrs.
MUS 121-143	Applied Music — Minor	1
MUS 199	Recital	1
MUS 803	Work Experience	3-4
or		
MUS 804	Work Experience	3-4
PSY 131	Human Relations	3
BUS 234	Business Law	3
	*Elective	3
		14-15

4th Semester

MUS 121-243	Applied Music	2
MUS 199	Recital	1
MUS 813	Work Experience	3-4
or		
MUS 814	Work Experience	3-4
BUS 201	Principles of Accounting	3
	*Elective	3
		12-13

***Electives**

Six hours of electives are required for this program. Following is a list of suggested electives.

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

COMMERCIAL MUSIC — PERFORMING MUSICIAN

This program is designed to prepare the instrumental and vocal student for performance 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.

COMMERCIAL MUSIC — PERFORMING MUSICIAN

ASSOCIATE DEGREE PROGRAM

1st Semester		**Credit Hrs.**
MUS 101	Freshman Theory	4
MUS 117	Piano Class I	1
MUS 121-270	Applied Music	1-3
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 192	Music in America	3
MUS 193	Improvisation	3
MUS 199	Recital	1
		14-16

2nd Semester

MUS 102	Freshman Theory	4
MUS 118	Piano Class II	1
MUS 121-270	Applied Music	1-3
MUS 155	Vocal Ensemble	1
for		
MUS 181	Lab Band	1
MUS 194	Jazz Workshop	3
MUS 196	Business of Music	3
MUS 199	Recital	1
BUS 105	Introduction to Business	3
		17-19

Summer Sessions — **Credit Hrs.**

COM 131	Applied Composition & Speech	3
or		
ENG 101	Composition & Expository Reading	3
COM 132	Applied Composition & Speech	3
or		
ENG 102	Composition & Literature	3
		6

3rd Semester

MUS 221-270	Applied Music	2-3
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 199	Recital	1
MUS 290	Recording Techniques	2
MUS 292	Arranging/Orchestration	3
MUS 293	Independent Study	3
or		
MUS 803	Work Experience	3-4
or		
MUS 804	Work Experience	3-4
	*Elective	2-4
		14-18

4th Semester

MUS 121-270	Applied Music	2-3
MUS 155	Vocal Ensemble	1
or		
MUS 181	Lab Band	1
MUS 199	Recital	1
MUS 291	Advanced Recording Techniques	2
MUS 813	Work Experience	3-4
or		
MUS 814	Work Experience	3-4
	*Elective	2-4
		11-15

***Electives** — **Credit Hrs.**

Following is a list of 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

MAJOR APPLIANCE REPAIR

This program is designed to train students to meet entry level requirements in the field of Major Appliance Repair. This will include the installation, repair, and maintenance of the major appliances found in most homes. Included in this program is the study of domestic refrigerators and freezers, clothes washers and dryers, dishwashers, trash compactors, disposers, and gas and electric ranges. Throughout the entire program an emphasis is placed on current techniques as used by major appliance repair technicians.

MAJOR APPLIANCE REPAIR

CERTIFICATE PROGRAM

			Credit Hrs.
1st Semester			
AC	150	Basic Electricity	6
MTH	195	Technical Mathematics	3
			9
2nd Semester			
AC	160	Basic Refrigeration	10
3rd Semester			
MAR	200	Domestic Refrigerators — Freezers	6
MAR	210	Domestic Dishwashers, Disposers, & Trash Compactors	6
			12
4th Semester			
MAR	220	Domestic Laundry Equipment	6
MAR	230	Domestic Cooking Equipment	6
MAR	240	Professional Service Skills	3
			15

MAJOR APPLIANCE REPAIR

ASSOCIATE DEGREE PROGRAM

			Credit Hrs.
1st Semester			
AC	400	Basic Electricity	6
MTH	195	Technical Mathematics	3
SS	131	American Civilization	3
			12

2nd Semester

AC 410	Basic Refrigeration	10
COM 131	Applied Communications & Speech	3
		13

Summer Session

PHY 131	Applied Physics	4
	*Elective	3
		7

3rd Semester

MAR 200	Domestic Refrigerators & Freezers	6
MAR 210	Domestic Dishwashers, Disposers & Trash Compactors	6
	*Elective	3
		15

4th Semester

MAR 220	Domestic Laundry Equipment	6
MAR 230	Domestic Cooking Equipment	6
MAR 240	Professional Service Skills	3
		15

***Electives**

Six hours of electives are required and shall be selected from the following list of courses.

		Credit Hrs.
COM 132	Applied Communications & Speech	3
PSY 131	Human Relations	3
BUS 105	Introduction to Business	3
BUS 131	Bookkeeping	3
BUS 136	Principles of Management	3
BUS 153	Small Business Management	3
BPR 177	Blueprint Reading	2
AC 713	Work Experience	3
AC 714	Work Experience	4
AC 813	Work Experience	3
AC 814	Work Experience	4

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MID-MANAGEMENT

Mid-Management is a cooperative program with members of the business community to prepare students for career opportunities in management. During the program students will take courses in business and related areas, while working in a paid or part-time position in a sponsoring organization.

Admission to the Program

1. Admission is by individual application only.
2. Personal interview with any Mid-Management instructor.
3. Applicants should demonstrate a sincere desire for a management career in business.
4. Fulfill all requirements for admission to the College.

MID-MANAGEMENT

ASSOCIATE DEGREE PROGRAM

1st Semester		**Credit Hrs.**
BUS 105	Introduction to Business	3
BUS 150	Management Training	4
BUS 154	Management Seminar	2
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
HUM 101	Introduction to the Humanities	3
or		
ART 104	Art Appreciation	3
or		
MUS 104	Music Appreciation	3
or		
THE 101	Introduction to the Theatre	3
		15
2nd Semester		
BUS 136	Principles of Management	3
BUS 151	Management Training	4
BUS 155	Managemetn Seminar	2
COM 132	Applied Composition and Speech	3
or		
ENG 102	Composition and Literature	3
	*Elective	3
		15
3rd Semester		**Credit Hrs.**
BUS 201	Principles of Accounting I	3
or		
BUS 131	Bookkeeping I	3
BUS 250	Management Training	4
BUS 254	Management Seminar	2
SS 131	American Civilization	3
or		
HST 101	History of the United States	3
	*Elective	3
		15
4th Semester		
BUS 251	Management Training	4
BUS 255	Management Seminar	2
ECO 201	Principles of Economics	3
	*Elective	3
	*Elective	3
		15

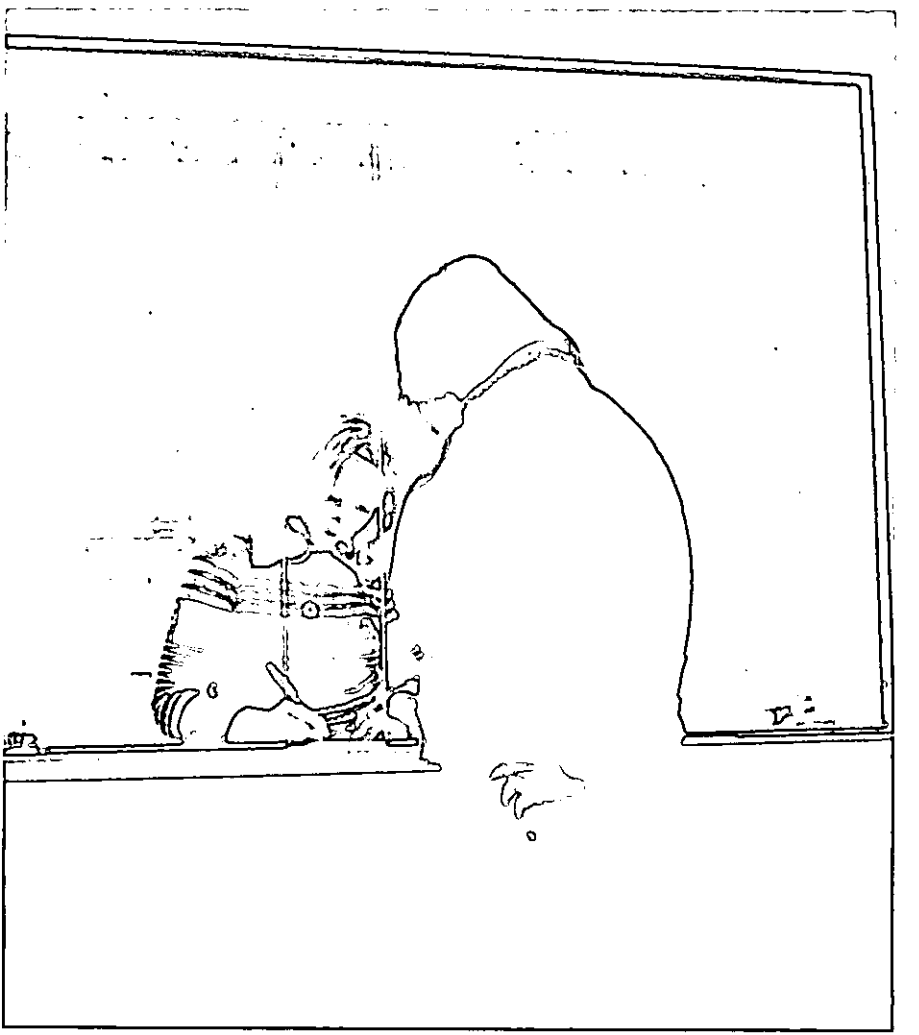
***Electives**

One elective must be chosen from the following:

PSY	105	Introduction to Psychology	4
PSY	131	Human Relations	3
SOC	101	An Introduction to Sociology	3

Nine hours of additional electives are required. Following is a list of suggested electives.

BUS	137	Principles of Retailing	3
BUS	160	Office Machines	3
BUS	206	Principles of Marketing	3
BUS	230	Salesmanship	3
BUS	231	Business Correspondence	3
BUS	233	Advertising and Sales Promotion	3
BUS	234	Business Law	3
BUS	237	Organizational Behavior	3
CS	175	Introduction to Computer Science	3
MTH	130	Business Mathematics	3
SPE	105	Fundamentals of Public Speaking	3



***Electives**

One elective must be chosen from the following:

PSY	105	Introduction to Psychology	4
PSY	131	Human Relations	3
SOC	101	An Introduction to Sociology	3

Nine hours of additional electives are required. Following is a list of suggested electives.

BUS	137	Principles of Retailing	3
BUS	160	Office Machines	3
BUS	206	Principles of Marketing	3
BUS	230	Salesmanship	3
BUS	231	Business Correspondence	3
BUS	233	Advertising and Sales Promotion	3
BUS	234	Business Law	3
BUS	237	Organizational Behavior	3
CS	175	Introduction to Computer Science	3
MTH	130	Business Mathematics	3
SPE	105	Fundamentals of Public Speaking	3

SMALL BUSINESS MANAGEMENT

Small Business Management is a cooperative program with members of the business community to prepare students for career opportunities in management. During the program students will take courses in business and related areas, while working in a paid or part-time position in a sponsoring organization. In this particular program an emphasis will be placed on the operation of small businesses.

Admission to the Program

1. Admission is by individual applicants only.
2. Personal interview with any Mid-Management instructor.
3. Applicants should demonstrate a sincere desire for a management career in business.
4. Fulfill all requirements for admission to the College.

MID-MANAGEMENT — SMALL BUSINESS MANAGEMENT

ASSOCIATE DEGREE PROGRAM

1st Semester		**Credit Hrs.**
BUS 150	Management Training	4
BUS 153	Small Business Management	3
BUS 154	Management Seminar	2
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
HUM 101	Introduction to the Humanities	3
or		
ART 104	Art Appreciation	3
or		
MUS 104	Music Appreciation	3
or		
THE 101	Introduction to the Theatre	3
		15

2nd Semester		
BUS 136	Principles of Management	3
BUS 151	Management Training	4
BUS 155	Management Seminar	2
COM 132	Applied Composition and Speech	3
or		
ENG 102	Composition and Literature	3
	*Elective	3
		15

3rd Semester		**Credit Hrs.**
BUS 157	Small Business Bookkeeping and Accounting Practices	3
BUS 250	Management Training	4
BUS 254	Management Seminar	2
SS 131	American Civilization	3
	or	
HST 101	History of the United States	3
	*Elective	3
		15

4th Semester		
BUS 251	Management Training	4
BUS 255	Management Seminar	2
ECO 201	Principles of Economics	3
BUS 210	Small Business Organization, Acquisition and Finance	3
BUS 211	Small Business Operations	3
		15

***Electives**
Six hours of electives are required. Following is a list of suggested electives.

			Credit Hrs.
BUS	137	Principles of Retailing	3
BUS	160	Office Machines	3
BUS	206	Principles of Marketing	3
BUS	230	Salesmanship	3
BUS	231	Business Correspondence	3
BUS	233	Advertising and Sales Promotion	3
BUS	234	Business Law	3
BUS	237	Organizational Behavior	3
CS	175	Introduction to Computer Science	3
MTH	130	Business Mathematics	3
SPE	105	Fundamentals of Public Speaking	3

MOTORCYCLE MECHANICS

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 chassis. Throughout the entire program an emphasis is placed on the latest factory recommended techniques.

MOTORCYCLE MECHANICS

CERTIFICATE PROGRAM

			Credit Hrs.
1st Semester			
EM	100	Shop Practices	3
EM	110	Engine Fundamentals	6
MTH	195	Technical Mathematics	3
			12
2nd Semester			
MM	120	Motorcycle Carburetion	3
MM	130	Motorcycle Ignition Systems	3
MM	140	Motorcycle Electrical Systems	3
			9

3rd Semester

MM	200	Motorcycle Drive Systems	3
MM	205	Two Stroke Engine Overhaul	3
MM	210	Four Stroke Single & Twin Cylinder Engine Overhaul	3
			9

4th Semester

MM	215	Four Stroke Multi-Cylinder Engine Overhaul	3
MM	220	Motorcycle Chassis Systems	3
			6

MOTORCYCLE MECHANICS

ASSOCIATE DEGREE PROGRAM

1st Semester

			Credit Hrs.
EM	100	Shop Practices	3
EM	110	Engine Fundamentals	6
MTH	195	Technical Mathematics	3
			12

2nd Semester

MM	120	Motorcycle Carburetion	3
MM	130	Motorcycle Ignition Systems	3
MM	140	Motorcycle Electrical Systems	3
COM	131	Applied Composition & Speech	3
			12

Summer Session

PHY	131	Applied Physics	4
		*Electives	9
			13

3rd Semester

MM	200	Motorcycle Drive Systems	3
MM	205	Two Stroke Engine Overhaul	3
MM	210	Four Stroke Single & Twin Cylinder Engine Overhaul	3
		*Electives	3
			12

4th Semester

MM	215	Four Stroke Multi-Cylinder Engine Overhaul	3
MM	220	Motorcycle Chassis Systems	3
SS	131	American Civilization	3
		*Electives	6
			15

***Electives**

Fifteen hours of electives are required and shall be selected from the following list of courses:

			Credit Hrs.
COM	132	Applied Composition & Speech	3
PSY	131	Human Relations	3
BUS	105	Introduction to Business	3
BUS	131	Bookkeeping	3
BUS	136	Principles of Management	3
BUS	153	Small Business Management	3
BPR	177	Blueprint Reading	2
EM	713	Work Experience	3
EM	714	Work Experience	4
EM	813	Work Experience	3
EM	814	Work Experience	4

OFFICE CAREERS — CERTIFICATE PROGRAM

The purpose of this program is to provide students with the basic skills necessary to enter the general office field in a minimum amount of time. Intensive training in the basic office skills is provided — including office machines, typewriting, records management, and other related business subjects.

OFFICE CAREERS

CERTIFICATE PROGRAM

1st Semester		**Credit Hrs.**
BUS 105	Introduction to Business	3
BUS 131	Bookkeeping I	3
or		
BUS 201	Principles of Accounting I	3
BUS 160	Office Machines	3
BUS 172	Beginning Typewriting	3
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
		15
2nd Semester		
BUS 162	Office Procedures	3
BUS 165	Introduction to Word Processing	3
BUS 174	Intermediate Typewriting	2
BUS 231	Business Correspondence	3
COM 132	Applied Composition and Speech	3
or		
ENG 102	Composition and Literature	3
MTH 130	Business Math	3
		17

OFFICE CAREERS — ASSOCIATE DEGREE PROGRAM

This two-year program is designed to train students for positions in the general office field such as clerk-typist, file clerk, receptionist, and word processing operator. There is a general orientation to the business world plus intensive training in typewriting, office machines, bookkeeping, and word processing. Management principles and human relations skills are also stressed.

OFFICE CAREERS

ASSOCIATE DEGREE PROGRAM

1st Semester		**Credit Hrs.**
BUS 105	Introduction to Business	3
BUS 131	Bookkeeping I	3
or		
BUS 201	Principles of Accounting I	3
BUS 160	Office Machines	3
BUS 172	Beginning Typewriting	3
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
		15

2nd Semester

BUS	162	Office Procedures	3
BUS	174	Intermediate Typewriting	2
BUS	231	Business Correspondence	3
HUM	101	Introduction to Humanities	3
COM	132	Applied Composition and Speech	3
	or		
ENG	102	Composition and Literature	3
MTH	130	Business Math	3
			17

3rd Semester

BUS	132	Bookkeeping II	3
	or		
BUS	202	Principles of Accounting II	3
BUS	165	Introduction to Word Processing	3
BUS	234	Business Law	3
BUS	273	Advanced Typewriting	2
PSY	131	Human Relations	3
			17

4th Semester

BUS	237	Organizational Behavior	3
BUS	256	Office Management	3
BUS	265	Word Processing Practices & Procedures	3
BUS	275	Secretarial Procedures	3
		*Elective	3
			15

***Electives**

Three hours of electives are required for this program. Following is a list of suggested electives.

			Credit Hrs.
BUS	136	Principles of Management	3
BUS	803	Cooperative Work Experience	3
	or		
BUS	813	Cooperative Work Experience	3
CS	175	Introduction to Computer Science	3
ECO	201	Principles of Economics I	3
PSY	105	Introduction to Psychology	3
SOC	101	Introduction to Sociology	3

SECRETARIAL CAREERS — CERTIFICATE PROGRAM

The purpose of this program is to provide students with the basic skills necessary to enter the secretarial field in a minimum amount of time. Intensive training is provided in the basic secretarial skills such as shorthand, typewriting, and office machines. Emphasis is also placed on English and math skills.

SECRETARIAL CAREERS

CERTIFICATE PROGRAM

			Credit Hrs.
1st Semester			
BUS	105	Introduction to Business	3
BUS	131	Bookkeeping I	3
	or		
BUS	201	Principles of Accounting I	3
BUS	159	Beginning Shorthand	4
BUS	172	Beginning Typewriting	3
MTH	130	Business Mathematics	3
			16
2nd Semester			
BUS	162	Office Procedures	3
BUS	165	Introduction to Word Processing	3
BUS	166	Intermediate Shorthand	4
BUS	174	Intermediate Typewriting	2
BUS	231	Business Correspondence	3
			15
Summer Session			
BUS	160	Office Machines	3
COM	131	Applied Composition and Speech	3
	or		
ENG	101	Composition and Expository Reading	3
			6

SECRETARIAL CAREERS — ASSOCIATE DEGREE PROGRAM

The purpose of this program is to prepare students to become alert and responsible secretaries capable of performing the tasks required of them in the modern business office. Extensive training is provided in the basic secretarial skills such as shorthand, typewriting, office machines, and word processing. Emphasis is also placed on English, math, and human relations skills. Decision making skills are stressed during the advanced courses.

SECRETARIAL CAREERS

ASSOCIATE DEGREE PROGRAM

			Credit Hrs.
1st Semester			
BUS	105	Introduction to Business	3
BUS	131	Bookkeeping I	3
	or		
BUS	201	Principles of Accounting I	3
BUS	159	Beginning Shorthand	4
BUS	172	Beginning Typewriting	3
MTH	130	Business Mathematics	3
			16

2nd Semester

BUS	162	Office Procedures	3
BUS	166	Intermediate Shorthand	4
BUS	174	Intermediate Typewriting	2
BUS	231	Business Correspondence	3
HUM	101	Introduction to Humanities	3
			15

Summer Session

BUS	160	Office Machines	3
COM	131	Applied Composition and Speech	3
or			
ENG	101	Composition and Expository Reading	3
			6

3rd Semester

			Credit Hrs.
BUS	165	Introduction to Word Processing	3
BUS	266	Advanced Shorthand	4
BUS	273	Advanced Typewriting	2
COM	132	Applied Composition and Speech	3
or			
ENG	102	Composition and Literature	3
		*Elective	3-4
			15-16

4th Semester

BUS	265	Word Processing & Procedures	3
BUS	275	Secretarial Procedures	3
PSY	131	Human Relations	3
CS	175	Introduction to Computer Sciences	3
		*Elective	3-4
			15-16

***Electives**

A minimum of six hours of electives are required for this program. Following is a list of suggested electives.

			Credit Hrs.
BUS	136	Principles of Management	3
BUS	143	Personal Finance	3
BUS	234	Business Law	3
BUS	237	Organizational Behavior	3
BUS	256	Office Management	3
PSY	105	Introduction to Psychology	3
SPE	105	Fundamentals of Public Speaking	3
BUS	803	Cooperative Work Experience	3
BUS	804	Cooperative Work Experience	4
BUS	813	Cooperative Work Experience	3
BUS	814	Cooperative Work Experience	4

LEGAL SECRETARY

The Legal Secretary Program is designed to prepare the student for a legal secretarial career. Intensive training is provided in secretarial skills such as typewriting, shorthand, word processing, and office machines. Emphasis is also placed on English, math, and human relations skills. In addition, students receive specialized training in legal secretarial procedures and legal terminology and transcription.

LEGAL SECRETARY

ASSOCIATE DEGREE PROGRAM

1st Semester		Credit Hrs.
BUS 105	Introduction to Business	3
BUS 131	Bookkeeping I	3
or		
BUS 201	Principles of Accounting I	3
BUS 159	Beginning Shorthand	4
BUS 172	Beginning Typewriting	3
MTH 130	Business Mathematics	3
		16

2nd Semester

BUS 162	Office Procedures	3
BUS 166	Intermediate Shorthand	4
BUS 174	Intermediate Typewriting	2
BUS 231	Business Correspondence	3
HUM 101	Introduction to Humanities	3
		15

Summer Session

BUS 160	Office Machines	3
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
		6

3rd Semester

BUS 165	Introduction to Word Processing	3
BUS 167	Legal Terminology and Transcription	3
BUS 273	Advanced Typewriting	2
COM 132	Applied Composition and Speech	3
or		
ENG 102	Composition and Literature	3
BUS 266	Advanced Shorthand	4
		15

4th Semester

BUS 265	Word Processing Practices & Procedures	3
BUS 275	Secretarial Procedures	3
BUS 274	Legal Secretarial Procedures	3
PSY 131	Human Relations	3
CS 175	Introduction to Computer Sciences	3
		15

Credit Given for CPS Rating

Credit toward an Associate Degree may be granted upon successful completion of all parts of the Certified Professional Secretary (CPS) Exam. The courses for which credit may be granted are:

BUS 131	Bookkeeping I	3
BUS 159	Beginning Shorthand	4
BUS 162	Office Procedures	3
BUS 166	Intermediate Shorthand	4
BUS 172	Beginning Typewriting	3
BUS 174	Intermediate Typewriting	2
BUS 231	Business Correspondence	3
BUS 234	Business Law	3
BUS 275	Secretarial Procedures	3
PSY 131	Human Relations	3
		31

In order to receive credit, the applicant must:

1. Request direct notification be given to the Registrar of the College by the Institute for Certifying Secretaries that the applicant has passed all sections of the exam.
2. Earned 12 hours credit for courses at Cedar Valley before the advanced standing credit is posted on the applicant's record.

OUTBOARD MARINE ENGINE MECHANICS

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.

OUTBOARD MARINE ENGINE MECHANICS

CERTIFICATE PROGRAM

			Credit Hrs.
1st Semester			
EM	100	Shop Practices	3
EM	110	Engine Fundamentals	6
MTH	195	Technical Mathematics	3
			12
2nd Semester			
OE	150	Marine Engine Fuel Systems	3
OE	160	Marine Engine Ignition Systems	3
OE	170	Marine Engine Electrical Systems	3
			9
3rd Semester			
OE	230	Single & Twin Cylinder Powerheads	3
OE	235	In Line Multi-Cylinder Powerheads	3
OE	240	"V" Multi-Cylinder Powerheads	3
			9
4th Semester			
OE	245	Manual Shift Lower Units	3
OE	250	Electrical Shift Lower Units	3
OE	255	Marine Engine Auxiliary Systems	3
			9

OUTBOARD MARINE ENGINE MECHANICS

ASSOCIATE DEGREE PROGRAM

			Credit Hrs.
1st Semester			
EM	100	Shop Practices	3
EM	110	Engine Fundamentals	6
MTH	195	Technical Mathematics	3
			12
2nd Semester			
OE	150	Marine Engine Fuel Systems	3
OE	160	Marine Engine Ignition Systems	3
OE	170	Marine Engine Electrical Systems	3
		*Elective	3
			12
Summer Session			
PHY	131	Applied Physics	4
3rd Semester			
OE	230	Single & Twin Cylinder Powerheads	3
OE	235	In Line Multi-Cylinder Powerheads	3
OE	240	"V" Multi-Cylinder Powerheads	3
		*Elective	3
			12

4th Semester

OE	245	Manual Shift Lower Units	3
OE	250	Electrical Shift Lower Units	3
OE	255	Marine Engine Auxiliary Systems	3
		*Electives	6
			15

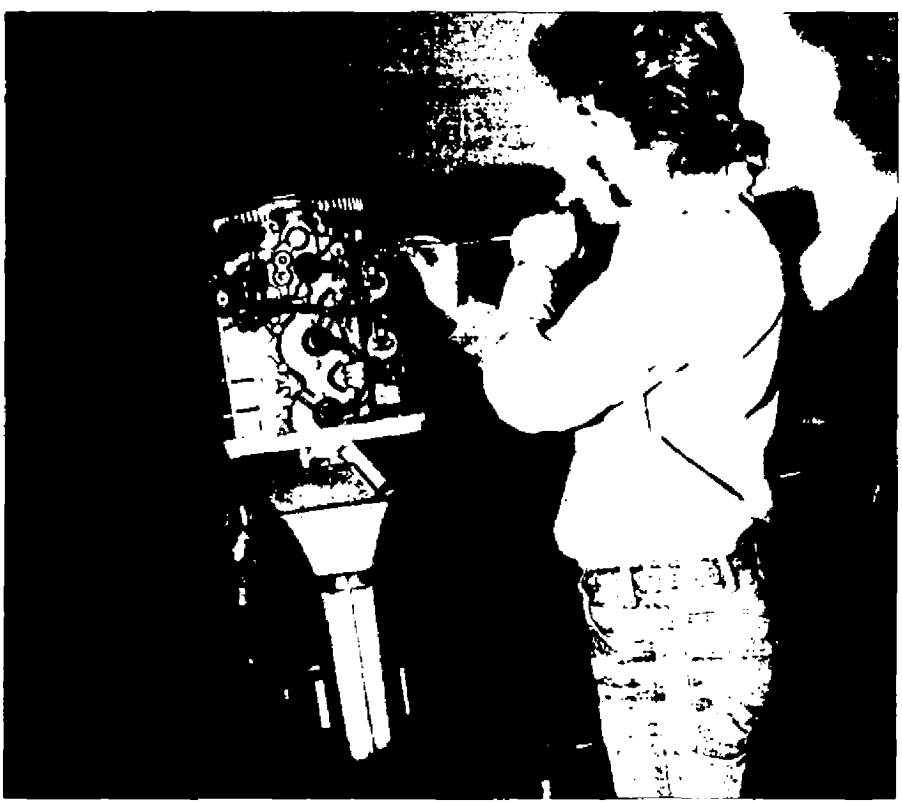
Summer Session

COM	131	Applied Composition & Speech	3
SS	131	American Civilization	3
			6

***Electives**

Twelve hours of electives are required and shall be selected from the following list of courses:

			Credit Hrs.
COM	132	Applied Composition & Speech	3
PSY	131	Human Relations	3
BUS	105	Introduction to Business	3
BUS	131	Bookkeeping	3
BUS	136	Principles of Management	3
BUS	153	Small Business Management	3
BPR	177	Blueprint Reading	2
EM	713	Work Experience	3
EM	714	Work Experience	4
EM	813	Work Experience	3
EM	814	Work Experience	4



RETAIL DISTRIBUTION AND MARKETING — COMMERCIAL DESIGN AND ADVERTISING

This two-year program is designed to prepare students 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 area in addition to business courses and also have the option of working in the commercial area through a sponsoring business firm.

RETAILING DISTRIBUTION AND MARKETING —
COMMERCIAL DESIGN AND ADVERTISING

ASSOCIATE DEGREE PROGRAM

		Credit Hrs.
1st Semester		
ART 110	Design I	3
ART 114	Drawing I	3
ART 210	Commercial Art I	3
MTH 130	Business Math	
or		
BUS 201	Accounting	
or		
BUS 131	Bookkeeping	3
COM 131	Applied Composition and Speech	
or		
ENG 101	Composition and Expository Reading	3
BUS 106	Professional Development	1
		16
2nd Semester		
ART 111	Design II	3
ART 115	Drawing II	3
ART 211	Commercial Art II	3
BUS 107	Professional Development	1
COM 132	Applied Composition and Speech	
or		
ENG 102	Composition and Literature	3
CS 175	Introduction to Computer Science	3
		16
3rd Semester		
BUS 206	Principles of Marketing	3
BUS 243	Professional Development — Organizational Competition	1
BUS 703	Work Experience	
or		
BUS 247	Simulated Business Training I	3
SPE 105	Fundamentals of Public Speaking	3
PSY 131	Human Relations	3
	*Electives	6
		19
4th Semester		
BUS 230	Salesmanship	3
BUS 233	Advertising and Sales Promotion	3
BUS 244	Professional Development	1
BUS 713	Work Experience	
or		
BUS 248	Simulated Business Training II	3
ECO 201	The Principles of Economics I	3
	*Electives	6
		19

***Electives**
Following is a list of recommended electives:

BUS	136	Principles of Management
BUS	137	Principles of Retailing
BUS	246	Marketing and Management Cases
ART	212	Advertising Illustration
ART	118	Creative Photography I
ART	119	Creative Photography II
ART	122	Advertising Design
ART	213	Commercial Design Group

RETAIL DISTRIBUTION AND MARKETING — FASHION MERCHANDISING

This two-year program is designed to prepare students for career opportunities in the field of fashion merchandising. During the first year of the program, students will take basic courses in business, communications, economics, and psychology. During the second year, students will be studying specialized courses in fashion buying, merchandising, and design and also have the option of working in the fashion merchandising area through a sponsoring business firm.

RETAIL DISTRIBUTION AND MARKETING — FASHION MERCHANDISING

ASSOCIATE DEGREE PROGRAM

1st Semester		**Credit Hrs.**
BUS 106	Professional Development	1
BUS 137	Principles of Retailing	3
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
MTH 130	Business Math	3
or		
BUS 201	Accounting	3
or		
BUS 131	Bookkeeping	3
PSY 131	Human Relations	3
	*Elective	3
		16

2nd Semester		
BUS 107	Professional Development — Local Organizations	1
BUS 230	Salesmanship	3
COM 132	Applied Composition and Speech	3
or		
ENG 102	Composition and Literature	3
CS 175	Introduction to Computer Sciences	3
ECO 201	Principles of Economics I	3
	*Elective	3
		16

3rd Semester			Credit Hrs.
BUS	206	Principles of Marketing	3
BUS	243	Professional Development — Organizational Competition	1
BUS	290	Fashion Buying	3
BUS	291	Fashion Merchandising	3
BUS	703	Work Experience	
	or		
BUS	247	Simulated Business Training I	3
		*Elective	3
			16

4th Semester			
BUS	233	Advertising and Sales Promotion	3
BUS	244	Professional Development — State and National Organizations	1
BUS	292	Fashion Design	3
DES	135	Textiles	3
BUS	713	Work Experience	3
	or		
BUS	248	Simulated Business Training II	3
SPE	105	Fundamentals of Public Speaking	3
		*Elective	3
			19

***Electives**

Twelve hours of electives are required for this program. Following is a list of suggested electives.

			Credit Hrs.
BUS	136	Principles of Management	3
BUS	242	Personnel Administration	3
BUS	245	Sales Management	3
BUS	246	Marketing and Management Cases	3

RETAIL DISTRIBUTION AND MARKETING — RETAIL MANAGEMENT

This two-year program is designed to prepare students for career opportunities in the field of retail management. During the first year of the program, students will take basic courses in business, communications, economics, and psychology. During the second year, students will specialize in retail management courses such as personnel administration and sales management. Students will also have the option of working in the retail area through a sponsoring business firm.

RETAIL DISTRIBUTION AND MARKETING —
RETAIL MANAGEMENT

ASSOCIATE DEGREE PROGRAM

1st Semester		Credit Hrs.
BUS 106	Professional Development	1
BUS 136	Principles of Management	3
COM 131	Applied Composition and Speech	3
or		
ENG 101	Composition and Expository Reading	3
MTH 130	Business Math	3
or		
BUS 201	Accounting	3
or		
BUS 131	Bookkeeping	3
PSY 131	Human Relations	3
	*Elective	3
		16

2nd Semester

BUS	107	Professional Development Local Organizations	1
BUS	230	Salesmanship	3
COM	132	Applied Composition and Speech	3
	or		
ENG	102	Composition and Literature	3
CS	175	Introduction to Computer Science	3
ECO	201	Principles of Economics I	3
		*Elective	3
			16

3rd Semester

BUS	137	Principles of Retailing	3
BUS	206	Principles of Marketing	3
BUS	242	Personnel Administration	3
BUS	243	Professional Development — Organizational Competition	1
BUS	703	Work Experience	3
	or		
BUS	247	Simulated Business Training I	3
		*Elective	3
			16

4th Semester

BUS	233	Advertising and Sales Promotion	3
BUS	244	Professional Development State and National Organizations	1
BUS	245	Sales Management	3
BUS	246	Marketing and Management Cases	3
BUS	713	Work Experience	3
	or		
BUS	248	Simulated Business Training II	3
SPE	105	Fundamentals of Public Speaking	3
		*Elective	3
			19

***Electives**

Twelve hours of electives are to be chosen after consultation with a faculty advisor.

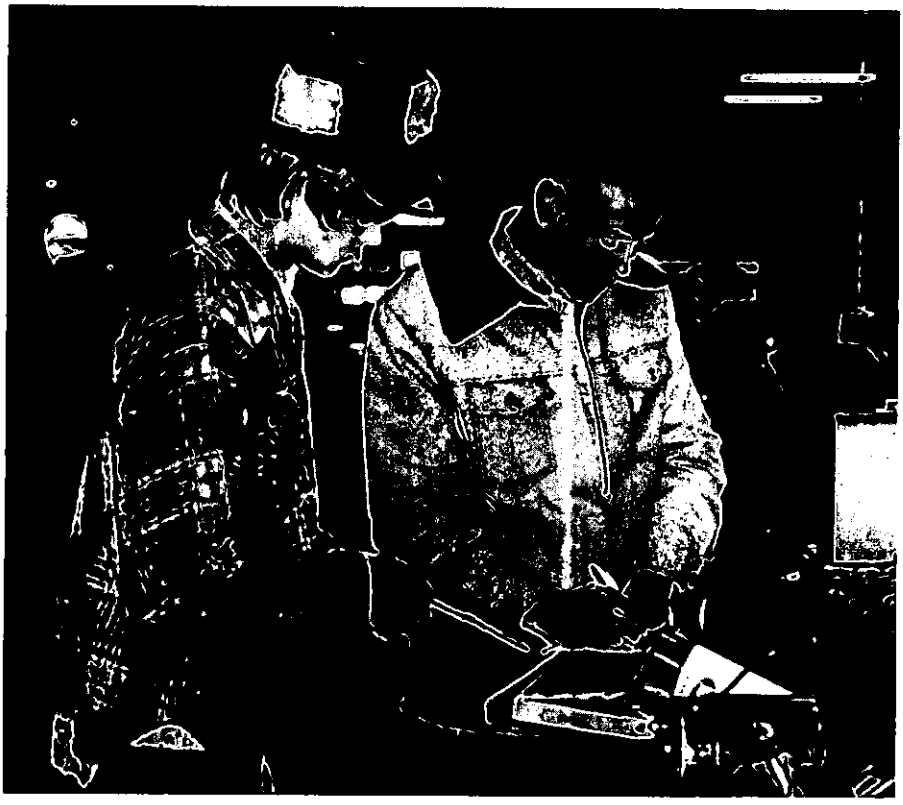
SMALL ENGINE MECHANICS

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 engine 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.

SMALL ENGINE MECHANICS

CERTIFICATE PROGRAM

			Credit Hrs.
1st Semester			
EM	100	Shop Practices	3
EM	110	Engine Fundamentals	6
MTH	195	Technical Mathematics	3
			12
2nd Semester			
SE	180	Small Engine Carburetion	3
SE	260	Small Engine Electrical Systems	3
SE	280	Power Transfer Systems	3
			9
3rd Semester			
SE	270	Engine Overhaul & Tune-Up	6



SMALL ENGINE MECHANICS

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 engine 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.

SMALL ENGINE MECHANICS

CERTIFICATE PROGRAM

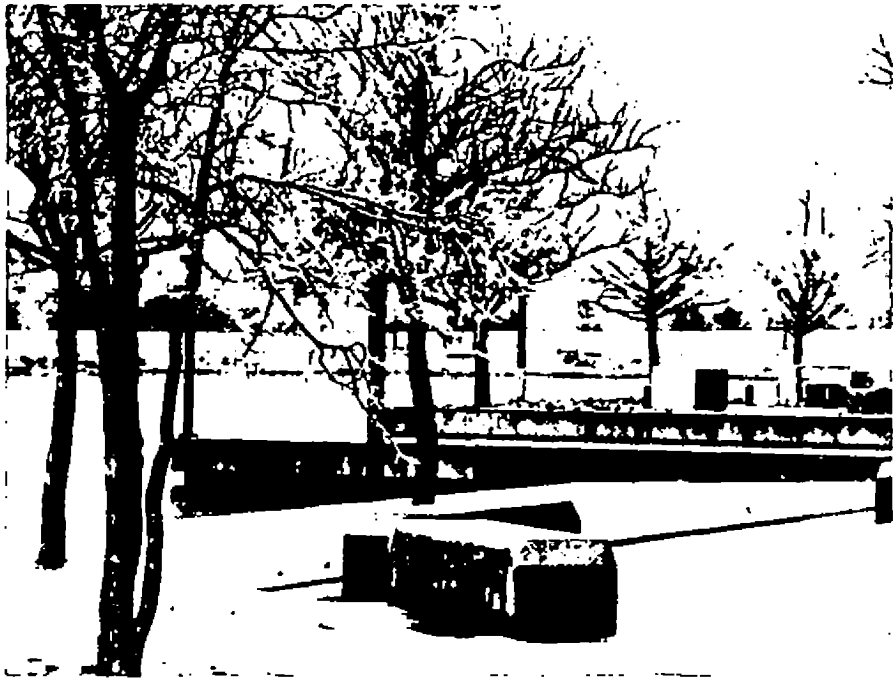
			Credit Hrs.
1st Semester			
EM	100	Shop Practices	3
EM	110	Engine Fundamentals	6
MTH	195	Technical Mathematics	3
			12
2nd Semester			
SE	180	Small Engine Carburetion	3
SE	260	Small Engine Electrical Systems	3
SE	280	Power Transfer Systems	3
			9
3rd Semester			
SE	270	Engine Overhaul & Tune-Up	6

ASSOCIATE DEGREE PROGRAM

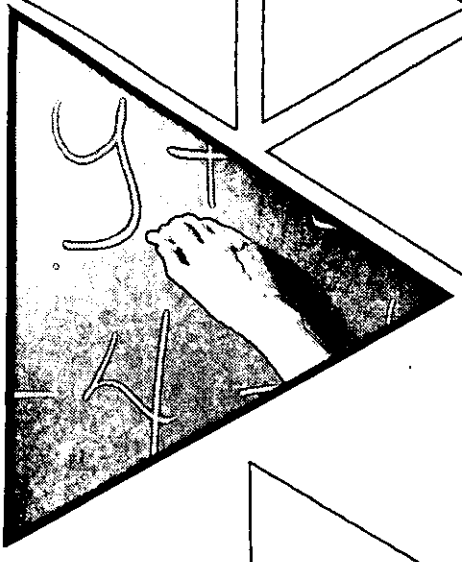
1st Semester			
EM	100	Shop Practices	3
EM	110	Engine Fundamentals	6
MTH	195	Technical Mathematics	3
			12
2nd Semester			
SE	180	Small Engine Carburetion	3
SE	260	Small Engine Electrical Systems	3
		*Electives	6
			12
Summer Session			
PHY	131	Applied Physics	4
3rd Semester			
SE	270	Engine Overhaul & Tune-Up	6
COM	131	Applied Composition & Speech	3
		*Electives	3
			12
4th Semester			
SE	280	Power Transfer Systems	3
SS	131	American Civilization	3
		*Electives	9
			15
Summer Session			
		*Electives	6

***Electives**
Following is a list of recommended electives:

			Credit Hrs.
COM	132	Applied Composition & Speech	
PSY	131	Human Relations	3
BUS	105	Introduction to Business	3
BUS	131	Bookkeeping	3
BUS	136	Principles of Management	3
BUS	153	Small Business Management	3
EM	713	Work Experience	3
EM	714	Work Experience	4
EM	803	Work Experience	3
EM	804	Work Experience	4
EM	813	Work Experience	3
EM	814	Work Experience	4



Faculty & Staff



FACULTY AND STAFF

James A. Adkins, Physics & Astronomy
B.S., University of Texas-Arlington; M.A., University of Texas-Arlington

Ron Beecham, Biology
B.S., East Texas State University; M.S., East Texas State University

Walter N. Beene, Vice President-Business Services
B.S., University of Houston

Russell E. Benzamin, Music
B.S., Southwest Missouri State University; M.A., North Colorado State University

Keith Bilbrey, Air Conditioning
A.A.S., Tarrant County Junior College

Don R. Boardman, Automotive Technology

Carolyn D. Boswell, Associate Registrar/IS User Coordinator
A.A.A.S., El Centro College

Jean Billingslea Brown, English
A.B., Rutgers University; M.A., Atlanta University

Nora Busby, Instructional Development Consultant
B.S., Florida State University; M.S., Florida State University

Brucie Cavett, Physical Education/Intramural Director
B.S., Texas Woman's University; M.S., Texas Woman's University

Florence L. Chester, Library Services
B.S., North Texas State University

Calvin L. Christman, History
A.B., Dartmouth College; M.A., Vanderbilt University; M.A.T., Vanderbilt University; Ph.D., Ohio State University

Thomas W. Cobb, Assistant Librarian
B.S., East Texas State University; M.S./L.S., East Texas State University

Joseph Cortina, Reading
A.A., Citrus Community College; B.A., San Diego State University; M.Ed., North Texas State University; Certified Reading Specialist/Texas

Joanne Cox, Director of Counseling
B.A., Wake Forest University; M.Ed., University of South Carolina

C. Edward Dawson, Music
B.A., University of North Carolina; M.M., University of North Carolina

Mary E. Davidson, Division Chairperson, Communications/Humanities Division
B.S., Texas Woman's University; M.A., Texas Woman's University; Ed.D., North Texas State University

Roger E. Dismore, Music
B.M.E., North Texas State University; M.M.E., North Texas State University

Brian D. Earle, Science
B.S., North Texas State University

David Theodore Eishen, Air Conditioning/Refrigeration
A.A.S., Tarrant County Junior College

Floyd S. Elkins, President
B.S., University of Texas-Austin; M.Ed., University of Texas-Austin; Ph.D., University of Texas-Austin

Norman R. Fletcher, Mathematics
A.S., Texarkana College; B.S., East Texas State University; M.S., East Texas State University

Gale Fraizer, Coordinator Assessment Center/Services For The Handicapped
B.S., Oklahoma State University; M.S., Oklahoma State University

Patsy J. Fulton, Division Chairperson, Business/Social Sciences Division
B.B.A., North Texas State University; M.B.E., North Texas State University; Ph.D., North Texas State University

Edward H. Garcia, Journalism
B.A., University of Texas-Austin; M.A., Ohio State University; Ph.D., University of Texas-Austin

Ines Gehrmann, Director of Library Services
B.A., Tarleton State University; M.L.S., State University of New York: Geneseo

LeRoyal Hampton, Automotive Technology
East Texas University

Jim Harlow, Counselor
B.B.A., East otexas State University; M.S., East Texas State Univers ty

David Hawes, Director of Student Financial Aid
B.B.A., North Texas State University; M.Ed., North Texas State University

Diana M. Henshaw, Assistant Dean-Community Services
B.S., East Carolina University; M.Ed., North Carolina State University

Carolyn Deal Henson, College Nurse
Diploma, Hendrick Memorial Hospital; B.S.N., Hardin-Simmons University; R.N.

Larry Horton, Biology
B.S., Greenville College; M.A., Southern Illinois University

Mike Huddleston, Division Chairperson, Math/Science/PE/Technology Division
B.S., East Texas State University; M.S., East Texas State University

Johnny E. Hullett, Director of Security, Commissioned Law Officer, State of Texas

Ron Hutchings, Mathematics
B.A., University of Texas-Austin.

Jo Ann Jackson, Guidance Associate
B.A., Bishop College; M.Ed., Prairie View A&M

Roger E. Kinseth, Associate Dean-Technical/Occupational Programs
A.A., Tarrant County Junior College; A.A.S., Tarrant County Junior College; B.S., East Texas State University; M.S., East Texas State University

Joseph Kovach, Motorcycle, Outboard Marine Engine, Small Engine Mechanics

Cynthia Krause, Animal Medical Technology

Kathleen Krebbs, Director of Public Information
A.A.S., Dallas Baptist College; B.A., Dallas Baptist College; M.L.A., Southern Methodist University

Paul Lindsey, Air Conditioning and Refrigeration

William L. Lineberry, Animal Medical Technology
B.S., Texas A&M; Animal Technician Registered

Donna Mainzer, Co-operative Work Experience/Job Placement

Rick Maxwell, Art
B.A., University of Dallas; M.F.A., Southern Methodist University

Clarice McCoy, Accounting
B.S., Southeastern Oklahoma State University; M.B.A., East Texas State University

Bettie M. Meachum, Psychology
B.M.E., Northwestern State University; M.Ed., Northwestern State University; Ed.D., Baylor University

Peggy Meador, Secretarial Careers
A.A.A.S., El Centro College

Duncan A. Paul, Motorcycle, Outboard Marine Engine and Small Engine Mechanics
B.S., North Texas State University

Maria Perez, Evening Nurse
LVN, Nursing School, Memorial Hospital, Beeville, Tx.

John Pharr, Business and Retail Management
B.A., North Texas State University; M.S., North Texas State University

Joyce Powell, English
B.A., Mississippi College; M.A.Ed., University of Mississippi

Joel L. Riley, Counselor
B.S., Bishop College; M.Ed., North Texas State University

Eddie Robinson, Mathematics
B.S., Northeast Oklahoma State University; M.S., Oklahoma State University

Lincoln Rolling, Jr., History
B.A., Sam Houston State University; M.A., Sam Houston State University

Gordon R. Schwend, Automotive Technology
A.A., Santa Rosa Junior College

Phil Simmons, Automotive Technology Apprenticeship
B.S., East Texas State University

Ruth G. Shaw, Vice President-Instruction
A.B., East Carolina University; M.A., East Carolina University; Ph.D., University of Texas-Austin

Gerald B. Shilling, Mid-Management Coordinator/Business
B.B.A., Central State University-Oklahoma; M.B.A., University of Dallas

Debby Shingshang, Physical Education
B.S., North Texas State University

Ronald G. Slone, Mid-Management Coordinator/Business
B.B.A., East Texas State University; M.B.A., East Texas State University

Tim Sullivan, Anthropology/Sociology/Religion
B.A., University of Southern California; M.A., Southern Methodist University

Kenneth W. Thomas, Associate Dean-Extended Day Programs
B.A., Baylor University; M.A., University of Texas-Arlington

Dixie L. Thompson, Biology
A.A.S., Eastfield College; B.S., Texas A&M University

John Thompson, Director of Media Services
B.F.A., Southern Methodist University; M.Th., Southern Methodist University

Ruth J. Watkins, Associate Dean-Learning Resources
B.A., California State University-Los Angeles; M.A., California State University-Los Angeles

Manual L. Wigley, Director of Physical Plant

John W. Williamson, Director of Admissions & Registrar
A.A., Kilgore Junior College; B.S., East Texas State University; M.S., East Texas State University

Dave Wilkie, Athletic Director/Physical Education
B.S., Ball State University; M.A., Ball State University

David L. Wright, Animal Medical Technology
B.S., Texas A&M; D.V.M., Texas A&M

Rebecca Young, Fashion Merchandising
B.S., Iowa State University; M.S., Texas Woman's University; Ph.D., Texas Woman's University

Mary Ann Youngblood, English
B.A., University of Texas-Arlington; M.A., North Texas State University

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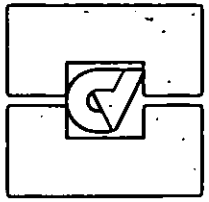

Cedar Valley College
303 N. Dallas Ave.
Lancaster, Texas 75134