SOUTHWESTERN
Technical Institute

1976 - 1977

CATALOG

SOUTHWESTERN TECHNICAL INSTITUTE

SYLVA, NORTH CAROLINA 28779

CATALOG 1976-1977

AN INSTITUTION
OF
THE NORTH CAROLINA DEPARTMENT
OF COMMUNITY COLLEGES

Mailing Address	Southwestern Technical Institute P. O. Box 95 Sylva, North Carolina 28779
Telephone Number	586-4091 Area Code 704

For prompt handling, inquiries should be addressed to the offices indicated below:

General Information	President
Business Affairs	Business Manager
Admissions Student Information Financial Aid Counseling Services	Director of Student Services
Vocational-Technical Programs	Dean of Instruction
Continuing Education	Director of Continuing Education

Visitors are always welcome at Southwestern Technical Institute. The Administrative Offices are open Monday through Thursday from 8 a.m. to 10 p.m. and Friday from 8 a.m. to 5 p.m. Visitors desiring interviews with members of the staff are urged to make appointments in advance.

CALENDAR
1976-77

FALL QUARTER
55 DAYS

Instructor In-Service	Wednesday, September 22 through Monday, September 27
Registration	Tuesday, September 28
Classes Begin	Wednesday, September 29
Fall Quarter Ends	Thursday, December 16
Instructor Work Day	Friday, December 17

Thanksgiving Holidays — November 25, 26

WINTER QUARTER
55 DAYS

Registration	Monday, January 3
Classes Begin	Tuesday, January 4
Winter Quarter Ends	Monday, March 21
Instructor Work Day	Tuesday, March 22

SPRING QUARTER
55 DAYS

Registration	Monday, March 28
Classes Begin	Tuesday, March 29
Spring Quarter Ends	Tuesday, June 14
Instructor Work Day	Wednesday, June 15

Easter Monday — April 11

SUMMER QUARTER
55 DAYS

Registration	Tuesday, July 5
Classes Begin	Wednesday, July 6
Summer Quarter Ends	Wednesday, September 21
Instructor Work Day	Thursday, September 22

Labor Day — September 5

FALL QUARTER, 1977

Registration — September 30, 1977
Classes Begin — October 3, 1977

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THE INSTITUTE

ADMISSIONS

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SERVICES TO STUDENTS

THE INSTITUTE

Under the Community College Act passed in 1963 by the North Carolina General Assembly, a system of comprehensive community colleges, technical institutes, and industrial education centers was created to operate under the State Board of Education.

Southwestern Technical Institute was founded in 1964 as an area educational institution within the system of community colleges of North Carolina. Jackson, Swain, and Macon counties make up the primary service area of this institution.

From the time of its creation in 1964 until January 1, 1968, it was part of Asheville-Buncombe Technical Institute. On January 1, 1968, the school became an independent institution and was renamed Southwestern Technical Institute.

The first building, which houses the vocational curricula, was constructed in 1965, followed in 1970 by the construction of a building housing Commercial Specialties, Human Services, and General Education. A third facility with administrative offices, additional classrooms, gymnasium, and cafeteria was completed in the summer of 1974.

Situated on a beautiful hill in the midst of a twenty-three acre tract of land with spectacular scenery in all directions, the Institute is located on Webster Road two miles south of Sylva, five miles from Western Carolina University, and twenty miles from the Cherokee Indian Reservation and Great Smoky Mountains National Park. Franklin is twenty miles to the west. Cashiers-Highlands is thirty miles south, and the Blue Ridge Parkway is twelve miles away.

PHILOSOPHY

The philosophy of Southwestern Technical Institute's open door policy has been stated by Dr. Dallas Herring, Chairman of the State Board of Education:

The only valid philosophy for North Carolina is the philosophy of total education; a belief in the incomparable worth of all human beings, whose claims upon the State are equal before the law and equal before the bar of public opinion; whose talents (however great or however different from the traditional), the state needs and must develop to the fullest possible degree.

This is why the doors to the institutions in North Carolina's system of community colleges must never be closed to anyone of suitable age who can learn what they teach. We must take the people where they are and carry them as far as they can go within the assigned function of the system.

PURPOSE

The purpose of Southwestern Technical Institute is to provide convenient learning opportunities for people of the area by offering vocational, technical and developmental programs and general adult education courses to any individual beyond high school age. These courses and programs will better prepare indivlduals to join the labor market as new employees, qualify them for employment opportunities in new and existing industry, provide specific skills training, and encourage personal improvement, self-satisfaction, and an understanding of the responsibilities and privileges of citizenship.
Specifically stated, the objectives are:

To provide educational opportunities for adults desiring to continue their educatlon.

To provide inexpensive, nearby educational opportunities for high school graduates.

To provide vocational programs for individuals seeking employment in trades.

To provide two-year technical programs for individuals desiring employment in business and industry.

To provide programs of vocational education for employed adults needing training, re-training or wishing to gain personal benefit from the program.

To provide suitable courses for individuals desiring to enrich their lives and to continue personal growth.

To offer testing, guidance and educational counseling services to students and prospective students, as well as to any other person in the area who has need of such service.

GENERAL ADMISSION REQUIREMENTS

Southwestern Technical Institute operates under the OPEN DOOR POLICY of the Department of Community Colleges and students are admitted without regard to race, religion, sex, or national origin. Thus, any person who is eighteen years old or older or is a high school graduate and is able to profit from further formal education, will be served by the institution.

Students will meet minimum requirements before being admitted to a specific curriculum. Deficiencies may be removed through courses available at Southwestern Technical Institute.

Admission to degree programs requires a high school diploma or the equivalent. Admission to diploma programs normally requires a high school diploma or the equivalent; however, an exception may be made for the applicant who demonstrates the ability and motivation to enter the curriculum. Southwestern Technical Institute administers the General Education Development Tests for applicants who have not completed high school.

ADMISSION PROCEDURES

Any applicant wishing to enroll in any curriculum program should:

1. Submit a completed admissions form to the Student Services Division.
2. Have records of all previous education mailed directly to the institution. Applicants who have the high school equivalency certificate should submit a copy of the certificate but should also ask their high school to send transcripts of all work done at the school. All transcripts must come directly from the school to the technical institute.
3. Arrange a personal interview with a counselor on the Student Services Staff.

In addition to the general admission procedures, all Practical Nursing applicants should complete the following:

1. Complete the G.A.T.B. test battery given through the North Carolina Employment Security Commission.
2. Complete physical and dental exams.
3. Supply three (3) references.

In addition to the general admission procedures, all Law Enforcement applicants should complete the following:

1. File physical exam form.
2. Submit a recommendation from any of the following: Sheriff of county in which applicant resides; a chief of police; a state or federal law enforcement officer.

ADMISSION PROCEDURES FOR SPECIAL STUDENTS

While most new students will be seeking enrollment in a curriculum and should follow the steps listed previously, the Institute recognizes that many adults in the community will wish to register for one or more courses as a student, but not a candidate for a degree or diploma. In order to encourage this type of Interest, the Institute will allow a qualified person to be admitted to the Institute and enroll for courses without taking the pre-enrollment test battery provided the person does not wish to enter a degree or diploma curriculum.

TRANSFER STUDENTS

Applicants, for day or night classes, either full-time or part-time, who have attended other colleges, universities, or technical institutes are responsible for having a transcript from each institution submitted directly to the Admissions Office. If official high school records are necessary, the applicant will be notified. All freshmen and sophomore courses in which passing grades were received are customarily accepted if they are applicable to the program selected at this institute and if they were earned at an accredited college or university, at an institution within the North Carolina Community College System, or at an institution approved by the Dean of Instruction.

Transcripts are not required of applicants who audit courses. Transcripts are not required for Visiting Students provided they have the written approval of the institution in which they are regularly enrolled. A minimum of two quarters of work must be taken at STI.

AUDITING

By special permission, an applicant may be admitted to certain courses as an auditor. Such students receive no credit for the course. Auditors will be expected to attend classes and participate in the same manner as credit students. Fees for auditing students will be identical to those charged to regular students. Transcripts are not required of applicants who audit courses.

FOREIGN STUDENTS

The Institute is authorized under Federal law to enroll non-immigrant alien students. Students enrolling under this classification will be treated as non-resident with respect to tuition and fees. An immigrant alien is subject to the same considerations as a citizen. Foreign students must have a sponsor living in the U. S.

ADMISSIONS AFTER FALL QUARTER

A student may be admitted to the Institution in certain curriculums in quarters other than fall quarter. In such cases, however, the Institution cannot assure that a sequential pattern of courses can be scheduled and that graduation can be attained in the number of quarters specified.

READMISSION

A student who officially withdraws from school or who is dropped because of excessive absences may be readmitted by submitting an application and conferring with his advisor and by arranging a conference with the admissions counselor and his advisor.

EXPENSES

TUITION PER QUARTER

Full-Time Student		$33.00
Part-Time Student (Per Quarter Credit Hour)		2.75
Extension Student (Per Class)		3.00
Activity Fee (Per Quarter)	12 Credit Hours	2.50
	9-11 Credit Hours	1.85
	6-8 Credit Hours	1.25
	0-5 Credit Hours	.50
Insurance (Per Year)		2.50

Graduation fees will be paid when the student registers for his last quarter of work prior to graduation.

ADDITIONAL FEES

In addition to the above fees, students enrolled in Cosmetology and Practical Nurse Education are required to pay an additional insurance fee and to purchase uniforms. Cosmetology students must purchase a cosmetology kit.

Because costs are so inexpensive, the institute does not provide for installment payments of fees and charges.

NON-RESIDENT FEES

Southwestern Technical Institute will charge out-of-state tuition in accordance with General Statutes 116-143.1, 1971, as amended by the 1973 General Assembly.

REFUNDS

Tuition refund for students shall not be made unless the student is, in the judgment of the Institution, compelled to withdraw for unavoidable reasons. In such cases, two-thirds of the student's tuition may be refunded if the student officially withdraws within 10 calendar days after the first day of classes as published in the school calendar. Tuition refunds will not be considered after that time. Tuition refunds will not be considered for tuitions of five dollars ($5.00) or less, unless a course or curriculum fails to materialize.

In order to comply with federal regulations in institutions not regionally accredited, the State Board authorized modifications of the tuition refund policy so that veterans or war orphans receiving benefits under U.S. Code, Title 38, Chapters 33 and 35, can be refunded the pro rata portion of the tuition fee not used up at the time of withdrawal of such students.

OBLIGATION TOWARD TUITION AND FEES

Tuition and fees are due and payable at the time of the student's registration. No student will be permitted to graduate or register for a new quarter if he has an unpaid balance due or an account from any previous quarter unless payment of such an outstanding balance has been guaranteed in writing by a financially responsible person or organization.

Any student experiencing special difficulties may make special arrangements with the business manager.

In the event a student completes registration and withdraws before paying the appropriate fees and tuition, the institution will make three attempts during the current year by letter and personal contact to collect these funds. If the institution is unsuccessful, the account will be turned over to the North Carolina Attorney General's office for disposition.

TEXTBOOKS

All curriculum students will be expected to purchase adopted textbooks In all courses. These textbooks will be sold at less than retail price to students. Every effort will be made to keep the quarterly price of all textbooks between $15 and $30.

Recommended textbooks are to be purchased at the beginning of the quarter in which they are to be used. Textbooks used in any one quarter must be purchased by the end of the second week of classes of that particular quarter.

STUDENT FINANCIAL AID

The purpose of the Financial Aid Program at Southwestern Technical Institute is to provide financial assistance to students who, without aid, would be unable to attend the Institute. Financial assistance is available to needy students in the form of loans, grants, work study and scholarships. These programs may be used in combination or singly to meet the expenses of students whose parents cannot totally finance their education.

Financial aid applications are available at the STI Students Services Office. Parents Confidential Statement forms may be obtained from high school guidance counselors or from the Student Services Office at the Institute. Students submitting PCS forms should designate Southwestern Technical Institute as the school recipient. Applications should be filed as early as possible to allow time for processing.

COLLEGE WORK STUDY PROGRAM

A program of employment in which the student, particularly from a low Income family, is compensated for the number of hours he works for the Institute or an off campus agency. Students who are employed in this program may work up to 15 hours per week while attending classes full time. During vacation periods, when the student is not in school, he may work up to 40 hours per week. On campus jobs can include work in offices, shops, libraries, and maintenance.

The Federal Government currently provides 80 percent of student earnings. The Institute and participating organizations arrange for the other 20 percent.

VOCATIONAL WORK STUDY PROGRAM

A limited number of students may be employed on a part time basis by the Institute under the provisions of the federal work study program. Applicants for work study must be under 21 years of age and show that earnings are needed to commence or continue training at the Institute on a full-time basis.

BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM

This is a new federal program of student financial aid which provides for grants of $1400 less the expected family contribution for all eligible students to assist them in meeting educational costs. The concept of this program is one of *entitlement,* "That every eligible student with demonstrated need is assured financial resources to continue his education beyond high school." The Basic Grant program will potentially assist students from families up to an income level of approximately $13,000.

A student who wishes to receive a Basic Grant must complete an Application For Determination Of Basic Grant Eligibility. This form can be obtained in the Student Services Office, high school counselor's office, post offices, and libraries.

N. C. STUDENT INCENTIVE GRANT PROGRAM

Legal residents of North Carolina accepted for enrollment or enrolled full time, in good standing, may apply for Student Incentive Grants to help pay their educational expenses. Students must demonstrate "substantial financial need" as determined through the need analysis system of either the College Scholarship Service or American College Testing Program. The amount of each grant will be based on the individual student's demonstrated financial need in relation to resources and cost of education but may not exceed $1,500 per academic year. SPECIAL NOTE: All students applying for Incentive Grants must first apply for Basic Grants. Both Incentive Grant and Basic Grant applications are available from the student aid office at Southwestern Tech and high school counselor's offices.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS

This program provides grants to students of exceptional financial need, who, for the lack of financial means of their own or of their families, would be unable to enter or to remain at the Institute. Grants, ranging from $200 to $1,000, are available to a limited number of students and must be matched with other aid funds. Supplemental Grants do not have to be repaid.

NATIONAL DIRECT STUDENT LOANS

The National Direct Student Loan Program provides long term, low interest loans to qualified students in need of financial assistance to pursue a course of study at the Institute. A student may borrow up to $1,000 for each year of study. The repayment period and interest, at the rate of 3 percent, begins nine months after a student ends his studies at the Institute.

The Federal Government provides 90 percent of each student loan. The Institute provides the other 10 percent.

COLLEGE FOUNDATION INCORPORATED LOAN FUND

Legal residents of North Carolina who are enrolled or have been accepted for enrollment in an eligible college, university, technical or vocational school in a full-time undergraduate program are eligible to apply. Applicants must meet certain academic requirements as related to their course of study and must provide proof of financial need. Students in good standing may reapply each year that additional funds are needed.

NORTH CAROLINA STATE BOARD OF EDUCATION STUDENT LOAN FUND

Full-time students enrolled in a vocational or technical program In an institution under the North Carolina Department of Community Colleges may borrow a maximum of $300 per year.

JAMES FRANK COWAN MEMORIAL STUDENT LOAN FUND

This fund was established by friends and fellow STI staff members at the time of Mr. Cowan's death in October, 1974.

The purpose of the fund is to provide short duration loans in small amounts to full-time students.

ROTARY CLUB LOAN FUND

A limited amount of money is available to students enrolled in vocational programs in the form of emergency loans, sponsored by the Sylva Rotary Club.

FIRST UNION NATIONAL BANK

The Educational Checkloan is designed for those families who can afford higher education for their children but need to spread the cost over a number

of years. A flexible program, it allows any qualified resident of North Carolina to borrow up to $10,000 for four years of higher education.

SUZANNE M. DAVIS

Low interest loans are available to Cherokee Indians through the Suzanne M. Davis Loan Fund administered through the Historical Association, Cherokee, North Carolina.

LAW ENFORCEMENT EDUCATION PROGRAM

LEEP was established by Congress to provide for and encourage training, education, research and development for the purpose of improving law enforcement by increasing the educational level of its personnel. To this end, Congress saw fit to provide financial assistance to allow in-service law enforcement officers to continue their education at the college and university level.

NURSING SCHOLARSHIPS

The Health Careers Scholarship Program of the James G. K. McClure Educational and Development Fund is to aid financially deserving and academically promising residents of Western North Carolina to enter the Licensed Practical Nursing Program. Evidence of Christian character and the desire to be of service to one's fellowmen are considered of basic importance in the selection of the recipients.

W. N. C. LUNG ASSOCIATION SCHOLARSHIP

The Western North Carolina Lung Association grants a scholarship to the Institute each year to be used by a student enrolled in the Practical Nursing Education Program.

GREENEBAUM SCHOLARSHIPS

The James G. K. McClure Educational and Development Fund provides scholarships, given by the family and friends of the late Edward De Zulueta Greenebaum, for residents of Jackson County. Awards are based upon scholarship, financial need and recommendations.

ART SCHOLARSHIP

Southwestern Technical Institute offers four scholarships each year to the four top contestants in the annual Commercial Art contest sponsored by the school.

AD CLUB SCHOLARSHIP

The Western North Carolina Advertising Club sponsors a scholarship for a second-year student enrolled at the Institute in the Commercial Art and Advertising Design Program.

TOMMY LOVE MEMORIAL SCHOLARSHIP

This scholarship will pay tuition for one year at Southwestern Technical Institute for a deserving graduate of Sylva-Webster High School.

ALCOA FOUNDATION SCHOLARSHIPS

Alcoa Foundation of Pittsburgh awards scholarships to eligible students in the counties of Macon, Jackson, Swain, Graham and Cherokee. These scholarships are administered through the STI Student Financial Aid Office.

HAROLD'S SUPERMARKET SCHOLARSHIP

This program provides a scholarship each year for employees of Harold Potts or their children. If there are no applicants in the above category, then the Scholarship is open to anyone from Jackson County who demonstrates a financial need.

MACON COUNTY RETIRED TEACHERS ASSOCIATION

NURSING SCHOLARSHIP

This scholarship will pay tuition for one year for a Macon County student entering the Licensed Practical Nurses Program at Southwestern Technical Institute.

SOUTHWESTERN TECHNICAL INSTITUTE FOUNDATION

STUDENT FINANCIAL AID

The Southwestern Technical Institute Foundation Student Aid Program is designed to complement the present aid program operated by the Institute. Applications may be obtained from the Student Services Office.

THE STUDENT SCHOLARSHIP AND GRANT PROGRAM will serve all students, especially those not qualified for federal aid.

STUDENT EMPLOYMENT is a program to aid both the student and Southwestern Technical Institute as students use their skills and knowledge in support of the Institute and its purpose,

The *STUDENT LOAN PROGRAM* will provide long-term, low interest loans to students who otherwise would be unable to attend Southwestern Technical Institute.

The *EMERGENCY LOAN FUND* is a short-term or "petty cash" loan fund to permit the Institute to satisfy the emergency needs of students. Emergency needs may include tuition, fees, books, rent or grocery money, etc. This fund will provide small amounts of money for a short period of time.

DARRIS GREENE MEMORIAL FUND provides loans to students entering the Commercial Art and Advertising Design Program at the Institute.

NORTH CAROLINA DIVISION OF REHABILITATION

The Institute Is approved for the training and education of personnel who qualify under the provisions of the North Carolina Division of Vocational Rehabilitation, Department of Public Instruction.

SOCIAL SECURITY ADMINISTRATION

Eligible persons may receive educational benefits from the Social Security Administration if the head of the household is over 62 and retired or disabled.

BUREAU OF INDIAN AFFAIRS

Educational assistance is provided to the Cherokee Indians through the Bureau of Indian Affairs, Cherokee, North Carolina.

ACADEMIC INFORMATION

DEGREE PROGRAM

Southwestern Technical Institute will confer an Associate of Applied Science degree in the name of the State Board of Education in all technical curricula. A state comprehensive examination may be required before graduation in any technical curriculum.

DIPLOMA PROGRAM

Southwestern Technical Institute will grant diplomas in the name of the Southwestern Technical Institute Board of Trustees upon successful completion of any vocational level curricula four quarters in length (or the part-time equivalency). A state comprehensive examination may be required before graduation in any vocational level curriculum.

CERTIFICATE PROGRAM

Certificates will be issued in the name of Southwestern Technical Institute to students who successfully complete curricula less than four full quarters in length.

GRADING SYSTEM

Grades will be issued the end of the term. Students enrolled in any curriculum will be graded by the following system:

A 93-100 Excellent
B 84-92 Above Average
C 75-83 Passing or Average
I Incomplete
R-Repeat Course
W-Wlthdrawal
S-Credit by examination
Aud-Audit

INCOMPLETES

An "I", or Incomplete, indicates that a student has done work of a passing grade in a course but has not completed all required work. (Must have completed a min. of 70% of Requirements). It is the student's responsibility to have this deficiency removed withln the followlng quarter. When in the judgment of the Instructor a student is not making a reasonable effort to remove the Incomplete and has not done so within the required period, the grade will be automatically changed to an R.

ACADEMIC PROBATION — SUSPENSION

A student who receives two R's during one quarter or who has accumulated two R's will be placed on academic probation for the following quarter. A student who receives any additional R's during the probationary period will be placed on academic suspension for the following quarter. When a student returns to S.T.I. at the end of the suspension period, he will be placed under previous probationary requirements. The student is obligated to reregister for any course in which an R has been made at the earliest date that the course is scheduled.

QUALITY POINTS

At the end of each quarter quality points are assigned in accordance with the following formula: The minimum quality point ratio for graduation is 2.00 or an average grade of C.

A—4 quality points per credit hour
B—3 quality points per credit hour
C—2 quality points per credit hour
I—no quality points

Quality point ratios are determined by dividing the total number of quality points by the number of hours completed.

DEAN'S LIST

1. Only full-time students are considered. (A full-time student is defined as a student enrolled in a curriculum program, carrying a minimum of 12 quarter hours.)

2. The student is to have a minimum 3.50 quality point average to qualify for the quarter under consideration.

3. Incompletes and withdrawals will automatically eliminate a student from this list for that particular quarter. Students receiving credit for a course by examination or transfer are not affected.

GENERAL ATTENDANCE REQUIREMENTS

All students are expected to be present and regular in attendance for all scheduled classes and open labs. Absences will be considered justified and excusable only in cases of emergencies, serious illness, or death in the immediate family.

A student will be dropped by the instructor after five consecutive absences.

Any work missed because of absences must be made up.

Special Requirements for Students Receiving VA Benefits in Compliance with VA Regulations

The last date of attendance is determined by the instructors and is submitted to the Veterans Affairs Office within the three (3) days after the student has officially withdrawn or dropped in accordance with the school's attendance policy.

Special Procedures for Students Receiving VA Benefits in Compliance with VA Regulations Concerning Satisfactory Progress

Satisfactory progress for veterans is determined by the following steps:

1. Veterans Coordinator will check with each department at mid-term of each quarter to see if any veterans are having problems.

2. If a veteran(s) is having problems, a counseling session will be arranged between the instructor, veteran, and Coordinator of Veterans. A plan of action is determined to remedy the problem.

3. If the veteran fails to reach or maintain satisfactory progress as determined by the grading system and the instructor, the instructor will officially drop the veteran and will complete the Veterans Load Adjustment Form.

4. The Veterans Coordinator will send completed VA Form 22-1999b to the Veterans Administration stating that the veteran has been dropped from the course or courses indicated.

CHANGE OF SCHEDULE

Changes in class schedule after registration may be made only with the approval of the students advisor and instructors.

WITHDRAWAL PROCEDURE

If a student wishes to withdraw for any reason he should:

a.) Discuss it with his advisor.

b.) Complete a withdrawal form with his advlsor.

c.) Have the librarian sign the withdrawal form.

d.) Take the completed withdrawal form and the student ID card to the registrar.

e.) Present withdrawal form to the cashier.

STUDENT CONDUCT

Students of Southwestern Technical Institute will be expected to conduct themselves at all times as mature adults. Students who do not respect the rights and privileges and personal property of other students and who fail to demonstrate a high regard for school facilities and property will be subject to dismissal.

Violation of rules and regulations relating to drug abuse and use of alcoholic beverages may result in disciplinary measures or dismissal.

Possession of firearms or other weapons as defined in G. S. 14-284.1 while on campus is unlawful whether carried openly or concealed. Violations may result in dismissal and prosecution.

Students of the institute are subject to the operating policies and rules of the school, the local ordinances, the North Carolina General Statutes and the laws of the United States.

FACULTY ADVISOR

Each student will be assigned an advisor by the Department Chairman in his major field. The purpose of this program is to provide each student with personal assistance in orientation and with guidance as he progresses in his course of study.

CREDIT BY EXAMINATION

Advanced placement is offered to those students who because of their demonstrated abilities are qualified to accelerate their studies. To obtain advanced placement a student may take a proficiency examination in any subject when he believes he already has mastery of the course material. Permission for such an examination must be obtained from the appropriate Department Chairman with the Dean of Instruction concurring. The examination may be written, oral, performance, or all of these. Students failing such an examination may not request a second examination until evidence of further study in the subject concerned is presented. The decision of the examining instructor will be final.

A veteran student may apply for credit toward graduation for training received under any of the armed forces college training programs. Credit may also be granted for specialized and technical training done under the auspices of the armed forces and courses taken through USAFI.

COOPERATIVE EDUCATION

In keeping with its policy of offering new and enriching educational experiences to students, Southwestern Technical Institute has introduced Cooperative Education in some of its curricula and will extend it to others later. Cooperative Education, as the name implies, is a joint enterprise between the school and private industry. Within this program, students are employed for a specific period of off-campus work as a requirement of their course. This employment will be related as closely as possible to the student's course of study. Cooperative Education combines classroom teaching with practical experience on the job. Students interested in the Cooperative Education program should check with their counselor or Instructor.

NIGHT CURRICULUM PROGRAMS

It is the intent of Southwestern Technical Institute to make all courses available to all who want them during both day and night. Therefore, we are making available curriculum level courses during the evening hours. One may enroll for classes during both the day and night. For additional information, contact the Evening Program Director.

GRADUATION REQUIREMENTS

The student will be held responsible for fulfilling all requirements for the degree or diploma for which he is registered. It is also the student's responsibility to apply officially to the Student Services Office for his degree or diploma at the beginning of the last quarter the student is enrolled.

The required fee for degree, diploma or certificate must accompany application for graduation.

Candidates for graduation are required to participate in graduation exercises if they wish to receive their degree or diploma.

LIBRARY AND MEDIA SERVICES

The Library and Media Services Division provides various types of media for students, faculty, and staff at Southwestern Technical Institute. The Library has a growing collection of over 14,000 books which are primarily scientific and technical. The reference collection contains encyclopedias and many specialized dictionaries and handbooks. In addition to housing the book collection, the Library receives more than 325 magazines and several newspapers.

The Library also provides other material such as pamphlets and clippings. Included in the collection are bound volumes and microfilm of approximately 84 periodicals. The Library also provides microfiche of several document titles.

Many types of audiovisual materials and equipment are available through Media Services. The audiovisual media include films, filmstrips, tapes, slides, transparencies, flim loops, and video tapes. The materials may be used in the Library at the study carrells or taken to a classroom.

The Library and Media Services staff of trained personnel is always willing to assist any users in locating and using the various types of media.

The Library is open from 8:00 a.m. to 9:00 p.m. Monday through Thursday and from 8:00 a.m. to 5:00 p.m. on Friday. The Library serves not only faculty, staff, and students of Southwestern Technical Institute, but also residents of the community-at-large.

SERVICES TO STUDENTS

Student Services is a distinct and vitally important aspect in the development, administration, operation, and future planning of Southwestern Technical Institute. Such services are provided primarily to serve the student effectively.

A definite program of service is offered to assist the student in selecting, entering, progressing within, and completing a program of study. In addition, the individual is provided numerous opportunities for personal development and social growth through a variety of planned activities.

TESTING

The Institute provides an extensive program of aptitude, achievement, and individual testing at the school.

COUNSELING

Students are encouraged to seek counseling on matters affecting their well being. This service is available to assist students in coping with academic, personal or vocational problems. Each student is assisted in developing according to his peculiar set of abilities and background. Students needing assistance should contact Student Services.

HOUSING

Southwestern Technical Institute was established to serve students within the commuting distance of the campus. Thus, the Southwestern Technical Institute has no dormitory or housing facilities on campus. However, the Student Services Department maintains a listing of available apartments, rooms, or trailers for rent in addition to dormitory rooms at near-by Western Carolina University. Although it assumes no responsibility for housing, the Institute will assist out-of-town students in locating suitable living accommodations if it is requested through the Student Services Office.

ORIENTATION

At the beginning of each quarter, an Orientation program is held for new students to acquaint them with basic ideas, procedures, academic areas, administrative personnel and services of the Institute. The primary purpose for schedullng this program is to inform new students of important information about the Institute in an effort to assist them in making an easy transition to new surroundings.

PLACEMENT

Assistance in locating employment is available to all Southwestern Technical Institute students and graduates. Qualified students are referred to employers contacting the Institute, and the school provides facilities for employers desiring on-campus interviews.

Students will be asked to file a Personal Data Sheet with the Student Services Office. This information is used for employment referral.

VETERANS AFFAIRS

The Student Services Division maintains a full-time Coordinator of Veterans Affairs for purposes of counseling and helping veterans obtain their educational benefits, select a program of education, and helping the veteran in general attending Southwestern Technical Institute. This also includes war orphans and dependents of disabled or deceased veterans that qualify for educational assistance under the G. I. Bill.

Any veteran with 181 or more days of continuous active duty after January 31, 1955 or who was discharged or released under conditions other than dishonorable can qualify for benefits. Length of entitlement is 1½ months for each month of active duty up to a maximum of 36 months.

The office of Veterans Affairs also coordinates the award of North Carolina Veterans Scholarships which may be given to qualified veterans or their dependents.

HEALTH SERVICES

The Institute does not have a Health Clinic to provide hospitalization or emergency services. Injuries should be referred to the Student Personnel Office.

In the event of a accident or sickness, the following procedures should be followed:

1. Notify the Student Services Office.
2. The person should not be moved, but made comfortable until help arrives.

All curriculum students enrolling in the Institute are required to fill out a student medical data form. This information is used for the purpose of referral in the event of an emergency. For more detailed information refer to the student handbook.

LOST AND FOUND

The Student Services Office will post information on articles that have been lost and turned in. Any lost articles should be reported to the Student Services Office.

STUDENT IDENTIFICATION CARD

Student identification cards are distributed during one's initial registration with the Institute. These cards will be available in the Student Services Office after registration.

CHANGE OF ADDRESS

A student should report any change of address immediately to the Student Services Office.

TRANSCRIPTS OF STUDENT RECORDS

All student records are held in confidence by the institute. Placement credentials, transcripts, and other information will be made available only upon written, signed request of the student. If the student is under age 18, the parent or legal guardian must sign the request form. Transcript release forms are available in the registrar's office.

STUDENT ORGANIZATIONS AND ACTIVITIES

Southwestern Tech encourages student participation in student organizations and activities. Although student activities are viewed as secondary to the central purpose of academic preparation, they are nevertheless an important phase of student growth and development. A faculty sponsor is required for each student group and organization.

The groups currently functioning on the campus are:

STUDENT GOVERNMENT

Students at Southwestern Technical Institute have the opportunity to participate in Student Government through the Student Government Association.

The Student Government Association Is designed to promote the general welfare of the college in a democratic fashion and to facilitate communication between the student body, the faculty, and the administration. The student council provides a means through which students can promote interest in student activities both on and off campus.

Copies of the Student Government Constitution are available in the Student Handbook.

INTRAMURAL ACTIVITIES

An intramural program with wide variety and scope provides activities of interest to all students. Present activities include: canoeing, touch football, hiking, chorus, drama. Activities will be added according to student interest and as facilities and equipment become available. The idea of activity clubs for student and faculty is being developed which features a golfing club.

INTERCOLLEGIATE ATHLETICS

The intercollegiate activities of Southwestern Technical Institute feature a men's basketball team with a cheerleader squad, golf and baseball teams.

VETERANS CLUB

Members must be veterans of at least six months active duty in the armed forces of the United States. Its purpose is to provide information for incoming veterans concerning VA benefits, and to focus their efforts and opinions for the benefit of the school.

SECRETARIAL SCIENCE CLUB

The purpose of the Secretarial Science Club is to foster and encourage interest in the secretarial fields. Memberships is open to students in the Secretarial Science curriculum.

SOCIAL LIFE

A series of programs is provided throughout the year for the cultural, educational, and social enrichment of the students. Any student who pays the student activity fee is eligible to attend activities sponsored by the college.

COMMERCIAL SPECIALTIES

BUSINESS

Accounting
Business Administration
Secretarial Science

COMMERCIAL ART AND ADVERTISING DESIGN

ACCOUNTING

Purpose

Accounting is a process of measuring and reporting various functions of business and governmental organizations. These measurements are in terms of dollars and material, labor, time, index numbers, and other valid units of measurement. Accounting gives meaning to these measurements, and is justly described as the "language of business."

The duties and responsibilities of an accountant vary somewhat in different firms. An accountant may record transactions, render periodic reports, maintain cost records, make special reports, complete tax returns, audit the books, and advise management in areas of financial affairs.

Job Description

The graduates of the Accounting Curriculum may qualify for various jobs in business and industry leading to any of the following accounting positions: accounting clerk, payroll clerk, accounting machine operator, auditor, and cost accountant. This training plus further experience should prepare them to become office managers or accounting supervisors, and to fill other responsible positions in a business firm.

Suggested Curriculum By Quarters

			Class	Lab	Hours Credit
First Quarter					
ENG	100	English I	3	2	4
MAT	110	Business Math	5	0	5
BUS	101	Introduction to Business	3	2	4
BUS	110	Office Machines	2	2	3
BUS	102	Typing I	2	3	3
			15	9	19
Second Quarter					
ENG	101	English II	3	2	4
BUS	120	Accounting I	4	3	5
BUS	248	Business Economics I	3	2	4
EDP	104	Introduction to Data Processing	3	0	3
			13	7	16
Third Quarter					
ENG	102	English III	3	2	4
BUS	121	Accounting II	4	3	5
BUS	235	Business Management	3	2	4
BUS	249	Business Economics II	3	2	4
			13	9	17
Fourth Quarter					
ENG	204	English IV	3	0	3
BUS	122	Accounting III	4	3	5
BUS	239	Marketing	3	2	4
BUS	124	Personal Finance	3	2	4
			13	7	16

			Class	Lab	Hours Credit
Fifth Quarter					
ENG	103	English VI	3	0	3
BUS	115	Business Law I	5	0	5
BUS	222	Intermediate Accounting I	3	2	4
BUS	229	Income Taxes I	3	2	4
			14	4	16
Sixth Quarter					
BUS	223	Intermediate Accounting II	3	2	4
BUS	237	Small Business Management	3	0	3
BUS	230	Income Taxes II	3	2	4
BUS	225	Cost Accounting	3	2	4
			12	6	15
Seventh Quarter					
BUS	123	Business Finance	3	2	4
BUS	224	Intermediate Accounting III	3	2	4
BUS	271	Office Management	3	2	4
BUS	279	Profit Planning & Budgetary Control	3	2	4
BUS	277	Credit & Collection	3	2	4
			15	10	20

BUSINESS ADMINISTRATION

(Industrial Management Option)

Purpose

Industry's needs in positions of supervision and mid-management have grown extensively with the development of new methods of manufacturing. The supervisor and persons in mid-management and must be concerned daily with human behavior and the psychological factors which affect personnel working under their direction.

This program is designed to develop the individual's abilities in the art of communicating with his fellow worker by providing him with training in business and industrial management, production methods, and the general and social education that broadens one's perspective. This training should provide the student with the opportunity to enter into an industrial occupation and, with experience, assume the responsibilities that go with supervisory and mid-management positions in industry.

Job Description

The graduate of the Business Administration Curriculum, Industrial Management Option, may enter a variety of career opportunities: First-Line Supervisor, Industrial Engineering Assistant, Purchasing Expediter, Production Planner, Quality Control Technician, Safety Manager, Budget Clerk.

Suggested Curriculum By Quarters

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	110	Business Math	5	0	5
BUS	101	Introduction to Business	3	2	4
BUS	110	Office Machines	2	2	3
BUS	102	Typing I	2	3	3
			15	9	19

Second Quarter					
ENG	101	English II	3	2	4
BUS	120	Accounting I	4	3	5
BUS	248	Business Economics I	3	2	4
EDP	104	Introduction to Data Processing	3	0	3
			13	7	16

Third Quarter					
ENG	102	English III	3	2	4
BUS	235	Business Management	3	2	4
BUS	127	Financial Management	3	2	4
BUS	121	Accounting II	4	3	5
			13	9	17

Fourth Quarter

			Class	Lab	Hours Credit
ENG	204	English IV	3	0	3
BUS	272	Principles of Supervision	3	2	4
BUS	239	Marketing	3	2	4
BUS	124	Personal Finance	3	2	4
BUS	273	Personnel Management	3	2	4
			15	8	19

Fifth Quarter

ENG	103	English VI	3	0	3
BUS	115	Business Law I	5	0	5
BUS	229	Income Taxes I	3	2	4
BUS	109	Seminar on Human Relations	3	0	3
BUS	269	Safety Engineering	3	2	4
			17	4	19

Sixth Quarter

BUS	261	Manufacturing Cycles	5	0	5
BUS	266	Value Analysis	3	0	3
BUS	265	Work Measurement	3	2	4
BUS	267	Production Control	3	2	4
			14	4	16

Seventh Quarter

BUS	263	Quality Control	3	2	4
BUS	268	Plant Layout	3	2	4
BUS	262	Current Trends in Industrial Mgmt.	3	0	3
BUS	279	Profit Planning & Budgetary Control	3	2	4
			12	6	15

BUSINESS ADMINISTRATION
(Retail Management Option)

Purpose

In North Carolina the opportunities in business are increasing in pace with the population; thus, our local businesses offer more opportunity for employment. These positions will be filled by people with specialized education beyond the high school level. The Business Administration Curriculum, Retail Management Option, is designed to prepare the student for employment in one of many occupations common to the retailing business.

Job Description

The graduate of the Business Administration Curriculum, Retail Management Option, may enter a variety of career opportunities from beginning sales clerk to manager. Potential job opportunities include: advertising, banking, credit, finance, retailing, wholesaling, hotel, tourist and travel industry, transportation, and communications.

Suggested Curriculum By Quarters

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	110	Business Math	5	0	5
BUS	101	Introduction to Business	3	2	4
BUS	110	Office Machines	2	2	3
BUS	102	Typing I	2	3	3
			15	9	19
Second Quarter					
ENG	101	English II	3	2	4
BUS	120	Accounting I	4	3	5
BUS	248	Business Economics I	3	2	4
EDP	104	Introduction to Data Processing	3	0	3
			13	7	16
Third Quarter					
ENG	102	English III	3	2	4
BUS	235	Business Management	3	2	4
BUS	127	Financial Management	3	2	4
BUS	121	Accounting II	4	3	5
			13	9	17
Fourth Quarter					
ENG	204	English IV	3	0	3
BUS	272	Principles of Supervision	3	2	4
BUS	239	Marketing	3	2	4
BUS	124	Personal Finance	3	2	4
BUS	273	Personnel Management	3	2	4
			15	8	19

			Class	Lab	Hours Credit
Fifth Quarter					
ENG	103	English VI	3	0	3
BUS	115	Business Law I	5	0	5
BUS	229	Income Taxes I	3	2	4
BUS	109	Seminar on Human Relations	3	0	3
BUS	269	Safety Engineering	3	2	4
			17	4	19
Sixth Quarter					
BUS	244	Retail Management	3	2	4
BUS	232	Sales Development	3	2	4
BUS	237	Small Business Management	3	0	3
BUS	243	Advertising	3	2	4
BUS	242	Public Relations	3	0	3
			15	6	18
Seventh Quarter					
BUS	246	Current Trends in Retail Management	3	0	3
BUS	276	Purchasing & Inventory Control	3	2	4
BUS	271	Office Management	3	2	4
BUS	277	Credit & Collection	3	2	4
			12	6	15

SECRETARIAL SCIENCE

(Shorthand Option)

Purpose

The demand for better-qualified secretaries in our ever-expanding business, industry, government, and professional world is becomlng more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business, industrial, and professional areas to enable persons to become proficient soon after employment in their particular field. Special training in secretarial subjects is supplemented by related courses in math, accounting, and personality development. During the fourth quarter, students are placed on actual jobs which provide valuable experience.

Job Description

Students may take courses in shorthand or have the option of courses which give them a broader business background. This option gives students a choice of concentrated study preparing them for employment as stenographers and secretaries or for a variety of secretarial positions where shorthand skills are not required.

Suggested Curriculum By Quarters

				Hours		
First Quarter				Class	Lab	Credit
	ENG	100	English I	3	2	4
	MAT	110	Business Math	5	0	5
	BUS	101	Introductlon to Business	3	2	4
	BUS	102	Typing I	2	3	3
OR	BUS	243	Advertising	3	2	4
	BUS	106	Shorthand I	3	2	4
OR	PSY	102	General Psychology	3	0	3
Second Quarter						
	ENG	101	English II	3	2	4
	BUS	103	Typing II	2	3	3
	BUS	107	Shorthand II	3	2	4
OR	BUS	232	Sales Development	3	2	4
	BUS	248	Business Economics I	3	2	4
	EDP	104	Introduction to Data Processing	3	0	3
Third Quarter						
	ENG	102	English III	3	2	4
	BUS	104	Typing III	2	3	3
	BUS	108	Shorthand III	3	2	4
OR	BUS	277	Credit & Collection	3	2	4
	BUS	110	Office Machines	2	2	3
	BUS	112	Filing	3	0	3
	BUS	209	Machine Transcription	2	0	2

Fourth Quarter			Class	Lab	Hours Credit
BUS	215	Office Applications	0	30	3
BUS	216	Orientation and Evaluation	3	0	3
BUS	217	Skill Performance and Production	3	0	3
BUS	218	Business Techniques	3	0	3
Fifth Quarter					
BUS	205	Advanced Typing	2	3	3
BUS	206	Dictation and Transcription I	3	2	4
OR BUS	109	Seminar on Human Relations	3	0	3
ENG	204	English IV	3	0	3
BUS	201	Word Processing Communications & Applications	3	0	3
BUS	229	Income Taxes I	3	2	4
Sixth Quarter					
BUS	207	Dictation and Transcription II	3	2	4
OR BUS	242	Public Relations	3	0	3
BUS	124	Personal Finance	3	2	4
BUS	120	Accounting I	4	3	5
BUS	202	Word Processing Systems	3	0	3
ENG	103	English VI	3	0	3
Seventh Quarter					
BUS	214	Secretarial Procedures	3	2	4
BUS	208	Dictation and Transcription III	3	2	4
OR BUS	235	Business Mgmt.	3	2	4
BUS	271	Office Mgmt.	3	2	4
BUS	121	Accounting II	4	3	5
BUS	251	Personality Development	3	0	3

COMMERCIAL ART
ADVERTISING DESIGN

Purpose

This curriculum wlll prepare a graduate with a sound, well-rounded background for technical and creative achievement throughout his professional life. Design and illustration for commerce is continually advancing its standards; therefore, the background offered the student must be well-developed to prepare him for performance on a contemporary professional level. Graduates of this program will have an adequate background in illustration, layout and lettering, design, and production.

Equipped with professional competence and the potential for continuing growth and improvement, graduates are qualified for employment in most fields of commercial art.

Job Description

The commercial artist or advertising designer creates and designs layouts and illustrations for printing, creates posters, signboards, billboards, and show cards. He may design and prepare charts, diagrams, sketches, and maps for publication and exhibition, perform responslble illustrative work for package design, photography, lettering, and art work for the printing processes. Opportunities for graduates of this program may be in advertising agencies, newspapers and magazines, television studios, industrial advertising departments and design studios, department stores, government agencies, or in printing and publishing houses.

Suggested Curriculum By Quarters

			Class	Lab	Hours Credit
Flrst Quarter					
ENG	100	English I	3	2	4
CAT	100	Art Orientation	1	0	1
DFT	101	Technical Drafting I	0	6	2
CAT	101	Advertising Principles	3	0	3
CAT	102	Art and Design	2	6	4
CAT	121	Commercial Art and Advertising Design I	4	6	6
			13	20	20
Second Quarter					
ENG	101	English II	3	2	4
DFT	102	Technical Drafting II	0	6	2
CAT	105	Life Study I	2	3	3
CAT	122	Commercial Art and Advertlsing Design II	4	6	6
			9	17	15
Thlrd Quarter					
ENG	102	English III	3	2	4
CAT	106	Life Study II	0	6	2
CAT	116	Photography I	2	6	4
CAT	123	Commercial Art and Advertlsing Design III	6	6	8
			11	20	18

Fourth Quarter (Summer)			Class	Lab	Hours Credit
CAT	227	Fashion Illustration	4	6	6
CAT	117	Photography II	2	6	4
CAT	205	Advertising Copywriting and Fitting	3	2	4
CAT	201	Art History	5	0	5
CAT	212	Industrial Art & Design	2	3	3
			16	17	22

Fifith Quarter					
ENG	204	English IV	3	0	3
CAT	110	General Illustration	2	6	4
CAT	224	Commercial Art and Advertising Design IV	4	6	6
CAT	206	Project Seminar	2	3	3
BUS	243	Advertising	3	2	4
			14	17	20

Sixth Quarter					
BUS	232	Sales Development	3	2	4
CAT	225	Commercial Art and Advertising Design V	6	6	8
CAT	217	Silk Screen Techniques	2	6	4
CAT	231	Project Seminar	2	3	3
			13	17	19

Seventh Quarter					
BUS	248	Business Economics I	5	0	5
CAT	226	Commercial Art and Advertising Design VI	6	6	8
CAT	235	Advertising Art Directions	5	0	5
CAT	232	Project Seminar	1	6	3
			17	12	21

134 Total Hours

GENERAL EDUCATION

DEVELOPMENTAL STUDIES

ASSOCIATE DEGREE PROGRAM FOR VOCATIONAL INSTRUCTORS

RELATED INSTRUCTION IN THE HUMANITIES SOCIAL AND NATURAL SCIENCES

DEVELOPMENTAL STUDIES

Purpose

The Developmental Program is a series of courses designed for students who, at their present educational level, cannot enter regular curriculum courses or who have not completed their high school education. This program gives every person the opportunity of re-entering school and meeting requirements of the world of work and of further education. The courses are structured to meet individual needs, and placement of a student in a course of studies depends upon the person's level of achievement when he registers for the course. Emphasis is placed on reading, math, and English. The student may select other electives which he may need to meet his particular objective. The program also assists students who have a physical handicap or who have a personal situation that would put them at a disadvantage in getting the vocational training they want.

Objectives

1. To help students make such academic progress that he can make an acceptable score on the GED.
2. To encourage students to develop study skills, test taking proficiencies and to give him a general idea of what will be expected of him in the world of work.
3. To enable a student to assess his actual potential so that he can make wise vocational choices.
4. To provide individual instruction and tutoring for any student in the program who has specific problems not common to the whole class and such reinforcement for students who have already completed the program.
5. To provide enrichment courses in communication, mathematics, and reading for high school graduates who are planning to enter a university.

Programs of Study

PRE-TECHNICAL T-099

A program of studies based on the needs of particular students in areas of deficiencies. Structured to bring up these specific areas so that a student may succeed in a technical curriculum.

PRE-VOCATIONAL V-099

Basic courses structured to meet the needs of students preparing to enter a vocational curriculum.

HIGH SCHOOL EQUIVALENCY

A program of studies outlined for students who have not received a hlgh school diploma. A student mav enter the program at any time during a quarter. After he is tested, a sequence of courses is outlined so that a student may work toward a level of achievement which will enable him to make a passing score on the GED.

Admission

The Developmental Studies Program is open from 8:00 A.M. until 5:00 P.M. Monday through Friday and from 6:30 P.M. until 9:30 P.M. Monday through Thursday. A student may register for as many hours as his time allows. Veterans may receive benefits for full time or part-time work. A veteran who has not finished hlgh school may receive benefits up to twelve months.

Any applicant wishing to enroll in Developmental Studies should follow the application procedures.

ASSOCIATE DEGREE PROGRAM FOR VOCATIONAL INSTRUCTORS

Purpose

The program is designed for persons who have developed a skill, trade or technical specialty and desire to teach or pursue a degree. Successful graduates of the program may find employment in the public high schools, community colleges and technical institutes. It is also designed for those already teaching in such programs who have not had the opportunity to acquire professional educational training.

This program is unique in its design and offers the opportunity to earn an Associate in Applied Science Degree allowing credit for previous training experience, and formal study in the student's area of expertise, supplemented by course work to broaden the student personally and develop professional skills in the techniques of teaching.

Program

Credit will be awarded to skilled craftsmen based on educational experience and work experience. Credit will be awarded in the following manner:

1. A. Twenty-four quarter hours' credit for full-time trade school, twelve months in one special skilled are certified by diploma or letter by trade school officials, maximum twenty-four quarter credit hours.

   and/or

   B. One quarter hour credit per sixty hours of full-time trade instruction for programs of less than one year duration. Certified by diploma or letter by trade school officials, maximum eight credit hours.

2. One quarter hour credit per forty hours of special short course instruction - company sponsored school. Certified by diploma, certificate or letter by company school. Maximum five hours.

3. Five quarter hours' credit for each full year of employment in a teaching situation. Teaching must be the primary responsibility of employment. Maximum ten hours.

4. Two quarter hours' cerdit for each full year of employment in the specialty occupation qualified to teach. Maximum ten hours.

The maximum number of hours awarded for specialty skills toward an Associate in Applied Science Degree is 48 quarter hours.

A minimum of 56 quarter hours' credit must be earned through course work at Southwestern Technical Institute or another recognized college or technical institute program. In order to earn an Associate in Applied Science Degree at Southwestern Technical Institute, the general education rquirements must be met either through transfer credit, challenge examination, or formal course work.

A program of study will be prepared for each individual vocational instructor or potential instructor who makes application for the program. The Dean of Instruction or the Director of Occupational Education will serve as advisor.

Following are minimum requirements for an Associate in Applied Science Degree for this curriculum. Anyone who needs additional hours may choose electives from any technical curriculum with the approval of the advisor.

Three areas of development and the hours required for each are:

	Min. Quarter Hours Required
A. Specialty Skills	48
B. Personal Skills (Sciences, Humanities)	28
English 15	
Social Sciences 6	
Math 5	
Science 2	
C. Professional Skills (Vocational Educational)	28
TOTAL	104

COURSE REQUIREMENTS

English (The English requirements may be met by completion of 15 hours from the following courses.)

ENG	100	English I	3	2	4
ENG	101	English II	3	2	4
ENG	102	English III	3	2	4
ENG	204	English IV	3	0	3
ENG	103	English VI	3	0	3
ENG	206	English VII	3	0	3

Social Sciences (The Social Sciences requirements may be met by completion of a minimum of 6 hours from courses listed under PSY, HIS, SOC, SSC, ECO or POL in the Course Description Section.)

Mathematics (Mathematics requirements may be met by completion of 5 hours from the following courses.)

MAT	101	Technical Math	5	0	5
MAT	104	Statistics	5	0	5
MAT	110	Business Math	5	0	5

Science (Science requirements may be met by completion of a minimum of 2 hours from courses listed under PHY, BIO, CHM or SCI in the course description section.)

Vocational Education (Vocational Education requirements may be met by completion of 28 hours from the following courses.)

EDU	110	Methods of Teaching Industrial Subjects	3	0	3
EDU	111	Use of Media in Instruction	3	0	3
EDU	112	Shop Organization and Planning I	2	2	3
EDU	113	Shop Organization and Planning II	2	0	3
EDU	114	Safety in the School Shop and Laboratory	3	0	3
EDU	115	Introduction to Industrial Education	3	0	3
EDU	116	History and Philosophy of Industrial Ed.	3	0	3
EDU	117	Program and Course Development	3	0	3
EDU	118	Principles of Cooperative Education	3	0	3
EDU	119	Occupational Guidance	3	0	3
EDU	123	Environmental Concepts in Education	1	2	2

HUMAN SERVICES

COSMETOLOGY

EARLY CHILDHOOD SPECIALIST

ENVIRONMENTAL SCIENCE

FOOD SERVICE MANAGEMENT

LAW ENFORCEMENT

PARALEGAL TECHNOLOGY

PRACTICAL NURSE EDUCATION

RECREATION TECHNOLOGY

COSMETOLOGY

Purpose

This curriculum is approved by the North Carolina State Board of Cosmetic Art Examiners. After successfully completing the requirements of this course, a student must apply to the State Board of Cosmetic Art Examiners for examination. Successful candidates will receive their North Carolina license in Cosmetology.

Job Description

The licensed Cosmetologist is in great demand throughout the United States. Many newly licensed Cosmetologists join the staffs of beauty salons while others open their own shops or form partnerships.

Suggested Curriculum By Quarters

	Class	Lab	Hours Credit
First Quarter			
Cos. 100—Scientific Study I	4	6	6
Cos. 1011—Mannequin Practice	1	19	7
	5	25	13
Second Quarter			
Cos. 1002—Scientific Study II	5	0	5
Cos. 1022—Clinical Applications I	0	29	9
	5	29	14
Third Quarter			
Cos. 1003—Scientific Study III	5	0	5
Cos. 1033—Clinical Applications II	0	29	9
	5	29	14
Fourth Quarter			
Cos. 1004—Scientific Study IV	5	0	5
Cos. 1044—Clinical Applications III	0	29	9
	5	29	14

TOTAL CONTACT HOURS 1452

EARLY CHILDHOOD SPECIALIST

Purpose

Early childhood specialists provide for infants and young children a program which will promote the optimal development of each child. The specialist must understand and be able to meet the physical and nutritional needs of preschool children; to provide activities which stimulate intellectual, emotional, and social growth of children; guide children in the formation of acceptable habits and attitudes; and assist the children in learning to communicate effectively with others.

Job Description

The early childhood specialist may choose to work with exceptional children as an aide to the kindergarten teacher or to organize and operate a child care facility as a private enterprise.

Suggested Curriculum By Quarters

			Class	Lab	Hours Credit
First Quarter					
ENG	100	English I	3	2	4
EDU	133	The Family: A Cross Cultural Survey	3	3	3
EDU	101	Child Growth and Development	5	0	5
SCI	101	General Science	3	4	5
BUS	102	Typewriting I	2	3	3
			16	12	20
Second Quarter					
ENG	101	English II	3	2	4
EDU	131	Human Growth and Development: Prenatal Infant	3	0	3
EDU	134	Families in American Culture	3	0	3
EDU	102	Programming for Young Children	3	6	5
NUT	102	Nutrition and Health for Young Children	3	2	4
			15	10	19
Third Quarter					
ENG	102	English III	3	2	4
EDU	132	Human Growth and Development: Early Childhood	3	0	3
EDU	135	The Family in the Community	3	0	3
EDU	103	Working with Young Children	3	6	6
HEA	101	First Aid and Health	2	4	4
			14	12	20
Fourth Quarter					
ENG	204	English IV	3	0	3
EDU	208	Physical Activities for Young Children	3	0	3
EDU	201	Activities for Young Children	3	9	6
EDU	210	The Child and Community Services	3	0	3
HIS	211	United States History I	3	0	3
			15	9	18

Fifth Quarter			Class	Lab	Hours Credit
EDU	211	Children's Literature	3	0	3
EDU	203	The Exceptional Child	3	0	3
HIS	212	United States History II	3	0	3
EDU	204	Parent Education	3	0	3
EDU	207	Special Problems in Early Childhood	2	0	2
MAT	100	Basic Mathematics	5	0	5
			19	0	19
Sixth Quarter					
EDU	202&205	Seminar-Practicum	5	20	15
		TOTAL	85	39	109

Teacher Assistant Option

The student may elect an optional major as Teacher Assistant by taking the following program in the second year.

Fourth Quarter

EDU	220	Role of the Teacher Assistant	3	0	3
EDU	221	Library Materials & Resources	3	0	3
ENG	204	English IV	3	0	3
EDU	208	Physical Activities for Young Children	3	0	3
EDU	227	Seminar Practicum	0	15	5
			12	15	17

Fifth Quarter

ENG	217	Children's Literature	3	0	3
EDU	222	Media Resources	3	0	3
EDU	223	School Records and Reports	3	0	3
EDU	228	Seminar Practicum	0	15	5
		Elective	3	0	3
			12	15	17

Sixth Quarter

EDU	204	Parent Education	3	0	3
EDU	229	Seminar Practicum	0	15	5
EDU	107	Mathematics for Young Children	3	0	3
		Elective(s)	6	0	6
			12	15	17

Electives

EDU	104	Introducing Reading	3	0	3
EDU	105	Music for the Early Years	1	2	2
EDU	106	Art for Young Children	1	2	2
EDU	108	Crafts for Young Children	1	2	2

ENVIRONMENTAL SCIENCE

Purpose

This curriculum provides the necessary background in environmental science oriented courses supplemented by basic courses in English, math, government and science. Emphasis is on environmental problems, the overall effect of these problems, and the proposed solutions. The broad program of study better qualifies the student to grasp and solve environmental problems.

Job Description

The technician's training will qualify him for a wide range of duties such as inspections, surveys, investigations, and evaluations. Specific tasks would include water and air sampling and anlaysis, assisting professionals in performing environmental research, and collecting and evaluating environmental impact data. Employment opportunities exist with industry and many branches of our local state, and federal government.

Suggested Curriculum By Quarters

First Quarter				Class	Lab	Hours Credit
ENG	100	English I		3	2	4
MAT	101	Technical Math		5	0	5
BIO	101	General Biology		3	4	5
ENV	100	Environmental Orientation		1	2	2
				12	8	16
Second Quarter						
ENG	101	English II		3	2	4
CHM	101	Chemistry I		3	4	5
MAT	104	Statistics		5	0	5
ENV	120	Land Resource Management		3	4	5
				14	10	19
Third Quarter						
ENG	102	English III		3	2	4
CHM	102	Chemistry II		3	4	5
ENV	210	Ecology		3	2	4
ENV	208	Fisheries Management	OR	*3	2	4
ENV	216	Environmental Health		*3	2	4
				12	10	17
Fourth Quarter						
ENV	201	Laboratory Applications		3	0	3
ENV	202	Data Studies		3	0	3
ENV	203	Use of Instruments		3	0	3
ENV	204	Field Studies		0	30	3
				9	30	12

Fifth Quarter			Class	Lab	Hours Credit
ENG	204	English IV	3	0	3
PHY	101	Physics I	3	2	4
ENV	220	Water Sampling, Analysis, Control	3	4	5
ENV	130	Microbiology	3	4	5
			12	10	16

Sixth Quarter					
ENV	213	Air Sampling, Analysis, Control	3	4	5
ENV	229	Meteorology	3	4	5
ENV	223	Instrument Maintenance	1	4	3
GEO	105	Population Geography	3	0	3
			10	12	16

Seventh Quarter					
ENV	230	Environmental Quality, Laws, and Enforcement	3	0	3
ENV	231	Environmental Project	1	12	5
*ENV	208	Fisheries Management OR	*3	2	4
*ENV	216	Environmental Health	*3	2	4

*Fisheries Management and Environmental Health will be offered alternately every year.

FOOD SERVICE MANAGEMENT

Purpose

The Food Service Management Curriculum is designed for trainIng of students in the art and science of quantity food preparation, with particular emphasis on institutional food service. In addition to development of knowledge and skills in food preparation, the student must develop an understanding and/or appreciation of food and equipment purchasing, financial control, record keeping, basic nutrition and menu planning and supervision.

Job Description

A graduate of this curriculum should be qualified for entry into positions as assistant cook, short order cook, cook, chef's assistant, cook-manager, baker, assistant baker, and pastry cook. Employment for graduates of this program would be found at hospitals, nursing homes, child care centers, colleges, and university food services, school food services, industrial cafeterias, private clubs, airline food services, food processing manufacturers, food service contract companies, and commercial restaurants.

Suggested Curriculum By Quarters

First Quarter

			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
FSO	101	Orientation to Food Services	1	0	1
FSO	102	Food Preparation I	3	6	5
FSO	103	Equipment	3	0	3
FSO	104	Sanitation and Safety	3	0	3
MAT	100	Basic Math	4	0	4
			17	8	20

Second Quarter

ENG	101	English II	3	2	4
FSO	105	Accounting-Purchasing-Records	3	0	3
FSO	106	Nutrition and Menu Planning I	3	0	3
FSO	112	Food Preparation II	2	9	5
FSO	107	Baking I	2	6	4
			13	17	19

Third Quarter

ENG	102	English III	3	2	4
FSO	108	Personnel Management	3	0	3
FSO	109	Production Management	3	0	3
FSO	122	Food Preparation III	0	9	3
FSO	117	Baking II	2	6	4
			11	17	17

Fourth Quarter

			Class	Lab	Hours Credit
FSO	110	Practical Food Preparation	0	30	3
FSO	113	Customer Relations	3	0	3
FSO	115	Peak Service Planning	3	0	3
FSO	116	Food Handling	3	0	3
			9	30	12

Fifth Quarter

ENG	204	English IV	3	0	3
FSO	201	Equipment	3	0	3
FSO	203	Organization and Management	3	0	3
FSO	202	Food Preparation IV	3	6	4
FSO	204	Food Purchasing and Cost Control	3	0	3
			15	6	16

Sixth Quarter

BUS	272	Principles of Supervision	3	2	4
PSY	102	General Psychology	3	2	4
FSO	205	Nutrition and Menu Planning II	3	0	3
FSO	206	Financial Management	3	0	3
FSO	212	Food Preparation V	0	6	3
			12	10	17

Seventh Quarter

BUS	288	Organizing a Small Business	3	4	5
FSO	207	Food Merchandising	2	6	4
FSO	215	Legal Requirements for Food Handlers	3	0	3
FSO	214	Specialty Cooking	2	4	3
FSO	211	Seminar	3	0	3
			13	14	18

LAW ENFORCEMENT

Purpose

The Law Enforcement Curriculum is designed to prepare the student for entry into the field of police work and other allied occupations. Police science vocations have evolved from simple jobs requiring minimal qualifications to highly complex activities requiring great capacity for highly specialized knowledge and techniques.

Applicants to this curriculum must have a physical examination and must submit a recommendation from any of the following: Sheriff of County In which applicant resides; a Chief of Police; a state or federal law enforcement officer.

Job Description

Job opportunities are abundant on the federal, state, county, and municipal levels. Many industries now employ skilled technicians trained in protective techniques.

Suggested Curriculum By Quarters

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	100	Basic Math	5	0	5
PSC	101	Introduction to Law Enforcement	5	0	5
PSC	110	Crime and Delinquency	5	0	5
			18	2	19

Second Quarter

MAT	104	Statistics	5	0	5
ENG	101	English II	3	2	4
PSC	115	Criminal Law I	3	0	3
CAT	116	Photography I	2	6	4
			13	8	16

Third Quarter

ENG	102	English III	3	2	4
PSC	214	Criminal Law II	5	0	5
PSC	126	Criminal Investigation	3	2	4
PSC	121	Criminal Evidence and Procedure	3	2	4
PSC	102	Science of Fingerprinting	3	3	4
			17	9	21

Fourth Quarter

PSY	102	General Psychology	3	0	3
PSC	210	Emergency First Aid	0	3	1
PSC	209	Criminal Justice Field Training	0	32	8
			3	35	12

Fifth Quarter			Class	Lab	Hours Credit
PHY	101	Physics	3	2	4
ENG	204	English IV	3	0	3
PSC	111	Police Administration and Organization	5	0	5
PSC	206	Police Community Relations	5	0	5
SOC	102	Principles of Sociology	5	0	5
			21	2	22

Sixth Quarter					
ENG	103	English VI	3	0	3
CHM	101	Chemistry I	3	4	5
PSC	204	Crime Scene Technology	4	2	5
PSC	224	Narcotics and Dangerous Drugs	3	0	3
		Elective	3	0	3
			16	6	19

Seventh Quarter					
POL	103	National, State and Local Government	3	0	3
PSC	223	Defensive Tactics and Firearms	2	3	3
PSC	212	Criminalistics	4	2	5
PSC	228	Seminar in Criminal Justice	4	2	5
PSC	202	Traffic Accident Investigation	3	2	4
			16	9	20

Electives:

PSC	130	Introduction to Corrections	5	0	5
PSC	131	Intro. to Jail operations	3	0	3
PSC	132	Intro. to Jail Management	3	0	3
PSC	133	Juvenile Delinquency	5	0	5
PSC	227	Directed Study — Special	0	6	3
PSC	127	Human Relations	3	0	3

PARALEGAL TECHNOLOGY

Purpose

The legal profession is a very involved one and a profession that requires specialists and general practitioners. A legal specialist may be a lawyer specializing in one facet of law or a paralegal assisting a lawyer or group of lawyers.

This curriculum is designed to train individuals to work by the side of a lawyer, to relieve the lawyer of routine matters, and assist him in the conduct of more complicated and difficult tasks.

Job Description

The graduate of the Paralegal Curriculum will be able to directly assist the lawyer in most facets of law, but must always work under the supervision of the lawyer.

Suggested Curriculum

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
LEX	100	Paralegal Orientation	5	0	5
MAT	110	Business Mathematics	5	0	5
BUS	102	Typing (or Elective)	2	3	3
BUS	115	Business Law I	5	0	5
			20	5	22

Second Quarter					
BUS	120	Accounting I	4	3	5
BUS	116	Business Law II	5	0	5
ENG	101	English II	3	2	4
LEX	101	Techniques of Investigation I	3	3	4
			15	8	18

Third Quarter					
ENG	102	English III	3	2	4
LEX	102	Techniques of Investigation II	3	4	4
LEX	103	Legal Research I	3	3	4
LEX	104	Advanced Business Law	5	0	5
			14	9	17

Fourth Quarter					
LEX	220	Legal Research II	1	4	3
LEX	230	Appellate Practice	3	3	4
LEX	232	Estate Administration	3	0	3
LEX	211	Title Abstracting	3	0	3
LEX	234	Investigation of Real Property Condemnation Cases	1	3	2
			11	10	15

Fifth Quarter

			Class	Lab	Hours Credit
LEX	201	N. C. Legal Systems I	3	0	3
ENG	204	English IV	3	0	3
LEX	203	Techniques of Investigation III	3	3	4
LEX	215	The Law Office	3	3	4
BUS	229	Income Taxes I	3	2	4
			15	8	18

Sixth Quarter

ENG	206	English VII	3	2	4
LEX	202	N. C. Legal Systems II	3	0	3
BUS	231	Income Taxes II	3	2	4
LEX	204	Techniques of Investigation IV	3	3	4
LEX	210	Mechanics of Property Transactions	3	0	3
			15	7	18

Seventh Quarter

LEX	225	Litigation Preparation	3	0	3
LEX	226	Medical Terminology	5	0	5
LEX	227	Paralegal Profession	3	3	4
LEX	228	N. C. Law Summary	3	0	3
			14	3	15

PRACTICAL NURSE EDUCATION

Purpose

The aim of the Practical Nursing Program is to give qualified persons the opportunity to prepare for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing as determined by pre-entrance tests, interviews with faculty members, high school records, character references, and reports of medical and dental examination.

Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustments to the responsibilities of nursing. A passing score is required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

Graduates of accredited programs of practical nurse education are eligible to take the licensing examination given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license and to use a legal title, "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for license in other states on the basis of a satisfactory examination score without repeating the examination.

Job Description

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices and, in some localities, public health facilities. In all situations the LPN functions under supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex, or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Suggested Curriculum By Quarters

Course Title			Hrs. Per Week			Quarter Hours Credit
First Quarter			C	L	P	
NUR	1020	Fundamentals of Practical Nursing	6	6	0	8
NUR	1021	Nutrition and Diet Therapy	3	0	0	3
NUR	1022	Anatomy and Physiology	3	0	0	3
NUR	1023	Growth and Development	2	0	0	2
NUR	1024	Intro to Drug Administration	3	0	0	3
ENG	1103	English (Study Skills)	3	0	0	3
			20	6	0	22
Second Quarter						
NUR	1025	Medical-Surgical Nursing I	6	0	0	6
NUR	1026	Maternity Nursing	4	0	0	4
NUR	1027	Nursing of Children	3	0	0	3
NUR	1028	Clinical Experience I	0	0	16	5
			13	0	16	18

Third Quarter

			Hrs.	Per	Week	Quarter Hours Credit
NUR	1029	Medical-Surgical Nursing II	6	0	0	6
NUR	1030	Drug Therapy	4	0	0	4
NUR	1031	Clinical Experience II	0	0	24	8
ENG	1104	ENGLISH (Communication Skills)	2	0	0	2
			12	0	24	20

Fourth Quarter

NUR	1032	Medical-Surgical Nursing III	7	0	0	7
NUR	1034	Personal and Vocational Relationships	2	0	0	2
NUR	1035	Clinical Experience III	0	0	24	8
PSY	1101	Human Relations	3	0	0	3
			12	0	24	20

Total Quarter Hours in Courses

C Class
L Lab
P Practicum

RECREATION TECHNOLOGY

Purpose

Recreation Technology is designed to prepare students for staff skills and administrative responsibility in a wide variety of public and private recreational and group work facilities. Specific attention will be given to training in the areas of municipal recreation and outdoor recreation. Opportunity for specialization will be provided through the selection of electives, field work and special in-class projects which relate to settings or groups in which the student has the keenest interest and the most ability.

Applicants must meet all of the requirements for admission to the school. In addition to general school policies, admission requirements, test requirements and transfer credits, students are selected on the basis of demonstrated aptitude and moral character for recreation as determined by interest inventories, pre-entrance tests, high school transcript of grades and activities, interviews with faculty members, a physical examination report and character references.

Acceptance to the program does not carry with it candidacy for the Associate of Applied Science degree. To become a candidate, the student must after one quarter of study in recreation:

—remove any condition of admission to the school

—demonstrate ability to do work at the Associate degree level

—demonstrate leadership ability as determined by standard evaluation procedures

—with an advisor, project the program to completion indicating any remedial work necessary and/or areas of specialization

Throughout the program, there are additlonal expenses for supplies and incidentals.

Job Description

The recreation industry has become a significant factor in the American economy. Job opportunities are becoming available nearly everywhere that people gather to enjoy their leisure time—resorts; summer camps; scouting; YWCA's and YMCA's; city and county recreation centers; municipal, state and federal parks and playgrounds; industrial and hospital recreation programs—especially for professionally trained recreation leaders.

Suggested Curriculum By Quarters

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	110	Business Math	5	0	5
BIO	101	General Biology	3	4	5
REC	110	Professional Orientation	3	2	4
REC	125	Team Sports	3	2	4
			17	10	22
Second Quarter					
ENG	101	English II	3	2	4
GEO	108	Cultural Geography	3	2	4
REC	120	Social Recreation Leadership	2	2	3
REC	260	Maintenance & Operations	4	2	5
REC	111	Arts-Crafts-Drama	4	2	5
			16	10	21

Third Quarter

			Class	Lab	Hours Credit
ENG	102	English III	3	2	4
REC	258	Swimming Pool Manag.	3	2	4
REC	134	First Aid and Safety	1	2	2
REC	135	Individual Lifetime Sports	2	4	4
REC	120	Social Recreation Leadership	2	2	3
		Elective	0	4	1
			11	16	18

Fourth Quarter

REC	240	Field Studies	0	30	3
REC	247	Skill Performance	3	0	3
REC	248	Orientation & Evaluation	3	0	3
REC	249	Leadership Techniques	3	0	3
			9	30	12

Fifth Quarter

ENG	204	English IV	3	0	3
BUS	109	Seminar on Human Relations	3	0	3
REC	256	Conservation of Renewable Resources	2	3	3
REC	250	Recreation Programming	3	2	4
REC	265	Campground Management	3	2	4
			14	7	17

Sixth Quarter

BUS	242	Public Relations	3	0	3
REC	259	Recreation Administration	3	2	4
REC	266	Special Recreation	3	0	3
REC	268	Legal Principles & Practices in Recreation	3	2	4
		Elective	0	4	1
			12	8	15

Seventh Quarter

REC	273	Recreational Grounds Manag.	3	2	4
REC	277	State & Federal Lands Manag.	3	2	4
REC	278	Planning of Recreational Areas, Facilities and Equipment	2	4	4
REC	279	Seminar	3	2	4
		Elective	0	4	1
			11	14	17

Electives

REC	140	Elementary Swimming	0	2	1
REC	141	Intermediate Swimming	0	2	1
REC	142	Senior Life-Saving. Pre.: REC 141	0	2	1
REC	143	Water Safety Instructor. Pre.: REC 142	0	2	1
REC	241	Intermediate Tennis. Pre.: REC 135	0	2	1
REC	118, 128, 138, 158, 168, 178	Field Work I-VI Consent of Advisor	0	4	1
REC	119, 129, 139, 159, 169, 179	Intramurals I-VI	0	2	1
REC	160	Indoor Conditioning Activities	0	3	1

INDUSTRIAL-VOCATIONAL EDUCATION

AUTOMOTIVE MECHANICS

CARPENTRY

ELECTRONIC ENGINEERING

GENERAL MASONRY

LIGHT CONSTRUCTION

PLUMBING AND PIPEFITTING

SURVEYING

AUTOMOTIVE MECHANICS

Purpose

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair, or adjust automotive vehicles.

The courses are arranged in a sequence that gives the student the required technological and special skills as they are needed to coordinate with laboratory experiences. A high school diploma is required. Admission to the fifth and sixth quarter must be approved by the instructor. Emphasis is placed on the mechanical parts and operation of the various automobile units. Trouble shooting and servicing is also stressed.

Job Description

Auto Mechanic, Truck and Bus Mechanic, Shop Foreman, Maintenance Supervisor, Dealer, Service Manager, Sales Technician, Factory Representative, and Experimental Lab Worker are among those occupational opportunities awaiting graduates of the Automotive Mechanics Curriculum.

Suggested Curriculum By Quarters

			Class	Lab	Hours Credit
First Quarter					
MAT	1101	Fundamentals of Mathematics	5	0	5
PHY	1101	Applied Science I	3	2	4
PME	1101	Internal Combustion Engines	3	17	8
			11	19	17
Second Quarter					
PHY	1102	Applied Science II	3	2	4
ENG	1106	Fundamentals of English	5	0	5
PME	1102	Engine Electrical and Fuel Systems	5	15	10
			13	17	19
Third Quarter					
AUT	1121	Braking Systems	0	3	1
BUS	1103	Small Business Management	3	0	3
AUT	1123	Automotive Chassis and Suspension Systems	3	12	7
AUT	1101	Small Engines	3	0	3
WLD	1101	Basic Welding	0	3	1
DFT	1101	Schematics and Diagrams: Power Mechanics	0	3	1
			9	21	16

			Class	Lab	Hours Credit
Fourth Quarter					
PSY	1101	Human Relations	3	0	3
AUT	1124	Automotive Power Train Systems	2	9	6
AUT	1125	Automotive Servicing	2	6	5
AHR	1101	Air Conditioning Systems	2	6	5
			9	21	19
Fifth Quarter					
AUT	1201	Practical Shop I	0	27	9
AUT	1205	Automotive Seminar I	3	0	3
			3	27	12
Sixth Quarter					
AUT	1202	Practical Shop II	0	27	9
AUT	1206	Automotive Seminar II	3	0	3
			3	27	12

CARPENTRY

Purpose

The curriculum in carpentry is designed to train the individual to enter the trade with a background in both shop skills and related information. He must have a knowledge of mathematics, blueprint reading, methods of construction and a thorough knowledge of building materials.

The modern carpenter will work on new construction, maintenance, and repair of many types of structures, both residential and commercial.

Job Description

Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job is designated according to the specialty such as layout carpenter, framing carpenter, concrete form carpenter, scaffolding carpenter, accoustical and insulating carpenter, and finish carpenter.

Suggested Curriculum By Quarters

		Class	Lab	Hours Credit
First Quarter				
MAT 1112	Mathematics: Building Trades	5	0	5
DFT 1110	Blueprint Reading: Building Trades	0	3	1
CAR 1101	Basic Carpentry	5	17	10
		10	20	16
Second Quarter				
ENG 1106	Fundamentals of English	5	0	5
CAR 1113	Carpentry: Estimating	3	2	4
CAR 1103	Carpentry: Framing	5	15	10
		13	17	19
Third Quarter				
BUS 1103	Small Business Management	3	0	3
CAR 1104	Carpentry: Finishing	5	16	10
CAR 1114	Building Codes & Specifications	3	3	4
		11	19	17
Fourth Quarter				
CAR 1106	Millwork and Cabinet Making	5	15	10
CAR 1108	Building Safety	3	0	3
CAR 1109	Seminar: Special Techniques	2	5	4
		10	20	17

ELECTRONICS ENGINEERING TECHNOLOGY

Purpose

The field of electronics has undergone tremendous growth and a complete revolution in both theory and practice during the last twenty-five years. Today's electronic technician must possess a solid foundation in the scientific theory of electronics as well as a high aptitude in applied and field skills. He is the individual most often required to build, install, maintain, and operate the sophisticated equipment and systems that are produced by scientists and engineers.

STI believes strongly in technical proficiency. At the same time, it is realized that the graduate is first a citizen in his chosen community and while involved with technical studies he is also required to participate in classes and activities designed to keep him active in civic affairs.

Job Description

In acquiring the Associate in Applied Science degree, the graduate is assured of a technical proficiency that opens literally thousands of doors for him in manufacturing, laboratory research, data gathering, and field engineering. These opportunities exist world-wide and the demand is growing daily, thus assuring the electronic technician a wide choice of types of work as well as geographic locations. The graduate is also assured of very attractive salaries that are considerably higher than most positions in industry requiring an A.A.S. degree.

Suggested Curriculum By Quarters

First Quarter			Class	Lab	Hours Credit
ENG	100	English I	3	2	4
MAT	115	Electrical Math I	5	0	5
ELC	102	D. C. Fundamentals	5	7	8
DFT	107	Schematic Drawing I	1	2	2
			14	11	19

Second Quarter					
ENG	101	English II	3	2	4
MAT	116	Electrical Math II	5	0	5
ELC	104	A. C. Fundamentals	5	7	8
DFT	108	Schematic Drawing II	1	2	2
			14	11	19

Third Quarter					
ENG	102	English III	3	2	4
MAT	117	Electrical Math III	5	0	5
ELN	101	Electronics I	5	7	8
PHY	101	Physics I	3	2	4
			16	11	21

Fourth Quarter

			Class	Lab	Hours Credit
ELN	106	Entertainment Systems	3	10	8
ELN	108	Mechanical Circuit Layout	2	2	3
MAT	118	Electrical Math IV	5	0	5
ELN	125	FCC Exam Preparation	5	0	5
			15	12	21

Fifth Quarter

ENG	204	English IV	3	0	3
ELN	201	Electronics II	5	10	10
ELN	220	Antenna Design	3	0	3
PHY	102	Physics II	3	2	4
			14	12	20

Sixth Quarter

ELN	204	Electronics III	5	10	10
ELN	210	T.V. Systems Analysis	3	2	4
PHY	103	Physics III	3	2	4
			11	14	18

Seventh Quarter

ELN	207	Electronics IV	5	10	10
ELN	214	Electronic Instrumentation	0	3	1
ELN	216	Industrial Electronics	3	0	3
PSY	102	General Psychology	3	0	3
			11	15	18

Electives

ELN	121	International Morse Code	0	6	3
ELN	222	Special Project Building	0	5	2
ELN	225	Advanced Troubleshooting Procedures	3	2	4
ELN	125	FCC Exam Preparation	5	0	5
ELN	203	Pulse Circuits	3	0	3

LIGHT CONSTRUCTION

Purpose

Those interested in construction and maintenance of residential and light commercial buildings should find this program to their liking. Particular emphasis is placed on the construction of residential and small commercial buildings.

Training is offered in the basic trades of electrical wiring, welding, masonry, and carpentry.

Job Description

Employment may be obtained with contractors who specialize in the light construction building trades. These contractors employ carpenters, cabinetmakers, masons, plumbers, and electricians. Graduates may be employed as apprentices in some areas with advanced credit. Workers in these trades are in demand not only for installation but also building maintenance mechanics in small industries, apartments and hotels, public buildings and hospitals.

Light construction workers with adequate experiences and continuing education may qualify as foremen or contractors.

EVENING PROGRAMS

Electrical Wiring

				Class	Lab	Hours Credit
First Quarter						
MAT	1115	Electrical Math		5	0	5
ELC	1108	Residential Wiring		2	5	4
ELC	1005	Code Seminar		3	0	3
			Total	10	5	12
Second Quarter						
ELC	1110	Basic Electricity		3	2	4
ELC	1109	Commercial Wiring		2	5	4
ELC	1006	Code Seminar		3	0	3
			Total	8	7	11
Third Quarter						
DFT	1113	Electrical Drawing		2	3	3
ELC	1114	Industrial Wiring		2	5	4
ELC	1007	Code Seminar		3	0	3
			Total	7	8	10

Welding

WLD	1101	Basic Gas Welding		0	3	1
WLD	1104	Basic Arc Welding		3	9	6
WLD	1141	Welding Procedures		3	7	5
				6	19	12

MASONRY

		Class	Lab	Hours Credit
First Quarter				
DFT 1111 Blue Print Reading		0	2	1
MAS 1006 Masonry Shop 1A		1	12	5
	Total	1	14	6
Second Quarter				
MAT 1101 Fundamentals of Math		3	0	3
MAS 1107 Masonry Shop 1B		1	12	5
	Total	4	12	8
Third Quarter				
DFT 1112 Advanced Blue Print Reading		2	3	3
MAS 1012 Masonry Shop 2A		1	9	4
	Total	3	12	7
Fourth Quarter				
MAS 1013 Masonry Shop 2B		1	14	6
	Total	1	14	6
(Optional)				
MAS 1003 Principles of Rock Construction		3	0	3
MAS 1011 Masonry Shop III		0	27	9
		3	27	12
Elective:				
MAS 1004 Fireplace Construction		0	3	1

CARPENTRY

Fall Quarter				
CAR 1000 Carpentry I (Intro)		2	10	5
DFT 1110 Blueprint Reading — Building Trades		0	3	1
		2	13	6
Winter Quarter				
CAR 1001 Carpentry II (Framing)		2	7	4
CAR 1114 Building Codes & Specifications		3	3	4
		5	10	8

Spring Quarter		Class	Lab	Hours Credit
CAR	1002 Carpentry III (Finishing)	2	5	3
CAR	1108 Building Safety	3	0	3
CAR	1113 Carpentry Estimating	3	2	4
		8	7	10

Summer Quarter				
CAR	1107 Cabinet Making	0	8	3
CAR	1109 Special Techniques	2	5	4
		2	13	7

PLUMBING AND PIPEFITTING

Purpose

The curriculum in plumbing and pipefitting is designed to give the student the knowledge and basic skills to perform effectively. Courses in plumbing practices and pipefitting are included to provide practical experience as well as theoretical information. Other courses in communication skills, physics, human relations and business operations are provided to assist the individual in occupational growth.

Job Description

A substantial proportion of plumbers are self-employed or work for plumbing contractors doing repair, alteration, or modernization work. Some plumbers install and maintain pipe systems for government agencies and public utilities, and some work on the construction of ships and aircraft. Pipefitters, in particular, are employed as maintenance personnel in the petroleum, chemical, and food-processing industries.

Plumbers are employed by contractors in the building construction fields to install pipe systems which carry water, steam, air and other liquids or gases for sanitation, heating, industrial production and various other uses. They also alter and repair existing pipe systems and install plumbing fixtures, appliances, and heating refrigeration units.

Plumbing and pipefitting are sometimes considered to be a single trade. Journeymen in this field can specialize in either one. Water, gas, and waste disposal systems are installed by plumbers. Pipefitters install both high and low pressure pipes that carry hot water, steam, and other liquids as gases, especially those in industrial and commercial buildings and defense establishments, such as missile launching and testing sites.

Suggested Curriculum By Quarters

			Class	Lab	Hours Credit
First Quarter					
ENG	1106	Fundamentals of English	5	0	5
PHY	1101	Applied Science I	3	2	4
DFT	1110	Blueprint Reading: Building Trades	0	3	1
PLU	1110	Plumbing Pipework	5	12	9
			13	17	19
Second Quarter					
PHY	1102	Applied Science II	3	2	4
MAT	1112	Mathematics for Building Trades	5	0	5
DFT	1115	Blueprint Reading: Plumbing Trades	0	5	2
PLU	1111	Domestic Cold Water Systems	2	5	4
PLU	1113	Domestic Hot Water Systems	3	5	5
			13	17	20
Third Quarter					
MAT	1114	Mathematics for Plumbers	5	0	5
PLU	1118	Plumbing Codes	3	0	3
DFT	1116	Plumbing Drawings: Residential	6	0	6
PLU	1112	Installation of Plumbing Fixtures: Residential	0	7	2
PLU	1100	Soldering and Silver Soldering	2	7	4
			16	14	20

Fourth Quarter		Class	Lab	Hours Credit
PLU	1101 Working with Plastics	2	7	4
DFT	1117 Plumbing Drawing (Commercial)	5	0	5
PLU	1114 Commercial Piping (Plumbing)	3	6	5
PLU	1105 Construction Estimating	3	4	5
		13	17	19

SECOND YEAR OPTION

Fifth Quarter				
PLU	1125 Industrial Piping I	5	9	8
WLD	1102 Oxyacetylene Welding	3	13	7
		8	22	15

Sixth Quarter				
WLD	1108 Arc Welding	3	15	8
PLU	1126 Industrial Piping II	4	3	5
MAT	1114 Math for Plumbers	5	0	5
		12	18	18

Seventh Quarter				
PLU	1123 Panel Heating and Hot Water Boilers	8	10	11
PLU	1135 Oil Burner Installation	3	9	6
		11	19	17

Eighth Quarter				
PLU	1120 Low Pressure Steam Systems	6	10	9
PLU	1131 Fuels and Burners	3	4	4
PLU	1132 Circuits and Controls	3	4	4
		12	18	17

SURVEYING

Purpose

This curriculum is designed to give the students knowledge of the fundamentals of surveying. The course covers the legal principles of boundary controls as well as practical surveying.

Plane, land, topographical, route, building, and road construction surveying are covered in the course. Mapping, drafting, blueprint reading and applied mathematics are included.

This curriculum is recognized by the North Carolina State Board of Registration for Professional Engineers and Land Surveyors. Successful completion of the program is accepted as one year's credit toward the statutory experience requirement for registration as a Land Surveyor.

Job Description

With the tremendous growth of road construction, real estate business and industry, employment, opportunities are found with state and federal agencies, private contractors, engineering firms, industries and private land surveyors. Classes meet in the evening—field work on Saturday.

Suggested Curriculum By Quarters

			Class	Lab	Field	Hours Credit
First Quarter						
CIV	101	Surveying I	1	3	4	3½
MAT	100	Basic Mathematics	4	0	0	4
			5	3	4	7½
Second Quarter						
DFT	105	Surveying Drafting	2	2	0	3
MAT	101	Technical Mathematics I	5	0	0	5
BUS	248	Business Economics I	5	0	0	5
			12	2	0	13
Third Quarter						
CIV	102	Surveying II	1	3	4	3½
MAT	102	Technical Mathematics II	5	0	0	5
			6	3	4	8½
Fourth Quarter						
CIV	103	Surveying III	1	3	4	3½
CIV	100	Boundary Control	4	0	0	4
			5	3	4	7½

COURSE DESCRIPTIONS

AIR CONDITIONING AND REFRIGERATION (AHR)

AHR 1101—AIR CONDITIONING SYSTEMS (2 - 3 - 3)
General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system. Prerequisite: PHY 1102.

AHR 1116—OIL BURNER INSTALLATION (3 - 9 - 6)
Burner fundamentals, high pressure gun-type burners, pressure regulating valves, nozzles, fans and air control devices, low pressure atomization burners, rotary burners, vaporization pot-type burners, thermostats, pressure burner controls, vaporizing burner controls. Service and maintenance.

AUTOMOTIVE (AUT)

AUT 1101—SMALL ENGINES (3 - 3 - 4)
The purpose of this course is to teach the why and how of gasoline engine operations. A careful study of the theory and operating principles, plus actual practice in servicing and repairing engines will enable anyone to minimize engine troubles and to correct those troubles that do exist. The course will deal with small engines. Multicylinder engines will be included.

AUT 1121—BRAKING SYSTEMS (0 - 3 - 1)
Braking principles are studies in relation to the coefficiencies of friction and heat, and the expansion of materials. The operating principles of hydraulic, pneumatic, combination, and vacuum brake systems are emphasized. Laboratory instruction is offered in the installation of brake lining shoes, shoe reconditioning, drum turning, assembling and adjusting of brake systems and servicing of auxiliary units.

AUT 1123—AUTOMOTIVE CHASSIS AND SUSPENSION SYSTEMS (3 - 12 - 7)
Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, front end and alignment. Prerequisite: PME 1102.

AUT 1124—AUTOMOTIVE POWER TRAIN SYSTEMS (3 - 9 - 6)
Principles and functions of automotive power train systems, clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair. Prerequisites: PHY 1102, AUT 1123.

AUT 1125—AUTOMOTIVE SERVICING (3 - 7 - 5)
Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Extensive use of testing equipment will be made on the actual problem situations. A close simulation to the actual automotive shop will be maintained and every close effort will be made to give the student a full range of testing and servicing experience. Prerequisites: AUT 1121, 1123, 1124.

AUT 1201—PRACTICAL SHOP I (0 - 27 - 9)
A program that exposes the student to the unpredictable total car problems that occur on a day-to-day basis in a working shop. It is designed to provide the student with the opportunity to pull together and develop their skills in a working situation.

AUT 1202—PRACTICAL SHOP II (0 - 27 - 9)
A continuation of AUT 1201

AUT 1205—AUTOMOTIVE SEMINAR I (3 - 0 - 3)
Students meet with instructor to discuss problems and explore the deeper theoretical and practical concepts involved in advanced servicing.

AUT 1206—AUTOMOTIVE SEMINAR II (3 - 0 - 3)
A continuation of AUT 1205.

AUTOMOTIVE ELECTIVES

AUT 1207—AUTOMOTIVE SHOP MAINTENANCE (0 - 5 - 2)
This course is designed to provide the student with the opportunity to experience the fundamentals of maintaining common automotive shop tools and equipment. Emphasis is directed toward preventive maintenance and shop safety.

AUT 1208—FOREIGN CAR REPAIR (0 - 5 - 2)
The purpose of this course is to familiarize the student with the construction and operation of the component systems which constitute various foreign automobiles. Students enrolled in this course will also become acquainted with the metric system concerning automotive related measurements and tools.

AUT 1209—RECREATIONAL VEHICLE REPAIR (0 - 3 - 1)
The scope of this course encompasses the maintenance and repair of recreational vehicles such as motorcycles, marine vehicles, snowmobiles, dune buggies, and the like. The student will have the opportunity to become familiar with the basic operation and maintenance procedures involved in servicing various internal combustion engine powered vehicles.

BUSINESS (BUS)

BUS 101—INTRODUCTION TO BUSINESS (3 - 2 - 4)
A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management.

BUS 102—TYPEWRITING I (2 - 3 - 3)
Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Speed and accuracy requirements: 30 words per minute for five minutes; maximum of five errors.

BUS 103—TYPEWRITING II (2 - 3 - 3)
Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Speed and accuracy requirements: 40 words per minute for five minutes; maximum of five errors. Prerequisite: BUS 102 or equivalent.

BUS 104—TYPEWRITING III (2 - 3 - 3)
Emphasis on problems and speed building. Greater attention to development of production typing skills. Development of the student's ability to function as an expert typist, producing mailable copies, is stressed. Introduction to methods of duplication is also included. Speed and accuracy requirements: 50 words per minute for five minutes; maximum of five errors. Prerequisite: BUS 103

BUS 106—SHORTHAND I (3 - 2 - 4)
A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, phrases, and word beginnings and endings. Dictation rate of 40 words per minute required.

BUS 107—SHORTHAND II (3 - 2 - 4)
Continued theory study with greater emphasis on dictation and elementary transcription. Dictation rate of 60 words per minute required. Prerequisite: BUS 106 or equivalent.

BUS 108—SHORTHAND III (3 - 2 - 4)
Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Dictation rate of 80 words per minute required. Prerequisite: BUS 107.

BUS 109—SEMINAR ON HUMAN RELATIONS (3 - 0 - 3)
Discussions concerning the interactions of people in all types of situations. Emphasis on interactions of people in subordinate positions as well as management positions.

BUS 110—OFFICE MACHINES (2 - 2 - 3)
A general survey of the business and office machines. Students will receive training in the techniques, processes, operation, and application of the ten-key adding machine, ten-key printing calculator, full-keyboard adding machine, and electronic calculator.

BUS 112—FILING (3 - 0 - 3)
Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes, and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing.

BUS 115—BUSINESS LAW I (5 - 0 - 5)
A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

BUS 120—ACCOUNTING I (4 - 3 - 5)
Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: MAT 110.

BUS 121—ACCOUNTING II (4 - 3 - 5)
Partnership and corporation accounting. Emphasis is placed on recording, summarizing, and interpreting data for management control rather than on skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: BUS 120.

BUS 122—ACCOUNTING III (4 - 3 - 5)
Study of long term liabilities and investments, analysis of financial statements, cost, budgets and flow of funds. Prerequisite: BUS 121.

BUS 123—BUSINESS FINANCE (3 - 2 - 4)
Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term and consumer financing.

BUS 124—PERSONAL FINANCE (3 - 2 - 4)
A study of money management in personal and family affairs. The course includes business management and economics principles as they relate to personal finance, consumerism, family budgets, buying techniques, and saving and investment programs for individual and family use.

BUS 127—FINANCIAL MANAGEMENT (3 - 2 - 4)
The major objectives center around revealing the significance of business finance and the role it plays in the production and distribution process. The course is presented from the viewpoint of the finance department of a firm and deals with the concepts and techniques used in making correct decisions on obtaining and using funds.

BUS 201—WORD PROCESSING COMMUNICATIONS AND APPLICATIONS (3 - 0 - 3)
An introduction to Word Processing concepts. Training in the transferable skills of operation and application of magnetic keyboards in conjunction with dictation/transcription equipment. Prerequisite: BUS 209.

BUS 202—WORD PROCESSING SYSTEMS (3 - 0 - 3)
Through contacts with various firms throughout the country, students will become aware of the variety of Word Processing systems. Students will also develop research techniques. Prerequisite: BUS 201.

BUS 205—ADVANCED TYPEWRITING (2 - 3 - 3)
Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and typing projects that closely approximate the work appropriate to the field of study. Some of the projects involve: correspondence, manuscripts, reports, tabulation, technical, legal, government, and medical typing problems. Speed and accuracy requirements: 60 words per minute for five minutes; maximum of five errors. Prerequisite: BUS 104

BUS 206—DICTATION AND TRANSCRIPTION I (3 - 2 - 4)
Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Dictation rate of 100 words per minute required. Prerequisite: BUS 108.

BUS 207—DICTATION AND TRANSCRIPTION II (3 - 2 - 4)
Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Dictation rate of 110 words per minute required. Prerequisite: BUS 206.

BUS 208—DICTATION AND TRANSCRIPTION III (3 - 2 - 4)
Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Dictation rate of 120 words per minute required. Prerequisite: BUS 207.

BUS 209—MACHINE TRANSCRIPTION (2 - 0 - 2)
Training in the operation and applications of dictation/transcription equipment.

BUS 214—SECRETARIAL PROCEDURES (3 - 2 - 4)
Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. Some of these responsibilities include: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, and office organization.

BUS 215—OFFICE APPLICATIONS (0 - 30 - 3)
During the fourth quarter, students are assigned to work in a business or professional office for a minimum of thirty hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned. Prerequisite: All course requirements of the first three quarters or approval of the department head.

BUS 216 ORIENTATION AND EVALUATION (3 - 0 - 3)
On the first day of the quarter, the students will meet as a group with the school supervisor for work experience orientation. The students will meet again with the supervisor, both as a group and individually, at the end of the quarter for final evaluation discussions. The employer will fill out progress reports and rating sheets on each student to aid in this final evaluation. Prerequisite: All course requirements of the first three quarters or approval of the department head.

BUS 217—SKILL PERFORMANCE AND PRODUCTION (3 - 0 - 3)
The objective is to further develop and give hands-on experience in skill and production areas. The school supervisor will visit each student on the job to measure the student's performance in both areas. Prerequisite: All course requirements of the first three quarters or approval of the department head.

BUS 218—BUSINESS TECHNIQUES (3 - 0 - 3)
The objectives are to further develop and give hands-on experiences in business techniques and to help the student improve and become aware of the importance of desirable personal traits. Business techniques, abilities, and personal traits will be measured by the school supervisor during on-the-job visits with the students. Prerequisite: All course requirements of the first three quarters or approval of the department head.

BUS 222—INTERMEDIATE ACCOUNTING I (3 - 2 - 4)
Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes among other aspects, the balance sheet, income and retained earnings statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital. Prerequisite: BUS 122.

BUS 223—INTERMEDIATE ACCOUNTING II (3 - 2 - 4)
Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, long-term liabilities, paid in capital, retained earnings, and special analytical processes. Prerequisite: BUS 222.

BUS 224—INTERMEDIATE ACCOUNTING III (3 - 2 - 4)
Interpreting accounting data for managerial decisions. Budget preparations. Prerequisite: BUS 223.

BUS 225—COST ACCOUNTING (3 - 2 - 4)
Nature and purposes of cost accounting: accounting for direct labor, materials, and factory overhead; job cost, process cost, and standard cost principles and procedures; selling and distribution costs, budgets and executive use of cost figures. Prerequisite: BUS 122.

BUS 229—INCOME TAXES I (3 - 2 - 4)
Application of federal and state tax laws to individual tax situations with special emphasis on current tax law changes.

BUS 230—INCOME TAXES II (3 - 2 - 4)
Application of federal and state tax laws to partnership and corporations with special emphasis on current tax law changes. Continuation of BUS 229 with practical experience.

BUS 232—SALES DEVELOPMENT (3 - 2 - 4)
A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.

BUS 235—BUSINESS MANAGEMENT (3 - 2 - 4)
Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision making function versus the operating function. Role of management in business qualifications and requirements.

BUS 237—SMALL BUSINESS MANAGEMENT (3 - 0 - 3)
Introduces the problems of small business operation, business forms and records, financial problems, orders and inventories, layout of equipment and offices, methods of improving business, and employer-employee relations.

BUS 239—MARKETING (3 - 2 - 4)
A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in such marketing process.

BUS 242—PUBLIC RELATIONS (3 - 0 - 3)
Designed to make the student familiar with the practice of public relations, the problems most likely to be met, and the tools with which to approach these problems to be professionally effective.

BUS 243—ADVERTISING (3 - 2 - 4)
The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals, product and market research, selection of media, means of testing effectiveness of advertising. Theory and practice of writing advertising copy or various media.

BUS 244—RETAIL MANAGEMENT (3 - 2 - 4)
A study of the operations of a retail firm including: merchandising, buying, selling, advertising, and related functions such as financial management.

BUS 246—CURRENT TRENDS IN RETAIL MANAGEMENT (3 - 0 - 3)
A course designed to develop the student's ability to keep up to date in the retail area. Case studies and lectures centering around retailing and business periodicals are the major teaching techniques used.

BUS 248—BUSINESS ECONOMICS I (3 - 2 - 4)
The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution and consumption both in relation to the individual enterprise and to society at large.

BUS 249—BUSINESS ECONOMICS II (3 - 2 - 4)
Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems. Prerequisite: BUS 248.

BUS 251—PERSONALITY DEVELOPMENT (3 - 0 - 3)
Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement.

BUS 261—MANUFACTURING CYCLES (5 - 0 - 5)
Purchasing and distribution costs; consumption patterns, channels of distribution; marketing of consumer goods; shopping, specialty, agricultural and industrial goods; service marketing; functional middlemen; speculation and hedging; wholesaling shipping and warehousing; exporting and trade movements; standardization and grading; pricing government regulation of competition; sales promotional activities; merchandising practices.

BUS 262—CURRENT TRENDS IN INDUSTRIAL MANAGEMENT (3 - 0 - 3)
A course designed to develop the student's ability to keep up to date in his profession. Case studies and lectures centering around industrial and business periodicals are the major teaching techniques used.

BUS 263—QUALITY CONTROL (3 - 2 - 4)
Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, structure, costs, reports, records, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests for significance.

BUS 265—WORK MEASUREMENT (3 - 2 - 4)
Principles of work simplification including administration of job methods improvement, motion study fundamentals and time study techniques. Use of flow and process charts; multiple activity charts, operation charts, flow diagrams and methods evaluation.

BUS 266—VALUE ANALYSIS (3 - 0 - 3)
The modern concept in the control of manufacturing production. This course will provide the students an opportunity to study a production system with the specific purpose of identifying unnecessary costs. The objective of the concepts and techniques of value analysis is to make possible a degree of effectiveness in identifying and removing unnecessary cost by the use of sound decisions through a common sense approach.

BUS 267—PRODUCTION CONTROL (3 - 2 - 4)
Day-to-day plant direction, forecasting, product planning and control scheduling, dispatching, routing, and inventory control. Case histories are discussed in the classroom, and courses of corrective action are developed. Drafting room layout for planning and control.

BUS 268—PLANT LAYOUT (3 - 2 - 4)
A practical study of factory planning with emphasis on the most efficient arrangements of work areas to achieve lower manufacturing costs. Layouts for small and medium sized plants, layout fundamentals, selection of production equipment and materials handling equipment. Effective management of men, money and materials in a manufacturing operation.

BUS 269—SAFETY ENGINEERING (3 - 2 - 4)
Problems of accidents and fire in industry. Management and supervision responsibility for fire and accident prevention. Additional topics cover accident reports and the supervisor; good housekeeping and fire prevention; machine guarding and personnel protective equipment; state industrial accident code and fire regulation; the first aid department and the line of supervisory responsibility; job instruction and safety committees; insurance carrier and the Insurance Rating Bureau; and advertising and promoting a good safety and fire prevention program. The Occupational Safety and Health Act of 1970 will be emphasized.

BUS 271—OFFICE MANAGEMENT (3 - 2 - 4)
Presentation of the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems.

BUS 272—PRINCIPLES OF SUPERVISION (3 - 2 - 4)
Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and the associates. Emphasis on securing effective work force and the role of the supervisor. Methods of supervision are stressed.

BUS 273—PERSONNEL MANAGEMENT (3 - 2 - 4)
Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits and security.

BUS 276—PURCHASING AND INVENTORY CONTROL (3 - 2 - 4)
The organization of a purchasing department, methods of procurement, purchasing policies, sources of supply, legal aspects and controlling inventory.

BUS 277—CREDIT AND COLLECTION (3 - 2 - 4)
This course presents fundamental principles and practices of credit and collection. Meaningful projects are included in order to provide a better understanding of credit principles, concepts, procedures, job activities and responsibility.

BUS 279—PROFIT PLANNING AND BUDGET CONTROL (3 - 2 - 4)
The course is designed to familiarize students with the entire process of developing the profit plan and budget, and controlling expenditures through responsibility reporting.

CARPENTRY (CAR)

CAR 1000—CARPENTRY I (Intro) (2 - 10 - 5)
An introduction to the construction industry, the care and use of hand and power tools, materials, and methods of construction and basic building layout.

CAR 1001—CARPENTRY II (Framing) (2 - 7 - 4)
All aspects of the framing of residential structures are covered. Coordination with other trades is introduced.

CAR 1002—CARPENTRY III (Finishing) (2 - 5 - 3)
The interior and exterior finishing of residential structures and built-ins.

CAR 1101—BASIC CARPENTRY (5 - 17 - 10)
A brief history of carpentry and present trends of the construction industry. The course will involve operation, care and safe use of carpenter's handtools and powertools in cutting, shaping and joining construction materials. Major topics of study will include theoretical and practical applications involving materials and methods of construction, building layout, preparation of site, footings and foundation wall construction including form construction and erection.

CAR 1103—CARPENTRY-FRAMING (5 - 15 - 10)
A thorough introduction to the principles and practices of frame construction including sills, floor joist, subfloor, wall framing, ceilings, rafters bridging, sheathing partitions, and roof construction. Coordination with other skills will be stressed. Prerequisite: CAR 1101.

CAR 1104—CARPENTRY-FINISHING (5 - 16 - 10)
Methods and techniques of interior and exterior finishing will be covered including baseboards, door and window trim, stairways, door and window hanging, hardware, exterior trim, built-ins; emphasis will be on quality work. Prerequisites: CAR 1113, CAR 1103.

CAR 1106—MILLWORK AND CABINET MAKING (5 - 15 - 10)
Cabinet making and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment will be emphasized in learning methods of construction of millwork and cabinetry. Practical applications will include measuring, layout and construction of base and wall cabinets, built-ins, arches, stairs, and interior and exterior cornice and trim. Materials and finishes are also covered.

CAR 1107—CABINET MAKING (0 - 8 - 3)
The construction and installation of cabinets, shelves, and other bullt-ins encountered by the general carpenter on site are covered.

CAR 1108—BUILDING SAFETY (3 - 0 - 3)
All aspects of personal safety and proper job procedures are examined including a careful analysis of the Occupational Safety and Health Act as it applies to the construction trades.

CAR 1109—SEMINAR: SPECIAL TECHNIQUES (2 - 4 - 5)
A course designed to cover those general problems of construction not covered in the specific courses, including: coordination with other trades for smooth work flow and special problems encountered in light commercial construction.

CAR 1113—CARPENTRY-ESTIMATING (3 - 2 - 4)
A practical course in job estimating from basic data and working drawings. Student will work with quantities and grades of materials and develop cash estimates. Prerequisites: MAT 1101, CAR 1101.

CAR 1114—BUILDING CODES (3 - 3 - 4)
A thorough study of the building code requirements of city, county, state and federal agencies, and their application. Prerequisites: CAR 1113, 1103.

COMMERCIAL ART (CAT)

CAT 100—ART ORIENTATION (1 - 0 - 1)
Designed to aid the student in the understanding of the technical institute. Faculty and staff members explain the various functions of the institute. Exercises in developing study habits, writing and research techniques are completed by the students.

CAT 101—ADVERTISING PRINCIPLES (3 - 0 - 3)
A comprehensive survey of the history and development of advertising including a discussion of its economic and social values. An introduction to advertising media and current publications in the field.

CAT 102—ART AND DESIGN (2 - 6 - 4)
The plastic elements; Relationship of the Arts; Problems in Basic Design; Relationships of Materials and Techniques to form; Color Theory; Applied Problems.

CAT 105—LIFE STUDY (2 - 3 - 3)
Basic drawing in charcoal from the live model with emphasis on proportions, bone structure, muscles and main body masses.

CAT 106—LIFE STUDY (0 - 6 - 2)
A continuation and application of basic life study. Action and motion of figure, study of character, expression and the draped figure. Introducing various drawing techniques such as pen and ink, wash, pastels and paint. Prerequisite: CAT 105.

CAT 110—GENERAL ILLUSTRATION (2 - 6 - 4)
Study of creative methods and rendering techniques used in the illustration field. Editorial illustration, advertising spots, cartooning, fashion and retail product. Black and white and color problems will be assigned, using various media and materials. Emphasis on good drawing and research.

CAT 116—PHOTOGRAPHY I (2 - 6 - 4)
An introduction to the field of photography, photographic equipment and materials. A study of the fundamental techniques of the camera and its expressive possibilities in relation to the field of design and visual communications. Assigned camera projects, darkroom procedures and equipment.

CAT 117—PHOTOGRAPHY II (2 - 6 - 4)
Advanced photographic techniques and materials. Participation in studio and laboratory procedures illustrating various applications and creative possibilities of photography. Applied problems using the 35mm, copy and twin lens reflex cameras.

CAT 121—COMMERCIAL ART AND ADVERTISING DESIGN I (4 - 6 - 6)
Basic design fundamentals. Emphasis is on form, line, dimension and composition. The relation of nature and fine art to commercial art and design. Basic lettering form and style. Rough and finished lettering techniques.

CAT 122—COMMERCIAL ART AND ADVERTISING DESIGN II (4 - 6 - 6)
Basic color fundamentals and principles. The color wheel. Introduction of color into basic design problems. Typography; background, faces, uses, terms and specifying. Typographic design, indication and layout for type-setter. Prerequisite: CAT 121.

CAT 123—COMMERCIAL ART AND ADVERTISING DESIGN III (6 - 6 - 8)
Professional approach to advertising and editorial layout. The indicating of finished art concepts, visuals, and ideals. Pencil roughs, colored sketches and comprehensive layouts. Prerequisites: CAT 122, DFT 102.

CAT 201—ART HISTORY (5 - 0 - 5)
An examining of ideas, philosophies common to all periods of Art History, and a comparison of periods in terms other than chronological development.

CAT 205—ADVERTISING COPYWRITING AND FITTING (3 - 2 - 4)
A study of the techniques used in creating effective advertising copy for various types of media; purposes and duties of the copywriter and legal problems encountered in copywriting. Theory and practice will be given in writing copy for the various media including retail and fashion copy, mail order, direct mail, business, publications, radio and television.

CAT 206—PROJECT SEMINAR (2 - 3 - 3)
Each student selects and pursues project work in the field of his choice. Maximum individual attention is available.

CAT 212—INDUSTRIAL ART AND DESIGN (2 - 3 - 3)
A study of art and design for industry and business. Forms, charts and graphs, letterhead, trademarks and company publications. Use of the airbrush, photo retouching and airbrush art. Handling of annual reports. Prerequisite: CAT 123.

CAT 217—SILK SCREEN TECHNIQUES (2 - 6 - 4)
Commercial approach to silk screen printing. Applied problems using paper, tusche and glue, lacquer, film, aquafilm, and photographic film methods. Problems in multicolor printing.

CAT 224—COMMERCIAL ART AND ADVERTISING DESIGN IV (4 - 6 - 6)
A thorough background in production methods for various media. Study of printing and engraving processes. Color separation process. Assignments in art mechanicals, reproduction methods and printing paper qualities and selection. Trips to printing, engraving and paper plants. Prerequisite: CAT 123.

CAT 225—COMMERCIAL ART AND ADVERTISING DESIGN V (6 - 6 - 8)
A course providing simulated professional working conditions. The student will utilize all previous instruction "job" assignments. Work will start the student's individual portfolio of professional samples. There will be class critique and discussion of assignments and solutions.

CAT 226—COMMERCIAL ART AND ADVERTISING DESIGN VI (6 - 6 - 8)
Course providing simulated professional working conditions. Advanced "job" problems. Emphasis on self-expression and originality. The student will complete his professional portfolio. Prerequisite: CAT 225.

CAT 227—FASHION ILLUSTRATION (4 - 6 - 6)
Drawing the fashion figure, and employing basic types of rendering used in fashion advertising.

CAT 231—PROJECT SEMINAR (2 - 3 - 3)
Each student selects and pursues project work in the field of his choice. Maximum individual attention is available.

CAT 232—PROJECT SEMINAR (1 - 6 - 3)
Individual attention is given each student in the areas of learning which need strengthening. Project development is stressed.

CAT 235—ADVERTISING ART DIRECTION (5 - 0 - 5)
A study of the art director's profession. The creating and coordinating of effective advertising campaigns and editorial designs for both national and local markets. The practical consideration, procedures and job opportunities restrictions. Media selection, frequency of insertion, direct mail and response. The value of market research. Emphasis on dealing with professionals in related fields.

COSMETOLOGY (COS)

COS 1001—SCIENTIFIC STUDY I (4 - 6 - 6)
An introduction to the field of cosmetology. Subjects covered include professional ethics, grooming, hygiene and personality development, sterilization, sanitation, first aid and bacteriology, cosmetology law, anatomy, chemistry, nails, hair, scalp and skin disorders.

COS 1002—SCIENTIFIC STUDY II (5 - 0 - 5)
Theory of skin, scalp, hair, nails and disorders, salesmanship, permanent waving, croquignole and chemical hair relaxing, hairdressing and wig styling, hair coloring.

COS 1003—SCIENTIFIC STUDY III (5 - 0 - 5)
Theory of anatomy, manicuring, chemistry of cosmetics and facials, hair styling, massage scalp treatments, superfluous hair removal and grooming and hygiene.

COS 1004—SCIENTIFIC STUDY IV (5 - 0 - 5)
Theory of skin, scalp, hair, nails and disorders, salesmanship, permanent wave styling, beauty salon management, electricity, hair shaping, chemistry, sanitation and sterilization, cold waving.

COS 1011—MANNEQUIN PRACTICE (1 - 19 - 7)
An introduction to the practice of fingerwaving, pin curling, rollers, marcelling and hair relaxing, shampooing and rinses, scalp treatment, hair shaping, permanent waving, hairdressing and combing, hair tinting, bleaching, frosting and streaking, wigs—care and styling.

COS 1022—CLINICAL APPLICATION I (0 - 29 - 9)
An introduction to actual clinical practice covering bacteriology, pin curling, finger waving and roller, permanent waving, hair styling and wigs, manicuring and pedicuring, skin and scalp disorders, coloring, shaping.

COS 1033—CLINICAL APPLICATION II (0 - 29 - 9)
Shop practice in hair shaping, professional ethics, manicuring, cosmetics and facials, hairstyling, cold waving, hair coloring and scalp treatment.

COS 1044—CLINICAL APPLICATION III (0 - 29 - 9)
Advanced shop techniques in hair coloring and lash and brow tinting, artistry in hairstyling and wigs, cold waving, hair shaping, sterilization, sanitation and chemistry.

DRAFTING (DFT)

DFT 101—TECHNICAL DRAFTING I (0 - 6 - 2)
The field of drafting is introduced as the student begins study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique and perspective are introduced.

DFT 102—TECHNICAL DRAFTING II (0 - 6 - 2)
The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphic analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices for "details" and working drawings approval by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometric objects. Prerequisite: DFT 101.

DFT 105—SURVEYING DRAFTING (2 - 2 - 3)
An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double oblique auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time.

DFT 107—SCHEMATIC DRAWING I (1 - 2 - 2)
Introduces the use of basic drafting tools, symbols and conventions to convey technical information. Functionally oriented diagrams emphasized.

DFT 108—SCHEMATIC DRAWING II (1 - 2 - 2)
Continued study of functional presentations and introduces advanced techniques including airline, mechanical layout, pictorials, generation of systems and application of values and wave form information.

DFT 1101—SCHEMATICS AND DIAGRAMS: POWER MECHANICS (0 - 3 - 1)
Interpretation and reading of schematics and diagrams. Development of ability to read and interpret blueprints, charts instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

DFT 1102—BLUEPRINT READING: MECHANICAL (0 - 3 - 1)
Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes.

DFT 1103—BLUEPRINT READING: MECHANICAL (0 - 3 - 1)
Further practice in interpretation of blueprints as they are used in industry; study of prints supplied by industry; making plans of operations; introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes.

DFT 1108—BLUEPRINT READING: MECHANICAL (0 - 3 - 1)
Advanced blueprint reading and sketching as related to detail and assembly drawings used in machine shops. The interpretation of drawings of complex parts and mechanisms for features of fabrication, construction and assembly. Prerequisite: DFT 1103.

DFT 1110—BLUEPRINT READING: BUILDING TRADES (0 - 3 - 1)
Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.

DFT 1111—BLUEPRINT READING MASONRY (0 - 2 - 1)
Blueprint reading directly related to masonry. Estimating quantities and calculating dimensions from plans.

DFT 1112—ADVANCED BLUEPRINT READING MASONRY (2 - 3 - 3)
Advanced blueprint reading related to estimating.

DFT 1113—ELECTRICAL DRAWING (2 - 3 - 3)
Interpretation of schematics, diagrams and blueprints applicable to electrical installation with emphases on electrical plans for domestic, commercial and industrial buildings. The sketching of schematics, diagrams and electrical plans and using appropriate symbols and notes according to the national electrical code will be emphasized.

DFT 1115—BLUEPRINT READING: PLUMBING TRADES (0 - 3 - 1)
Sketching diagrams and schematics, and interpretation of blueprints applicable to the plumbing trades. Emphasis will be on plumbing plans for domestic and commercial buildings. Piping symbols, schematics, diagrams and notes will be studied in detail. Applicable building and plumbing codes will be used for reference. Prerequisite: DFT 1110.

DFT 1116—PLUMBING DRAWINGS: RESIDENTIAL (6 - 0 - 6)
A specialized course in drafting for residential plumbing and hydronic heating. Emphasis will be placed on reading of blueprints that are common to the trade; blueprints of mechanical components, assembly drawings, wiring diagrams and schematics, floor plans, plumbing and heating plans, including layout plans, and shop sketches. The student will make tracings of floor plans and layout plumbing systems. Prerequisites: DFT 1110, DFT 1115.

DFT 1117—PLUMBING DRAWINGS (COMMERCIAL) (3 - 6 - 5)
A study of different types of business and drawing plans for the plumbing and heating for the different types of business such as Offices, Motels, Schools, etc. This will give the student a better understanding of the industry. Prerequisites: DFT 1116, DFT 1115.

DFT 1118—PLUMBING DRAWINGS (INDUSTRIAL) (3 - 3 - 4)
The student will become familiar with industrial plans and specifications, different plumbing layouts, water treatment and chemical waste, different types of material used for this application. This will give the student a better understanding of the trade. Prerequisites: DFT 1110, DFT 1115, DFT 1116, DFT 1117.

EDUCATION (EDU)

EDU 101—CHILD GROWTH AND DEVELOPMENT (3 - 0 - 3)
Study of early growth and development, with emphasis on the principles and techniques for promoting the physical and mental health of the young child.

EDU 102—PROGRAMMING FOR YOUNG CHILDREN (3 - 6 - 5)
Study of principles and practices of early childhood education: the types of experiences, facilities, and media which will promote optimal development of each child. Guidelines for identifying, planning, organizing, and implementing appropriate programs for various levels of development are derived through group discussion and individual projects. Laboratory experience provides opportunities to participate in planning activities, in selecting equipment and materials, in defining the adult role, and in developing techniques for managing children in a group situation. Prerequisite: EDU 101.

EDU 103—WORKING WITH YOUNG CHILDREN (3 - 9 - 6)
Case presentations, films, observations, and group discussions are utilized to study characteristic behaviors of each level of development and to derive guidelines for promoting desirable behaviors and for coping with undesirable behaviors. Laboratory experiences will provide opportunities to develop observation skills, effective techniques, and beginning skill in adapting activities to the needs of individual children. Through coordination with PSY 106, theories from behavioral science are identified as the foundation of techniques for working with young children. Prerequisite: EDU 102.

EDU 104—INTRO. READING TO THE CHILD (3 - 0 - 3)
An introduction to reading and the young child with emphasis on the development of readiness activities and methods and materials for beginning reading skills.

EDU 105—MUSIC FOR THE EARLY YEARS (1 - 2 - 2)
Music activities for young children; demonstrations and practice work as well as an introduction to music materials available for various age levels and interests.

EDU 106—ART FOR YOUNG CHILDREN (1 - 2 - 2)
Guides for understanding children's art. Methods and materials especially suited for young children will be examined. Demonstrations and practice work.

EDU 107—MATH FOR YOUNG CHILDREN (3 - 0 - 3)
The teaching of basic number concepts through appropriate methods, materials and actlvities for the young child. Developmental experiences will be emphasized.

EDU 108—CRAFTS FOR YOUNG CHILDREN (1 - 2 - 2)
Demonstration and practical experiences to develop a wide range of craft activities suitable for the young child. A variety of media will be used to develop basic skills.

EDU 110—METHODS OF TEACHING INDUSTRIAL SUBJECTS (3 - 0 - 3)
A study of effective methods and techniques of teaching industrial subjects. Emphasis is given to class organization; student-teacher planning; methods of teaching manipulative skills and related information; lesson planning; shop safety; and evaluation. Teaching problems will be studied and analyzed following directed observations in the public schools.

EDU 111—USE OF MEDIA IN INSTRUCTION (3 - 0 - 3)
A basic course in the planning and production of slides, still pictures, mounting and preserving materials, graphics, transparencies, and audio recordings for instructional use. The design and application of these materials are related to current theories of instruction. Emphasis will be placed on developing audio-visual materials designed to achieve specific instructional objectives.

EDU 222—MEDIA RESOURCES (3 - 0 - 3)
Demonstrations and practical experiences to encourage teacher use of instructional media of all types. Selection and preparation of materials.

EDU 223—SCHOOL RECORDS & REPORTS (3 - 0 - 3)
A basic course providing background on the needs for school records as well as the types of information to be recorded. Experience in record-keeping, summarizing, accurate filing, etc.

EDU 227-228-229—SEMINAR PRACTICUM (0 - 15 - 5)
Application of knowledge of young children through guided experiences in a school setting.

ELECTRICAL (ELC)

ELC 102—D. C. FUNDAMENTALS (5 - 7 - 8)
Basic direct current circuits are introduced through elementary matter—particle theory, sources and general applications of D.C. Topics include: current, voltage, resistance, Ohm's law, Kirchoff's laws, series and parallel circuits, and magnetism. Proper use and care of D.C. instruments introduced to permit early use of laboratory facilities. Fundamental concepts emphasized.

ELC 104—A.C. FUNDAMENTALS (5 - 7 - 8)
Sinewave generation, alternators, inductors, transformers, resistance, capacitance, and impedance are studied as well as circuits involving series and parallel components, tuning, resonance, anti-resonance, filters, and networks. Basic A.C. test equipment is introduced. Laboratory application of principles emphasized.

ELC 1005—CODE SEMINAR (3 - 0 - 3)
An in-depth study of the National Electrical Code as it pertains to residential wiring. Emphasis will be placed on improving the students ability to locate rapidly and read accurately appropriate code sections.

ELC 1006—CODE SEMINAR (3 - 0 - 3)
An in-depth study of the National Electrical Code as it pertains to commercial wiring. Emphasis will be placed on improving the students ability to locate rapidly and read accurately appropriate code sections.

ELC 1007—CODE SEMINAR (3 - 0 - 3)
An in-depth study of the National Electrical Code as it pertains to industrial wiring. Emphasis will be placed on improving the students ability to locate rapidly and read accurately approprlate code sections.

ELC 1108—RESIDENTIAL WIRING (2 - 5 - 4)
Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups.

ELC 1109—COMMERCIAL WIRING (2 - 5 - 4)
Interpretation of construction and electrical specification along with the planning and installation of wiring systems in a variety of commercial structures is provided. The three-phase, four-wire system will be introduced and emphasized.

ELC 1110—BASIC ELECTRICITY (3 - 2 - 4)
The basic electricity subjects studied include structure of matter, electrical terminology and symbols, electron theory of current flow, magnets and magnetic field. The course stresses a mathematical analysis of direct and alternating current resistive circuits. Ohm's Law, Kirchoff's Law and power law are studied. Fundamental principles of inductors, capacitors and time constant circuits are introduced. Also covered are Thevenin's Theorem, Noton's Theorem, superposition and reciprocity.

ELC 1114—INDUSTRIAL WIRING (2 - 5 - 4)

Construction specifications and electrical systems are introduced with installation practices being an integral part of the course study. Also introduced into the field of study will be unit substation and high-voltage metering equipment, feeder ducts and distribution transformers, panelboards and sub-feeders, general circuits, motors and controllers, precipitron units, synchronous condensers, signal systems, ventilating and air-conditioning units, and alternate methods of feeder layout.

ELECTRONICS (ELN)

ELN 101—ELECTRONICS I (5 - 7 - 8)

Principles and application of vacuum tubes in tuned circuits, amplifiers and oscillators are explored. Precision electronic equipment used to test and evaluate student-built test, power, and amplifier circuits. Basic switches, relays, and electronic controls are covered. Application of principles emphasized.

ELN 106—ENTERTAINMENT SYSTEMS (5 - 10 - 10)

Various hi-fi, stereo, record changer and television systems are covered. Diagnosis and trouble shooting emphasized.

ELN 108—MECHANICAL CIRCUIT LAYOUT (2 - 2 - 3)

Space, weight, and component interaction problems involving layout and construction. Unit performance emphasized.

ELN 121—INTERNATIONAL MORSE CODE (0 - 6 - 3)

Elective consisting of daily code practice offered for the student with an avocational interest in amateur radio or a vocational interest in shipboard communications.

ELN 125—FCC EXAM PREPARATION (5 - 0 - 5)

Elective for the review of material normally given in the FCC First and Second Class examinations. Question and answer method of study used in conjunction with open discussions.

ELN 201—ELECTRONICS II (5 - 10 - 10)

The ultra-modern and fascinating field of solid state electronics is fully covered. Topics include diodes, transistors, micro-electronics, use of special purpose SS devices and a glimpse at the future of SS. Laboratory application emphasized. Prerequisite: ELN 101.

ELN 203—PULSE CIRCUITS (3 - 0 - 3)

Study of waveform analysis, basic networks including integrators, differentiators, multivibrators, blocking oscillators, saw tooth generators and various other non-sinusoidal circuits. Basic application emphasized.

ELN 204—ELECTRONICS III (5 - 10 - 10)

Theory and application of AF and RF amplifiers, basic transmitter design, AM and FM transmitter and receiver principles, and AF and RF measurements are presented in a mixture of classroom and laboratory assignments designed to sustain student interest. Prerequisite: ELN 201.

ELN 207—ELECTRONICS IV (5 - 10 - 10)

Applied pulse circuitry associated with television, microwave equipment, radar, radio direction finders, and precision electronic navigation equipment—such as Loran A and Loran C — is presented along with recent innovations in space communications. Prerequisite: ELN 204.

ELN 210—TV SYSTEMS ANALYSIS (3 - 2 - 4)

Detailed study of basic TV receiver circuits. Theory is proven by laboratory tests and measurements of voltages, resistances and waveforms utilizing up-to-date test equipment especially designed to gather such data. Laboratory application of theory emphasized.

ELN 214—ELECTRONIC INSTRUMENTATION (0 - 3 - 1)

Novel and exceptional uses of common instruments are studied and tested. Field conditions are simulated using improvised instruments.

ELN 216—INDUSTRIAL ELECTRONICS (3 - 0 - 3)
Standard and novel industrial methods and systems of counting, switching, speed control, product inspection and plant security are presented. Laboratory application emphasized.

ELN 220—ANTENNA DESIGN (3 - 0 - 3)
Involves study of simple and complex antennae, materials, physical dimensions, design formulae, skin effect, gain, radiation patterns, line loss, standing wave ratio, reflected power, and various methods of field strength evaluation.

ELN 222—SPECIAL PROJECT BUILDING (0 - 5 - 2)
An elective offered for the student interested in building a special project — either original design or kit form. Construction techniques emphasized.

ELN 225—ADVANCED TROUBLE-SHOOTING PROCEDURES (3 - 2 - 4)
Expedient and efficient methods are covered in detail, using logical "system and module" approach. Solid state circuits emphasized.

ELECTRONIC DATA PROCESSING (EDP)

EDP 104—INTRODUCTION TO DATA PROCESSING SYSTEMS (3 - 2 - 4)
Fundamental concepts and operational processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detailed study of particular computer problems.

ENGLISH (ENG)

ENG 100—ENGLISH I (3 - 2 - 4)
Designed to encourage the student's development of reading comprehension and reading rate. Emphasizes the grasp of basic ideas rather than words. Offers workable techniques which the student may use in reading assignments, helping him to identify, interpret and evaluate ideas.

ENG 101—ENGLISH II (3 - 2 - 4)
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations. Prerequisite: ENG 100.

ENG 102—English III (3 - 2 - 4)
Designed to aid the student in the improvement of self-expression in written composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: ENG 101.

ENG 103—ENGLISH VI (3 - 0 - 3)
The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must relate to his chosen curriculum. Prerequisite: ENG 102.

ENG 204—ENGLISH IV (3 - 0 - 3)
A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: ENG 102.

ENG 205—ENGLISH V FOR SECRETARIES (3 - 0 - 3)
A communications course designed for secretarial students who must learn to initiate written documents for the employer. Primary emphasis is placed upon the development of skills in the techniques of writing business letters, such as

credit and collections, complaints, orders, acknowledgements, remittances, inquiries and answers to inquiries. The student will also learn to write business reports based upon the accumulation of primary data and to summarize business conferences. Prerequisite: ENG 204.

ENG 206—ENGLISH VII (3 - 0 - 3)
Develops skills in techniques in writing business communications. Emphasis is placed on writing sales letters and prospectuses, business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances and inquiry. Prerequisite: ENG 102.

ENG 1103—ENGLISH FOR NURSES (2 - 0 - 2)
A self-paced course designed to help the student acquire desirable study habits through the development of listening and reading skills. Basic grammar skills are reviewed.

ENG 1104—ENGLISH FOR NURSES (2 - 0 - 2)
A self-paced composition course designed to improve the student's writing ability, and to develop skills in organization of thought and self-expression. Descriptive, analytic, and expository writing of topics relating the various aspects of the student's personal experiences is emphasized.

ENG 1106—FUNDAMENTALS OF ENGLISH (5 - 0 - 5)
Designed to aid the student in the improvement of self-expression in grammar, composition, and basic reading skills. Special machines are used for class drill to broaden the span of recognition, increase eye coordination, and word group comprehension.

ENVIRONMENTAL SCIENCE (ENV)

ENV 100—ENVIRONMENTAL ORIENTATION (1 - 2 - 2)
An introduction to environmental education, fields of environmental employment, and duties performed. Guest lecturers in environmentally related fields.

ENV 130—MICROBIOLOGY (3 - 4 - 5)
A study of general microbiology with emphasis on micro-organisms associated with pollutants such as industrial waste and sewage. Lab will include methods of isolating, culturing, and staining selected micro-organisms. Prerequisites: Bio 101, Chm 101.

ENV 132—SAMPLING TECHNIQUES & PRESENTATION OF DATA (2 - 4 - 4)
Introduction to design of sampling programs. Demonstrations of sampling tools and techniques. Basic data analysis, methods of plotting and displaying data. Contamination and error control.

ENV 201—LABORATORY APPLICATIONS (3 - 0 - 3)
Studies of laboratory techniques applied to field problems.

ENV 202—DATA STUDIES (3 - 0 - 3)
A practical application of the principles of data collection, analysis and presentation.

ENV 203—USE OF INSTRUMENTS (3 - 0 - 3)
Studies in the use of field instruments in data collection.

ENV 204—FIELD STUDIES (0 - 30 - 3)
Practical on-site experience with an environmental monitoring operation.

ENV 208—FISHERIES MANAGEMENT (3 - 2 - 4)
A study of the aquatic environment and fishery science. Life history and biology of important game and commercial fishes, age and growth analysis, population estimations, fish culture, fish management, and pollution studies.

ENV 210—ECOLOGY (3 - 2 - 4)
A basic course designed to acquaint the student with the relationships between organisms and their environment, and of interactions among organisms. Lectures, laboratories, and field trips present a balanced perspective in environmental biology. Included will be productivity, nutrient cycling; pollution, environmental factors affecting aquatic and terrestial systems, regulation and dynamics of populations, interactions among species, community ecology; and the ecological viewpoint in modern land management.

ENV 213—AIR SAMPLING, ANALYSIS, & CONTROL (3 - 4 - 5)
A study of air quality standards, air monitoring equipment, and techniques for sampling air. Lab will include sampling and analysis of ambient air.

ENV 216—ENVIRONMENTAL HEALTH (3 - 2 - 4)
The influence of environmental conditions on human health. Special emphasis given to medical laboratory procedures including bacteriology, hemotology, clinical chemistry, and urinalysis, used in assessing health.

ENV 220—WATER SAMPLING, ANALYSIS, CONTROL (3 - 2 - 4)
A basic study of water quality standards, water monitoring equipment, water monitoring techniques, and analysis of results.

ENV 223—INSTRUMENT MAINTENANCE (2 - 6 - 5)
Basic types of instruments and their design principles covers simple mechanical and electronic faults that can be repaired by a technician in a laboratory. Instrument calibrations and standardization will be discussed.

ENV 229—METEOROLOGY (3 - 4 - 5)
Physical aspects of weather and climate, with labs to accompany lectures.

ENV 230—ENVIRONMENTAL QUALITY LAWS AND ENFORCEMENT (3 - 2 - 4)
A study of local, state, and federal laws and acts concerning environmental quality standards and the use of resources, legal procedure for enforcing laws, and problems concerning enforcement. Included will be environmental standards dealing with polluting sources such as industry, agriculture, municipalities, and individuals.

ENV 231—ENVIRONMENTAL PROJECT (1 - 12 - 5)
This course consists of a supervised project concerning an environmental problem in the area which would enable the student to put to use some of the knowledge gained in class. The student will write a report on his project and accomplishments.

ENV —LAND RESOURCE MANAGEMENT (3 - 4 - 5)
An integrated course covering aspects of geology, soil and water conservation, and the relationship of these factors to the biological community. Methods of land management will be discussed allowing controlled growth without environmental degradation.

FOOD SERVICE MANAGEMENT (FSO)

FSO 101—ORIENTATION TO FOOD SERVICE (1 - 0 - 1)
Introduction to and history of food service and the outlook for the food service industry. Broad objectives and specific goals of training with an investigation of job opportunities and personal qualifications.

FSO 102—FOOD PREPARATION I (3 - 6 - 5)
A study of the scientific principles of food preparation and cooking procedures, including preparation of salads, stocks, soups, sauces, gravies, and beverages.

FSO 103—EQUIPMENT (3 - 0 - 3)
Designed to teach methods of simplifying work through the effective use and care of large and small equipment with emphasis on time and motion economy.

FSO 104—SANITATION AND SAFETY (3 - 0 - 3)
A study of sanitation standards and safety precautions as related to food storage, preparation, and service.

FSO 105—ACCOUNTING-PURCHASING-RECORDS (3 - 0 - 3)
Basic mathematical skills studied in relation to food purchasing, preparation, accounting, and records.

FSO 106—NUTRITION AND MENU PLANNING I (3 - 0 - 3)
A study of the principles of nutrition using the basic four food groups, and the application of these principles to the planning of nutritionally adequate diets as well as other factors influencing menu planning: refrigeration and storage facilities, availability of seasonal foods, equipment and facilities, employee skills, eye appealing food combinations, type of clientele and food service.

FSO 107—BAKING I (2 - 6 - 4)
An introduction to the principles of and development of skills in making.

FSO 108—PERSONNEL MANAGEMENT (3 - 0 - 3)
A study of the job responsibilities and duties of the food service worker: his relationship to his associates, with emphasis on understanding human behavior; labor policies and legislation; and the importance of self-development in relation to professional responsibility.

FSO 109—PRODUCTION MANAGEMENT (3 - 0 - 3)
Use of standardized recipes and portion control, work sheets, score sheets for judging food products, plan of work to improve work methods and further emphasis on motion economy. Prerequisite: FSO 105.

FSO 110—PRACTICAL FOOD PREPARATION (0 - 30 - 3)
Food preparation in a working environment designed to expose the student to the requirements and pressures of the job.

FSO 112—FOOD PREPARATION II (2 - 9 - 5)
Emphasis placed on meat analysis and cutting and on meat, poultry, fish, and shellfish cookery. Prerequisite: FSO 102.

FSO 113—CUSTOMER RELATIONS (3 - 0 - 3)
Techniques of meeting and courteous dealing with the public in providing information of the geographic area, directions, etc., as well as how to provide a pleasant dining experience for the customer through efficient service.

FSO 115—PEAK SERVICE PLANNING (3 - 0 - 3)
Proper planning for periods of peak service to insure adequate preparation without waste and to study timing to avoid delays or cold food.

FSO 116—FOOD HANDLING (3 - 0 - 3)
A practical study of the proper means of food handling to insure efficiency and cleanliness.

FSO 117—BAKING II (2 - 6 - 4)
The development of artistic skills related to cooking and baking. Prerequisite: FSO 107.

FSO 122—FOOD PREPARATION III (0 - 9 - 3)
Emphasis will be on whole meal preparation, including vegetable cookery, preparation of breakfast dishes and appetizers. Prerequisite: FSO 112.

FSO 201—EQUIPMENT (3 - 0 - 3)
Selection and purchasing of large and small equipment and supply items with field trips to equipment dealers and/or manufacturers. Emphasis on factors in planning space and equipment arrangements for functional flow of work. Prerequisite: FSO 103.

FSO 202—FOOD PREPARATION IV (3 - 6 - 5)
Emphasis on experimental cookery as related to quality control; study of food standards and specifications. Prerequisite: FSO 122.

FSO 203—ORGANIZATION AND MANAGEMENT (3 - 0 - 3)
A study of the organization structure, the application of the principles of scientific management and the effectiveness of personnel as related to successful food service operation. Prerequisite: FSO 108, FSO 109.

FSO 204—FOOD PURCHASING AND COST CONTROL (3 - 0 - 3)
Fundamentals of sound food purchasing methods and procedures based on cost control, specifications, quantity and storage.

FSO 205—NUTRITION AND MENU PLANNING II (3 - 0 - 3)
Principles of nutrition as applied to institutional menu planning: included will be school food service (type A lunch), cycle menus, and modified diet planning. Prerequisite: FSO 106.

FSO 206—FINANCIAL MANAGEMENT (3 - 0 - 3)
A comprehensive study of financial management related to food service operation, to include food, labor and equipment costs, operating and overhead expenses, personnel policies, and records. Prerequisite: FSO 105.

FSO 207—FOOD MERCHANDISING (2 - 6 - 4)
Emphasis on the art of food preparation and service.

FSO 211—SEMINAR (3 - 0 - 3)
Jcb orientation and overall evaluation of work experience.

FSO 212—FOOD PREPARATION V (0 - 6 - 3)
Planning and preparation of modified diets; type A lunch menus. Prerequisite: FSO 202.

FSO 214—SPECIALTY COOKING (2 - 4 - 3)
A course to prepare the student for employment in specialty restaurants. National dishes, fancy desserts, breads, meats, salads, etc., will be emphasized.

FSO 215—LEGAL REQUIREMENTS FOR FOOD HANDLERS (3 - 0 - 3)
All legal aspects of food service are covered, including inspections, sanitation for personnel, equipment and facilities.

HEALTH SERVICES (HEA, NUT)

HEA 101—PERSONAL HYGIENE AND HEALTH (2 - 0 - 2)
Study of influences on physical and mental health, individual practices which aid in maintaining good physical and mental health throughout the life span, and responsibilities of those working with young children to maintain personal health and to serve as models for health practices.

NUT 102—NUTRITION FOR YOUNG CHILDREN (2 - 3 - 3)
Study of basic nutrition, with emphasis on (1) methods of helping young children and their families learn nutritional concepts and (2) planning balanced diets for preschool children.

HISTORY (HIS)—POLITICAL SCIENCE (POL)

GEOGRAPHY (GEO)

GEO 105—POPULATION GEOGRAPHY (3 - 0 - 3)
A study of population groups in various parts of the world with emphasis on basic demographic theory, the composition of populations, and the relationship of population and the environment including such factors as health, land utilization and the internal development of particular nations.

GEO 108—CULTURAL GEOGRAPHY (3 - 0 - 3)
Interrelationships between man, the earth and culture; the geography of race, language, religion, political and economic patterns; settlement types and the cultural landscape; population growth and movements.

HIS 211—UNITED STATES HISTORY I (3 - 0 - 3)
Emphasis will be upon the backgrounds of discovery, settlement, constitutional development and union. Manifest destiny and the developing sectionalism up until the 1850's will be a part of this survey.

HIS 212—UNITED STATES HISTORY II (3 - 0 - 3)
The continuing study of the development of the United States will cover the causes of the Civil War, the war, Reconstruction, imperialistic tendencies, the progressive movement and World War I. Prerequisite: HIS 211.

POL 101—INTRODUCTION TO AMERICAN GOVERNMENT (3 - 0 - 3)
A study of political institutions, including the form and functions of American federal, state and local governments, emphasizing the rights and responsibilities of citizenship.

POL 103—NATIONAL, STATE AND LOCAL GOVERNMENT (3 - 0 - 3)
A study of the organization and functions of national, state, and local governments, intergovernmental relationships, and contemporary significant problems.

INDUSTRIAL SAFETY (ISC) 1101

ISC 1101—INDUSTRIAL SAFETY (3 - 0 - 3)
A study of the development of industrial safety; accident occurrence and prevention; analysis of accident causes and costs; basic factors of accident control; safety education and training; accident reporting and records; employer and employee responsibility; safety organizations; first aid; mechanical safeguards; personal protective equipment use; materials handling; fire prevention and protection; safety codes; and accident statistics.

LAW ENFORCEMENT (PSC)

PSC 101—INTRODUCTION TO LAW ENFORCEMENT (5 - 0 - 5)
An introduction to the development of law enforcement, court, and correctional procedures and philosophies from ancient to modern times. Explanation of the American concept of criminal justice as a heritage of Anglo-Saxon of England. A survey of the primary duties and responsibilities of the various law enforcement agencies, and an orientation relative to criminal justice as a career.

PSC 102—SCIENCE OF FINGERPRINTING (3 - 3 - 4)
A study of the history of fingerprints, and of the problem of fingerprint pattern interpretation, classification and comparison. Examination of latent impressions, and developing and maintaining fingerprint files by classification.

PSC 110—CRIME AND DELINQUENCY (5 - 0 - 5)
A brief survey of crime in the United States; trends, economic impact and victimization. Uniform crime reporting and crime statistics as they relate to the criminal justice system, and emphasis on organized crime. The responsibility of law enforcement officers and their interaction with various juvenile agencies in the system. Delinquency preventive measures and specific problems, and the influence of the environment,

PSC 111—POLICE ORGANIZATION AND ADMINISTRATION (5 - 0 - 5)
The principles of organization and administration in law enforcement agencies; recruitment, selection, training, descipline and promotion. Line and staff functions, chain of command, and the relationship between supervisor and subordinate.

PSC 115—CRIMINAL LAW I (3 - 0 - 3)
Instruction to provide an understanding of the United States and North Carolina Constitutions as the basis for our criminal justice system, and to include constitutional rights of accused persons and the limitations on the criminal justice system. Designed to present the evolution of the criminal law and the State and Federal Court systems. Prerequisite: PSC 101.

PSC 121—CRIMINAL EVIDENCE AND PROCEDURE (3 - 2 - 4)
A study of the rules of evidence and the admissibility of evidence in court; the kinds of evidence, judicial notice, opinion evidence and the hearsay rule; evidence distinguished from proof; the burden of proof; and the collection and preservation of evidence. The law of arrest; search and seizure will be emphasized coupled with the civil liabilities that may accrue. North Carolina Criminal Procedure from arrest to trial will be examined in depth with the problems of entrapment and criminal line-ups receiving special attention.

PSC 126—CRIMINAL INVESTIGATION (3 - 2 - 4)
A course in the theory of investigative process, sources of information, and the investigation of specific offenses, such as arson, larceny, burglary, robbery, homicide and sex offenses. Methods of interrogation, as well as the techniques, are included. Prerequisite: PSC 115.

PSC 202—TRAFFIC ACCIDENT INVESTIGATION (3 - 2 - 4)
A study of the traffic enforcement problem. In-depth study of the North Carolina traffic code with the emphasis on enforcement and education of the code. Instruction methods in procedures and reports applicable to traffic accidents. Particular emphasis will be on the interviewing of drivers and witnesses, as well as photography, measurements, and diagrams.

PSC 204—CRIME SCENE TECHNOLOGY (4 - 2 - 5)
This course is designed to familiarize the student with the importance of identifying the types of evidence found on a crime scene. The search for physical evidence and the location, reproduction, identification, collection, preservation, and transporting of evidence to the crime laboratory.

PSC 206—POLICE COMMUNITY RELATIONS (5 - 0 - 5)
A general orientation to the responsibilities of law enforcement in the areas of social protest, minority groups, and the problems of youth. This course will provide the student with an understanding of community structures as they relate to law enforcement. Prerequisite: PSC 110, and SOC 102.

PSC 209—CRIMINAL JUSTICE FIELD SERVICE PROGRAM (0 - 32 - 8)
Provide supervised observation and participation in uniformed patrol duty, investigation, communication, records, corrections, and crime laboratory work. This course is designed for the career student to bridge the gap between theory and practice, and requires a twenty-hour minimum of field work experience and a three hour seminar per week. Prerequisites: PSC 101, PSC 221, and special permission of instructor.

PSC 210—EMERGENCY FIRST AID (0 - 3 - 1)
Instruction in the immediate and temporary care in cases of accident, illness, poisoning, asphyxiation and emergency childbirth. Emergency rescue procedures and procedures applicable to electrical and gas emergencies will also be emphasized.

PSC 212—CRIMINALISTICS (4 - 2 - 5)
This course will serve as an introduction to the forensic sciences, including trace element examination, glass fragments, tool marks, blood samples, tire impressions, questioned documents, and polygraph examination procedures.

PSC 214—CRIMINAL LAW II (5 - 0 - 5)
A study of the elements required for specific crimes: classification of various crimes. The judicial process, including the statutory and Constitutional requirements for a legal arrest, the proper procedures for searches, both with and without warrants. The legal aspects of obtaining and using a confession and admission will be emphasized. Prerequisites: CJC; PSC 115 and PSC 121.

PSC 221—POLICE OPERATIONS AND TECHNIQUES (5 - 0 - 5)
A study of police problems and responsibilities, including the operating procedures, communications and records, police operations in disasters and disturbances, arrest, search and seizure techniques. Answering of the "in-progress" call, responding to handling of other special situation calls, and pursuit and defensive driving techniques.

PSC 223—DEFENSIVE TACTICS AND FIREARMS TRAINING (2 - 3 - 3)
Instruction includes familiarization with handgun, shotgun, rifle, and tear gas weaponry. Applicable laws and safety will be emphasized.

PSC 224—NARCOTICS AND DANGEROUS DRUGS (3 - 0 - 3)
This course will familiarize the student with the North Carolina Drug Laws and introduce the student to the identification and classification of drugs. Emphasis will be placed upon the various effects that the different drugs have upon the human body and the effects it produces in the temperament of individuals.

PSC 227—DIRECTED STUDY-SPECIAL TOPICS (0 - 6 - 3)
A directed study course in the criminal justice system. This course is available to both majors and non-majors who wish to investigate a particular problem related to the criminal justice system. The student will make application to the instructor for permission to enroll in the course. The instructor will organize and plan with the student the course of instruction through periodic meetings. A final supervised exam is required.

PSC 228—SEMINAR IN CRIMINAL JUSTICE (4 - 2 - 5)
This course is designed to review the criminal justice system; detailed procedures from incident to release. Particular emphasis is on courtroom demeanor and presentation. A practical application will include a mock trial with students serving as the participants. Concentration will be upon police professionalization and ethics.

MASONRY (MAS)

MAS 1000—MASONRY SHOP I (2 - 23 - 10)
History of brick and block laying, fundamental skills, laying to line, use and care of tools and equipment. Mortar mixing techniques and general masonry procedures.

MAS 1003—PRINCIPLES OF ROCK CONSTRUCTION (3 - 0 - 3)
A thorough study of rock construction and the unique techniques and tools required for quality work.

MAS 1004—FIREPLACE CONSTRUCTION (0 - 3 - 1)
Layout and erection of various fireplace designs for use in wall, corner, free-standing locations. Course includes proper draw, various materials and construction techniques, outdoor barbecue pits and chimney-pit combinations.

MAS 1010—MASONRY SHOP II (2 - 23 - 10)
Development of fundamental skills, bond layout, projects with various types of masonry units, fireplaces, ornamental work, recent developments in the masonry field.

MAS 1011—MASONRY SHOP III (0 - 27 - 9)
Practice in depth covering the construction of walls and retaining walls, fireplaces, barbecue pits, wing walls, bridge work.

MAS 1006, 1107—MASONRY SHOP 1-A AND 1-B (1 - 12 - 5)
Identical to MAS 1000 offered in two quarters.

MAS 1012, 1013—MASONRY SHOP 2A AND 2-B (1 - 9 - 4) (1 - 14 - 6)
Identical to MAS 1010 offered in two quarters.

MATHEMATICS (MAT)

MAT 100—BASIC MATHEMATICS
A course covering the fundamental elements of mathematics. Topics covered include basic computation with whole numbers, fractions, decimals, dimensional analysis, elements of geometry and algebra.

MAT 101—TECHNICAL MATHEMATICS I (5 - 0 - 5)
A course designed to develop the sound mathematical tools required by the technician. Topics include operations on numbers, operations on polynomials, linear equations, graphing, scientific notation, basic trigonometry, and vectors.

MAT 102—TECHNICAL MATHEMATICS II (5 - 0 - 5)
The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.

MAT 104—STATISTICS (5 - 0 - 5)
An introduction to elementary probability and statistics. Topics include descriptive methods, probability, the binomial and normal distributions, hypothesis testing, correlation and regression. Prerequisite: MAT 100 or MAT 101.

MAT 110—BUSINESS MATHEMATICS (5 - 0 - 5)
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

MAT 115—ELECTRICAL MATH I (5 - 0 - 5)
A self-paced introductory algebra course. Topics include operations on numbers, operations on polynomials, exponents, square roots, powers of ten, units and dimensions and use of the slide rule.

MAT 116—ELECTRICAL MATH II (5 - 0 - 5)
A self-paced course designed to develop the sound mathematical background needed in studying electronics. Topics covered include linear equations and lines, factoring and operations on algebraic fractions, quadratic equations and curves, and basic trigonometry and vectors. Prerequisite: MAT 115.

MAT 117—ELECTRICAL MATH III (5 - 0 - 5)
A course covering the particular mathematical tools and techniques used in the fields of electronics and electrical technology. Topics covered include simultaneous equations, quadratic equations, logarithms, trigonometric functions, and graphic analysis. Prerequisite: MAT 116.

MAT 1101—FUNDAMENTALS OF MATHEMATICS (3 - 0 - 3)
Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ration and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

MAT 1103—GEOMETRY (3 - 0 - 3)
Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles, and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations.

MAT 1104—TRIGONOMETRY (3 - 0 - 3)
Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations. All topics are applied to practical problems. Prerequisites: MAT 1103.

MAT 1112—MATHEMATICS: BUILDING TRADES (5 - 0 - 5)
Analysis of basic operations, addition, subtraction, multiplication, and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures, measurements of surfaces and volumes, basic algebra related to usage in the trades.

MAT 1114—MATH FOR PLUMBERS (3 - 0 - 3)
Emphasis is placed upon the development of usable skills in the layout, measurements and computations of pipelengths, including fitting allowances, volumes, pressure, capacities, cylinder stretchouts, heatloss, radiator size and estimating the size of piping are subject for various calculations. Prerequisite: MAT 1101.

MAT 1115—ELECTRICAL MATH (5 - 0 - 5)
A study of fundamental concepts of algebra; basic operations of addition, subtraction, multiplication, and division; solution of first order equations, use of letters and signs, grouping, factoring, exponents, ratios, and proporations; solution of equations, algebraically and graphically; a study of logarithms and use of tables; and introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current.

PARALEGAL TECHNOLOGY (LEX)

LEX 100—PARALEGAL ORIENTATION (5 - 0 - 5)
This course is a brief overview of criminal law, civil procedure, legal research, techniques of investigation and preparation and presentation of a trial brief.

LEX 101—TECHNIQUES OF INVESTIGATION I (3 - 3 - 4)
A study of how to interview witnesses, obtain medical and other official records, and photographs will be studied. Sketching and diagraming will be taught as it relates to explaining and clarifying a situation or presentation. How to assess property damage, personal injury and land evaluation will be studied.

LEX 102—TECHNIQUES OF INVESTIGATION II (3 - 4 - 4)
A study of the use of photograph, and photographic evidence, video tape equipment, and the drafting of interrogatories and depositions. Prerequisite: LEX 101.

LEX 103—LEGAL RESEARCH I (3 - 3 - 4)
Methods of Legal research, proper citation of authority, acquaintance with legal treaties, text, and reporter, shepardizing cases. Prerequisite: None.

LEX 104—ADVANCED BUSINESS LAW (5 - 0 - 5)
This course includes an analysis of the basic concepts of business corporations, partnerships and joint ventures, and sole proprietorships with emphasis on drafting articles of incorporation, by-laws, minutes, resolutions, stock certificate and partnership and joint venture agreements. The course will also deal with problems in business finance and acquisitions and in related areas of commercial law, in stock transfer and purchase agreements, and in employment contracts. General tax considerations will be given to all of the foregoing and consideration will be given to the role of the lawyer and paralegal. Prerequisite: BUS 116.

LEX 201—N. C. LEGAL SYSTEMS I (3 - 0 - 3)
Study and review of the N. C. Legal System from the magistrate court to the State Supreme Court. This will include the study of the N.C. Constitution, plus the statutes affecting the various courts. Included in this study of the Legal System, it will be a review of the federal judiciary within the state.

LEX 202—N. C. LEGAL SYSTEMS II (3 - 0 - 3)
Continuation of Lex 201 plus the functions of the office of the Clerk of Court. Prerequisite: LEX 201.

LEX 203—TECHNIQUES OF INVESTIGATION III (3 - 3 - 4)
In-depth study of investigating criminal cases, interviews, taking statements, collecting data, and the orderly assemblage of the attorney's use. This course includes a general examination of criminal laws and the definition and classification of criminal offenses; criminal responsibility including necessary elements for criminal activity. The following subjects will be covered with reference to criminal procedure: motions, writs, orders for bail bonds and procedures. A background study of the historical and legal principles applicable to the criminal cases found in legal records of a law library.

LEX 204—TECHNIQUES OF INVESTIGATION (3 - 3 - 4)
The study of the use of depositions and interrogatories in personal injury trial work.

LEX 210—MECHANICS OF PROPERTY TRANSACTIONS (3 - 0 - 3)
Includes the study of the preparation of simple contracts for sale of real estate; ordering title search; examining title searches and preparing simple titles, ordering title insurance; preparation of settlement sheet and holding closing. (1) Inform purchaser of needed documents and funds; (2) disbursement of funds and recording documents; (3) search continuation and preparation of certificate of title for lawyer's signature.

LEX 211—TITLE ABSTRACTING (3 - 0 - 3)
An examination will be made of the applicable statutory and common law principles including the form and adequate execution of documents; the functions of judgments and estates in the determination of whether a title to real estate is marketable; the study and function of various documents, indices and files on public records in various county offices. Forms of abstracting title information from public records and summaries thereof will be included. Various typical problems and errors which may render a title unmarketable will be included.

LEX 215—THE LAW OFFICE (3 - 3 - 4)
This course includes the study of the organization of a law office, office forms and legal forms, filing equipment and system, accounting systems for a lawyer's time, fees, and filing, client relations and office procedure. This will also familiarize the student with the operation of office machines and equipment.

LEX 220—LEGAL RESEARCH II (1 - 4 - 3)
Advanced research into particular points of law together with the writing of briefs and presentation of various materials. Prerequisite: LEX 102.

LEX 225—LITIGATION PREPARATION (3 - 0 - 3)
This course will teach the paralegal how a lawyer prepares his briefs prior to entering court proceedings. The student will be taught how to review a file, prepare subpoenas ready for the lawyer's signature, prepare exhibits for court, file pleadings, index interrogatories, depositions, admissions, pleadings. The course will prepare the student to interview witnesses and record statements in writing and on tape.

LEX 226—MEDICAL TERMINOLOGY (5 - 0 - 5)
This course is designed to cover terminology as applied to the whole man as well as medical methods and terms used by physicians and lawyers.

LEX 227—PARALEGAL PROFESSION (3 - 3 - 4)
This course is designed to teach the ethical, and professional duties and responsibilities of the paralegal. Limitations in the various paralegal assignments will be emphasized. Prerequisite: None.

LEX 228—N. C. LAW SUMMARY (3 - 0 - 3)
A general survey of N. C. Law necessary for a better understanding of ordinary legal problems encountered by the legal assistant. Subjects surveyed will be tort law, contract law, criminal law, negligence theory, etc.

LEX 230—APPELLATE PRACTICE (3 - 3 - 4)
A study of the N. C. Appellate System coupled with the preparation of record narratives and all documents and forms for appeals, as well as preparation and research of appellate brief.

LEX 232—ESTATE ADMINISTRATION (3 - 0 - 3)
In this course, the student will be instructed in the drawing of wills, making arrangements with the probate office for probate of will, or issuance of Letter of Administration, preparing simple transfer of inheritance tax forms, marshaling of assets, payment of debts of Estate, preparations of interim and final accounting and preparation of refunding bonds and releases.

LEX 234—INVESTIGATION OF REAL PROPERTY CONDEMNATION CASES (1 - 3 - 2)
This course is a study of the law of real property and an in-depth survey of the more common types of real estate transactions and conveyances. Emphasis will be placed on case histories as they are recorded in condemnation files of N. C. Legal cases. This course will include rural, urban and city condemnation procedures and cases.

PRACTICAL NURSE EDUCATION (NUR)

NUR 1020—FUNDAMENTALS OF PRACTICAL NURSING (6 - 6 - 0 - 8*)
Interpretation of the role of the practical nurse student and basic knowledge to be used in performing nursing. Philosophy and objectives of practical nursing in the technical institute setting. Use of study methods and materials. Principles of interpersonal relationships in nursing. Body mechanics for nurse and patient. Sterilization and disinfection methods. Principles of medical and surgical asepsis. Use of hospital equipment. Techniques for daily hygienic patient care. Spoken and written communications for nurses. Laboratory practice in nursing skills. Prerequisite: None.

NUR 1021—NUTRITION AND DIET THERAPY (3 - 0 - 0 - 3)
Designed to give knowledge of the use of nutrients for nurse and patient. Functions and sources of nutrients. The mechanics of digestion, absorption and metabolism. Principles of meal planning. Nutritional requirements for all age groups modified by religious, cultural, social, and psychological factors. Common therapeutic diets and their effect on disease conditions. Prerequisite: None.

NUR 1022—ANATOMY AND PHYSIOLOGY (3 - 0 - 0 - 3)
A study of the general plan of the body and ten systems: musculoskeletal, integumentary, digestive, respiratory, circulatory, urinary, endocrine, reproductive, nervous, and sensory systems. Designed for understanding how the human body controls its functions, stands erect and moves, dlstributes food and oxygen, eliminates wastes, and provides for survival. Prerequisite: None.

NUR 1023—GROWTH AND DEVELOPMENT (2 - 0 - 0 - 2)
Normal growth and development throughout the life cycle with consideration of the social, biological, and cultural influences upon growth from birth to senescence. Physical, mental, and personality changes with age. Community responsibilities and resources for young and old. Prerequisite: None.

NUR 1024—INTRODUCTION TO DRUG ADMINISTRATION (3 - 0 - 0 - 3)
Review of adding, subtracting, multiplying, dividlng, fractions, decimals, ratio, and percentage. Systems for measuring drugs. Solving problems of measurement, conversion within systems and from system to system. Legal aspects of medication preparation. Prerequisite: None.

NUR 1025—MEDICAL-SURGICAL NURSING I (6 - 0 - 0 - 6)
An introduction to nursing needs of the adult medical and surgical patient. Uses nursing knowledge gained in all courses in Quarter I. Prepares for nursing care of physical emotional problems caused by illness, body responses to disease and pain. Assisting patients during diagnostic tests. Pre-operative and post-operative care, safety and comfort measures for the aging, and meeting needs of patients with a communicable disease. Rehabilitation. Modification of diet for disease conditions. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024.

NUR 1026—MATERNITY NURSING (4 - 0 - 0 - 4)
Presentation of modern aspects of maternity nursing. The nursing care of the normal obstetrical patient and newborn child. Detailed nursing care of patients during antepartum, labor, and postpartum periods. Emphasis on provision of better and safer nursing care for the expectant mother and her baby. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024.

NUR 1027—NURSING OF CHILDREN (3 - 0 - 0 - 3)
Comparison of normal growth and development patterns of the newborn, school age child and adolescent. Physical differences in the child and adult. Methods of meeting needs of the hospitalized child and his parents. Nursing care of children with common home and hospitalized disorders. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024.

NUR 1028—CLINICAL EXPERIENCE I (0 - 0 - 24 - 8)
Eleven weeks experience with patients of all ages in a general hospital under supervision of clinical teachers. Five weeks of experience with young adults, adults of middle years and the aging. Six weeks of experience with mothers and newborns or with sick children from the age of newborn to the adolescent. Opportunities for practicing skills learned in laboratory. Emphasis on basic hygienic care for ambulatory and bed patients. Experience in making observations, and charting simple needs of hospitalized patients. Opportunities to begin development of attitudes and skills necessary for successful practical nursing careers. Beginning this quarter, each student is assigned two days of observational experience in operating and recovery rooms. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024.

NUR 1029—MEDICAL-SURGICAL NURSING II (6 - 0 - 0 - 6)
Principles and concepts of complex rehabilitative nursing. Cancer nursing. Study of nursing care and socio-psychological implications of common disorders of adults in the following body systems: Musculoskeletal, gastrointestional, respiratory cardiovascular and urinary. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028.

NUR 1030—DRUG THERAPY (4 - 0 - 0 - 6)
A beginning study for the practical nurse student of the classification of common drugs, related to the systems of the human body, their dosage, actions, uses, side effects and modes of administration. Storage and preparation of narcotics. Prerequisites: NUR 1024, 1028.

NUR 1031—CLINICAL EXPERIENCE II (0 - 0 - 24 - 8)
Continued experience with adults or experience with children or experience in the maternity nursing units. Assignment to patients with nursing needs of the musculo-skeletal, gastrointestional, respiratory, cardiovascular, and urinary systems. Practice of isolation technique and oxygen therapy. Continued experience in operating room and recovery room observation. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030.

NUR 1032—MEDICAL-SURGICAL NURSING III (7 - 0 - 0 - 7)
Continuation of study of disorders of body systems. Includes nursing care of clients with medical surgical conditions of the eye, ear, and skin. Nursing care of clients with disease conditions of the reproductive, endocrine and nervous systems. Introduction to the nursing needs of patients with psychosomatic illness, personality problems, alcoholism, drug addiction. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031.

NUR 1033—PERSONAL AND VOCATIONAL RELATIONSHIPS (2 - 0 - 0 - 2)
Advanced practical nursing ethics. Medico-legal aspects of practical nursing. North Carolina nursing law. Role of nurses in community and state. Job descriptions. Evaluating, applying for or resigning positions. Work resume'. Organizations for the graduate practical nurse. Continuing education. Preparation for State Board Examinations. Corequisites: NUR 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032.

NUR 1034—CLINICAL EXPERIENCE III (0 - 0 - 24 - 8)
Student learns her role as an assistant to the professional nurse in caring for the more seriously ill patients. Continued experience with adult in medical-surgical nursing, pediatric nursing or maternity nursing. Experience in more complicated nursing treatments. Assignment to patients with condition of circulatory, nervous, reproduction, and endocrine systems and social illnesses. Prerequisites: NUR 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033.

PLUMBING (PLU)

PLU 1100—SOLDERING AND SILVER SOLDERING (2 - 7 - 4)
This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop, where the student will learn how to handle these materials correctly. The student will perform operations such as sweating various sizes of copper tubing and fittings with different grades of solder used in the trade. Also silver soldering copper tubing as used in the trade. Prerequisite: PLU 1111, PLU 1113.

PLU 1101—WORKING WITH PLASTICS
The cutting, joining and melting of plastic pipe in cold water and drainage installation.

PLU 1105—CONSTRUCTION ESTIMATING (3 - 4 - 5)
Estimating plans and specifications of different buildings for plumbing and heating construction. Actual material take off from plans and specifications and all information pertaining thereto.

PLU 1110—PLUMBING PIPEWORK (5 - 12 - 9)
This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop, where the student can learn how to handle these materials correctly. The student will perform operations such as threading, cutting, and caulking of the various kinds of pipe used in the trade.

PLU 1111—DOMESTIC COLD WATER SYSTEMS (2 - 5 - 4)
The installation of water distribution systems beginning with the source of supply and including the location of pipes, valves, and pumps in both single-story and multi-story buildings will be studied. Plumbing installations will be made to provide practical applications. Private and public sewage and drainage systems, including their ventilation, is a part of this course. Field trips will be taken to study various types of installations. Prerequisite: PLU 1110.

PLU 1112—INSTALLATION OF PLUMBING FIXTURES: RESIDENTIAL (0 - 7 - 2)
The differences in materials and styles of lavatories, bathtubs and sinks, and the many ways that these fixtures can be installed, will form the basis of this course. The proper use of traps is included. The student will get actual practice by making installations. Prerequisites: PLU 1111, PLU 1113.

PLU 1113—DOMESTIC HOT WATER SYSTEMS (3 - 5 - 5)
The installation of hot water distribution systems beginning with the source of supply and including the location of pipes, valves, pumps, heating devices, and the storage and circulation of hot water for private and public use will be studied. Field trip will be taken to study various types of installations. Prerequisites: PLU 1110, PLU 1111.

PLU 1114—COMMERCIAL PIPING (PLUMBING) (3 - 6 - 5)
The differences in materials and styles of fixtures and the many ways that these fixtures can be installed will form the basis of this course. Field trips will be taken to study various types of installations. Prerequisites: PLU 1100, PLU 1110, DFT 1115, PLU 1112, DFT 1116, PLU 1113.

PLU 1118—PLUMBING CODES (3 - 0 - 3)
A study of plumbing definitions and the rules and regulations governing installations, repairs, alterations and maintenance of all plumbing and materials. Consideration is given to the study of the rules and regulations governing the installation of storage heaters, storage tanks, and appliances. Regulations governing public water supply, workmanship, licenses, permits and fees. Inspection and test as set forth in the plumbing code.

PLU 1120—LOW PRESSURE STEAM SYSTEM (6 - 10 - 9)
The student will become acquainted with types of low pressure steam boilers, and the principles of boiler operation. Boiler accessories such as connectors, fittings, and insulation are to be included. Low pressure steam systems, their layout, and component parts will be studied and installed. Equipment used in heat transmission, such as radiators, coils, and connectors will be included. Prerequisites: PLU 1100, PLU 1110, PLU 1113, PLU 1114, WLD 1141, WLD 1104, MAT 1114, PHY 1102.

PLU 1123—PANEL HEATING AND HOT WATER BOILERS (8 - 10 - 11)
The piping and accessory equipment needed to transfer hot water to radiators, heaters, and coils, and the advantages and disadvantages of each of these units will be studied, including apparatus for radiant heating and panel heating. Methods of "Sizing" equipment for various installations will be included. Practical application will be provided in installing this equipment. Prerequisites: PLU 1120, PLU 1111, PLU 1113, PLU 1110, PLU 1126, PLU 1100, MAT 1114.

PLU 1125—INDUSTRIAL PIPING I (5 - 9 - 8)
Piping systems of boilers, turbines, and steam engines especially as they are used in steam power plants, and process piping such as is used in the chemical industries will be the major emphasis of this course. Prerequisites: PLU 1112, WLD 1141, WLD 1104, PLU 1114, MAT 1114, PHY 1102, PLU 1110.

PLU 1126—INDUSTRIAL PIPING II
A continuation of PLU 1125

PLU 1131—FUELS AND BURNERS (3 - 4 - 4)
Fuels and burners used in supplying heat for various types of heating systems coal, oil, natural gas, manufactured gas, liquified petroleum gas, and electricity. Experiments in equipment selecting, installation, adjusting and servicing will be conducted. Prerequisites: PHY 1101, PHY 1102, AHR 1116.

PLU 1132—CIRCUIT AND CONTROLS (3 - 4 - 4)
Electric, electronic and pneumatic controls as related to ventilation, refrigeration and air-conditioning systems. Practices in layouts, including symbols and schematic diagrams. Laboratory work in installation of control systems. Test instruments of their use. System adjustments for proper operation. Prerequisites: PHY 1101, PHY 1102.

PLU 1135—OIL BURNER INSTALLATION (3 - 9 - 6)
Instruction covers the correct standards and methods of new and replacement oil burner installation, operational check out and balancing procedures with emphasis on safety aspects.

POWER MECHANICS (PME)

PME 1101—INTERNAL COMBUSTION ENGINE (3 - 14 - 7)
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.

PME 1102—ENGINE ELECTRICAL AND FUEL SYSTEMS (5 - 14 - 9)
A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. Prerequisite: PME 1101.

PSYCHOLOGY (PSY)

PSY 102—GENERAL PSYCHOLOGY (3 - 0 - 3)
A study of the various fields of psychology; the developmental process: motivation; emotion, frustration and adjustment, mental health, attention and perception; problems of group living. Attention is given to applications of these topics to problems of study, self-understanding and adjustment to the demands of society.

PSY 1101—HUMAN RELATIONS (3 - 0 - 3)
A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

RECREATION TECHNOLOGY (REC)

REC 110—PROFESSIONAL ORIENTATION (3 - 2 - 4)
Designed to introduce the history and fundamentals of organized recreation services, major program areas, organizations, special agencies and institutions which serve the recreation need of society. Group Dynamics field trips to be arranged.

REC 111—ARTS, CRAFTS, DRAMA (4 - 2 - 5)
Designed to acquaint students with practical activities and materials which groups practice in leather tooling, copper enameling, weaving, ceramics, pottery, poster making, paper-mache, clay modeling, wood carving, dyeing with natural and artificial dyes and other recreational arts and crafts. Emphasis on program planning. Use of such dramatic techniques as pantomime, spontaneous dialogue, characterization, story-telling, dramatic games in varied recreation situation. Emphasis on skills, knowledge, understanding and promotion of drama rather than on formal play-production.

REC 120—SOCIAL RECREATION LEADERSHIP (2 - 2 - 3)
A study of recreation based on group leadership techniques. Includes methods and materials for planning, organizing and conducting social activities for groups of various sizes and ages in a variety of social situations. Emphasis is on mechanics of planning and presenting a repertoire of activities for social recreation events. Major activities will be discussed, played, and/or demonstrated. Emphasis also on group involvement. Prerequisite: REC 110.

REC 125—TEAM SPORTS (2 - 4 - 4)
Offers a survey of the basic terminology, skills, and rules of selected team sports (softball, soccer, touch or flag football, volleyball, basketball) and their use in recreation. Emphasis is upon the supervisory aspects of the organization and administration and promotion of sports, including policies, problems, types of competition, record and forms rather than on mastery of performance skill. Emphasis on seasonal outdoor recreation and safety.

REC 134—FIRST AID AND SAFETY (1 - 2 - 2)
Prevention of accidents, standard and advanced courses as organized by the American Red Cross. Safety precautions in various recreational areas and situations.

REC 135—INDIVIDUAL LIFETIME SPORTS (2 - 4 - 4)
Offers a survey of the basic terminology, skills, and rules for selected individual lifetime sports, i.e., archery, badminton, bowling, golf, tennis. Emphasis is upon the supervisory aspect, knowledge and understanding of the organization, administration and promotion of sports including policies, problems, types of competition, records and form rather than a mastery of performance skills. Emphasis on seasonal outdoor recreation; safety.

REC 247—SKILL PERFORMANCE (3 - 0 - 3)
The student will be teaching and/or performing activity skills under supervision as planned on a study guide; includes organization and scheduling of activity; equipment order and preparation; tournaments and informal game play; suitability of activity to age group, time and location.

REC 248—ORIENTATION AND EVALUATION (3 - 0 - 3)
Designed to introduce the student to his/her specific job as detailed in the Field Studies course: Attention is given to class organization, student instructor planning and method of teaching skills, evaluation of work experience.

REC 249—LEADERSHIP TECHNIQUES (3 - 0 - 3)
Directed observation of staffings; factors that shape and condition administrative decisions; function of supervision, the organization and planning of supervision.

REC 250—RECREATION PROGRAMMING
Study of the nine major program areas in recreation. Look at types of recreation opportunities available to individuals, groups, neighborhoods or municipalities and the modern methods of providing these opportunities.

REC 256—CONSERVATION OF RENEWABLE RESOURCES (2 - 3 - 3)
The concepts and problems of coordinated use and management of the renewable resources; namely soil, air, water, vegetation and fauna. Field trips will be utilized to demonstrate the proper management as well as misuse of renewable resources.

REC 258—SWIMMING POOL MANAGEMENT
Emphasis on pool sanitation, filtration, personnel, and safety. Also covered will be pool designing, events and trends.

REC 265—CAMPGROUND MANAGEMENT
Development of organized camping and its educational, health, and recreational objectives. Private and public campgrounds that serve traveling recreationist will also be discussed.

REC 259—RECREATION ADMINISTRATION (3 - 2 - 4)
Responsibilities of the administrator; administration of tax-supported recreation; other sources of recreation funds, setting up guiding policies; financial planning, records, fees and charges, expenditures, budgets, unit costs; measuring attendance and participation; annual departmental reports, personnel recruitment and selection, position classification plan, performance evaluation, promotions, hours and conditions of work; in-service training. Public relations, use of community resources; cooperation with local public agencies, other communities, county, state and federal authorities.

REC 260—MAINTENANCE AND OPERATIONS
Methods of operation of various park and recreation facilities for public use, protection and law enforcement; job planning and scheduling, preventive maintenance and modern maintenance techniques and materials.

REC 265—CAMPGROUND MANAGEMENT (2 - 4 - 4)
Study of the trends of outdoor recreation and camping; franchises; costs and upkeep; user fees; problems of campground management; emphasis on family

camping; programs. Includes study of private state and federal campground locally, nationally and an overview of campground management around the world. Field trips.

REC 266—SPECIAL RECREATION (3 - 0 - 3)
Emphasis will be given to recreation programs and employment opportunities in rest homes, hospitals, industry and retirement resorts or villages and service organization.

REC 268—LEGAL PRINCIPLES AND PRACTICES IN RECREATION (3 - 2 - 4)
This course is designed to acquaint the student with the general legal principles which are followed in recreational agency law. It trains the student in the application of those principles to business situations. Specific emphasis on areas of legal liability in medical treatment, insurance; recreation legislation; State recreation enabling acts; court decisions on specific areas such as segregation; defenses against negligence; value of releases and waivers; accident reports.

REC 273—RECREATIONAL GROUNDS MANAGEMENT (2 - 4 - 4)
Presents basic horticulture and park layout. Use of plant materials as designing elements in the recreational landscape and play areas. Turf maintenance in special use and heavy use areas.

REC 277—STATE AND FEDERAL LANDS MANAGEMENT (3 - 2 - 4)
State and Federal lands management design problems relating to the recreational use of national parks, forests, waterways and other non-urban areas. Survey of responsibilities of park personnel; recreation program administration; construction and maintenance; enforcement of regulations on state and national lands.

REC 278—PLANNING OF RECREATIONAL AREAS, FACILITIES AND EQUIPMENT (2 - 4 - 4)
Site design and layout; area types and standards, methods of acquiring land for recreation; design and equipment for recreation areas and indoor recreation. Purchase care and dispensing methods for equipment and supplies.

REC 279—SEMINAR (3 - 2 - 4)
A culminating course dealing with group discussion of selected current controversial issues and problems and providing opportunity for practice in seeking unbiased solution to professional problem. Prerequisite: six previous quarters in Recreational Technology.

RECREATION TECHNOLOGY (REC)

ELECTIVES

CLASS: 0 LAB: 2 CREDIT: 1

REC 140—ELEMENTARY SWIMMING
Required of all students who have failed the swimming classification test. Designed to provide basic water safety skills outlined by the American National Red Cross.

REC 141—INTERMEDIATE SWIMMING
The course follows the American National Red Cross outline for intermediate swimming including the basic strokes and diving skills.

REC 143—WATER SAFETY INSTRUCTOR
Red Cross certification issued. Prerequisite: REC 142

REC 241—INTERMEDIATE TENNIS
Game practice of basic skills. Emphasis on games, strategy and doubles. Prerequisite: FEC 125

REC 244—SNOW SKIING
Beginning and Intermediate skills. Offered at a ski lodge located within forty miles of campus.

REC 118, 128, 138, 158, 168, 178—FIELD WORK I-VI
Practical experience in working with an agency leader as a junior leader. Exposure to leadership responsibilities in working with various age and sizes of groups. Also work experience in intramural program as activity supervisor. Prerequisite: Pre-test; consent of advisor.

REC 119, 129, 139, 159, 169, 179—INTRAMURALS I-VI
Practical experience in setting up a program of activities for the Student body meets at noon daily. Care and dispensing of equipment; supervision of activities.

REC 160—INDOOR CONDITIONING ACTIVITIES
Slimnastic exercises.

SCIENCE (BIO, CHM, PHY, SCI)

BIOLOGY (BIO)

BIO 101—GENERAL BIOLOGY
An introduction to the biological principles; a study of the chemical and physical properties of the living cell; selected laboratory experiments to reinforce lectures.

CHEMISTRY (CHM)

CHM 101—CHEMISTRY I
Study of the physical and chemical properties of substances, chemical changes, elements, compounds, gases, chemical combinations, weights and measurements; theory of metals, acids, bases, salts, solvents, solutions, and emulsions. In addition, study of carbohydrates; electrochemistry, electrolytes, and electrolysis in their application of chemistry to industry.

CHM 102—CHEMISTRY II
General course in applied inorganic chemistry and an introduction to organic chemistry as it relates to agriculture and environmental problems and products. Chemical and physical properties of selected inorganic and organic elements are studied in detail. Laboratory work will consist of performing tests and experiments designed to apply basic principles of chemistry to environmental problems. Prerequisite: CHM 101.

PHYSICS (PHY)

PHY 100—GENERAL PHYSICS (1 - 2 - 2)
An introduction to physical principles and their application in industry. Topics in this course include measurements; properties of solids, liquids, and gases; basic electrical principles.

PHY 101—PHYSICS I: PROPERTIES OF MATTER (3 - 2 - 4)
A fundamental course covering several basic principles of physics. Atomic theory of matter, solids and their characteristics, liquids at rest and in motion, gas laws and applications. Includes laboratory experiences.

PHY 102—PHYSICS II: WORK, ENERGY, POWER (3 - 2 - 4)
Includes such topics as statics, forces, center of gravity, and dynamics. Both English and metric measurement systems are included. Practical application of theory and data emphasized.

PHY 103—PHYSICS III: LIGHT AND SOUND (3 - 2 - 4)
Introduces the theory of wave motion. Principles involving wave generation, propagation, control, and uses are dealt with both in theory and in laboratory experiences.

PHY 1101—APPLIED SCIENCE (3 - 2 - 4)
An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles.

PHY 1102—APPLIED SCIENCE (3 - 2 - 4)
The second course in applied physical principles. Topics introduced are heat and thermometry and principles of force, motion, work, energy, and power. Prerequisite: PHY 1101.

GENERAL SCIENCE (SCI)

SCI 101—GENERAL SCIENCE (3 - 4 - 5)
Study of basic concepts from biological, physical, and natural sciences. Laboratory experiences provide opportunities to develop projects for demonstrating simple science concepts to young children, utilizing materials from nature and simple equipment. Each student will develop a series of projects appropriate for a specific level of development.

SOCIAL SCIENCE (SSC)

SSC 201—SOCIAL SCIENCE I (3 - 2 - 4)
An integrated course in the social sciences drawing from the fields of anthropology, psychology, history, and sociology.

SSC 202—SOCIAL SCIENCE II (3 - 2 - 4)
A further study of social sciences with emphasis on economics, political science, and social problems as they relate to the individual. Prerequisite: SSC 201.

SOCIOLOGY (SOC)

SOC 102—PRINCIPLES OF SOCIOLOGY (5 - 0 - 5)
A study in the principles of sociology, providing an understanding of culture, collective behavior, community life, social institutions and social change. Presents the scientific study of man's behavior in relation to others, the general principles affecting the organization of such relationships and the effects of social life on human personality and behavior.

SOC 207—SOCIOLOGY—RURAL SOCIETY (3 - 0 - 3)
A study of selected elements of rural sociology with emphasis on current social changes. The course provides a sociological background for the understanding of rural social changes. Areas of study include rural culture, group relationships, social classes, rural and suburban communities, farm organizations, the communication of agricultural technology, rural social problems, agricultural adjustment and population change.

SURVEYING (CIV)

CIV 100—BOUNDARY CONTROL (4 - 0 - 0 - 4)
The course covers the legal principles of boundary control to acquaint the student with the correct interpretations of deed description.

CIV 101—SURVEYING I (1 - 3 - 4 - 3½)
Care and use of instruments, theory and practice of plane surveying including taping, differential and profile leveling, transit, stadia, and transit-tape surveys.

CIV 102—SURVEYING II (1 - 3 - 4 - 3½)
Triangulation of ordinary precision, use of plane table, calculation of areas of land, land surveying, topographic surveys and mapping.

CIV 103—SURVEYING III (1 - 3 - 4 - 3½)
Route surveys by ground and aerial methods; simple, compound, reverse parabolic and spiral curves; geometric design of highways, highway surveys and plans including mass diagrams.

WELDING (WLD)

WLD 1101—GAS WELDING (0 - 3 - 1)
Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding, bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work.

WLD 1102—OXYACETYLENE WELDING (3 - 13 - 7)
Introduction and practical operations in the use of oxyacetylene welding methods applicable to general repair, open butt welding and pipe welding. Safety in the assembly and operation of equipment and worksite will be stressed.

WLD 1104—ARC WELDING (3 - 9 - 6)
Introduction to the history of oxyacetylene and arc welding, the principles of welding and cutting, nomenclature of the equipment, assembly of unit. The operation of various AC transformers. AC and DC rectifiers, and DC motor generator arc welding units. Welding procedures such as practice of puddling and carrying puddle, running flat beads, and the cutting of straight lines with the torch. Safety procedures are stressed throughout the program of instruction.

WLD 1108—ARC WELDING (3 - 15 - 8)
Introduction to arc welding, the principles of welding and nomenclature of the equipment, assembly of unit. The operation of various AC transformers. AC and DC rectifiers, and DC motor generator arc welding units. Welding procedures such as practice of puddling and carrying puddle, running flat beads. Safety procedures are stressed throughout the program of instruction.

WLD 1141—WELDING PROCEDURES (3 - 7 - 5)
Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding and flame cutting. Emphasis on electric arc and gas welding methods applicable to mechanical repair work. Bronze welding and silver soldering may also be covered.

CONTINUING EDUCATION

OCCUPATIONAL EXTENSION

ADULT BASIC EDUCATION

OFF-CAMPUS CURRICULUM

HUMAN RESOURCES DEVELOPMENT

COMMUNITY SERVICE

CONTINUING EDUCATION

The Institute, through its Extension Office, offers to any adult, regardless of his educational background, an opportunity to continue learning in a wide variety of fields. Classes can be organized either on or off campus, whenever and wherever there is a need expressed by a sufficient number of interested persons in any community in the primary service area of Jackson, Macon and Swain counties.

Extension courses are specially designed courses, usually of short duration ranging from a few hours to one or more quarters, structured so that they provide educational opportunities *either to prepare for entry* into an occupation, to *upgrade* the occupational competence of those already employed in the occupation, or work toward self-improvement.

Extension classes do not earn academic credits which can be recognized in a diploma or degree program; however, a certificate is awarded upon successful completion. For some courses, C.E.U.'s (Continuing Education Units) will be awarded, one C.E.U. to be given for each ten contact hours of participation in an organized Continuing Education experience under responsible sponsorship, capable direction and qualified instruction.

Continuing education also provides supportive services for off-campus curriculums. The courses meet the same standards and carry the same credit as on-campus courses and are transferrable into the appropriate full-time curriculum.

OCCUPATIONAL EXTENSION

Through occupational extension, a wide variety of courses are offered for academic, technical, vocational training or self-improvement. Classes designed to provide academic, vocational and technical skills will require a $3.00 registration fee. Exceptions will be Adult Basic Education, Firemanship Training and Law Enforcement. Classes of a recreational or hobby nature must be self-supporting. An adult 18 years old or older may enroll.

Courses are available in the following areas:

(ACADEMIC)

ARTS & CRAFTS: Basketry, Ceramics, Decoupage, Cornshuck Crafts, Jewelry, Leathercraft, Painting, Pottery, Weaving, Woodworking.

HUMANITIES: Language, Religion, Economics, Political Science.

HIGH SCHOOL EQUIVALENCY PREPARATION: To assist adults in preparing for the G.E.D. testing (High School Equivalency Certificate) the continuing educational division holds classes in G.E.D. preparation, which covers the following areas: Grammar, Literature, Mathematics, Social Studies, Natural Science. Students wishing to take the G.E.D. tests are referred to the evening director at Southwestern Technical Institute, under whose direction these tests are administered.

(TECHNICAL)

CIVIL ENGINEERING: Surveying, Drafting, Architecture, Wastewater Treatment.
PHYSICS: Electronics, Electricity, Mechanics.

(VOCATIONAL)

AGRICULTURAL: Farm Records, Gardening, Animal Science, Pest Control, Ornamental Horticulture.

BUSINESS: Advertisement, Finance and Credit, Insurance, Marketing, Real Estate, Transportation, Office Management, Bookkeeping, Typing, Accounting, Shorthand, Personal Improvement.

HEALTH AND SAFETY: Ambulance Attendant, Emergency Medical Technician, Civil Preparedness, Driver Education, First Aid, Nurse's Aide, Safety.

HOME ECONOMICS: Sewing, Child Care, Food Preparation, Interior Design.

TRADES AND INDUSTRY: Carpentry, Metal Working, Plastics, Printing, Public Utilities, Automotive Servicing, Graphic Arts, Electrical Wiring, Masonry, Plumbing, Textiles, Woodworking.

SPECIALTY OCCUPATIONS: There are five areas of specialized training offered through the continuing education division which are assisted by area consultants. These classes are designed to meet the general or specific training and re-training needs of groups, private individuals, employees in business, governmental agencies and other public institutions. Participants can earn a number of certificates and awards upon successful completion.

LAW ENFORCEMENT

Introduction to Police Science — 160 hours

This course is designed to provide the newly-employed law enforcement officer with the basic job knowledge, skills and abilities to perform entry level police work. The material covers: Constitutional law, basic principles of North Carolina Criminal and Motor Vehicle Law, traffic accident investigation and reporting basic laws of arrest, search and seizure, evidence, general criminal investigation, court structure and procedure, report writing, testifying in court, patrol operations, techniques and methods of arrest, public and human relations, first aid, firearms and defensive tactics.

Upon successful completion of this course, the officer can be certified by the Criminal Justice Training and Standards Council as a law enforcement officer in the State of North Carolina.

Upon successful completion of this course, an officer may wish to pursue a full degree program. See description of Law Enforcement in curriculum section. In addition to basic law enforcement training courses, various specialized law enforcement courses are conducted in the area served by Southwestern Technical Institute such as: Training required for Breathalyzer Operators, Criminal Law and Procedures, Narcotics and Dangerous Drugs, Criminal Investigation and related courses.

FISHERIES TRAINING

The program is designed to assist present trout growers make their operations more efficient as well as provide potential growers the necessary information to set up a profitable operation. Major topics are Trout Feeding, Diseases and Parasites, Marketing, Processing, Recreation Sales, Waste Disposal, and Laws and Regulations; Watershed Management courses give needed information concerning wise Land Use Management; and Artificial Bait Construction (Flytying) is designed to provide training needed to construct dry flies, wet flies, nymphs, and streamers.

FIRE SERVICE TRAINING

A variety of courses are offered in cooperation with individual fire departments in the service area. Specific units of study are designed to increase the firefighter's technical knowledge and improve his skills in fire-ground operation. Classes may be offered in any order according to the needs of each fire department. Examples of Firemanship classes are:

Area Fire Schools
Arson Detection
Civil Disorder
Compressed Gas Emergencies
Fire Apparatus Practices
Fire Brigade Training
Firefighting Procedures
Fire Stream Practices
Forcible Entry
Home Fire Safety
Hospital Fire Safety
Hose Practices
Introduction to Firefighting
Ladder Practices
Officer Training
Portable Fire Extinguishers
Protective Breathing Equipment
Rescue Practices
Rope Practices
Salvage and Overhaul Practices
School Bus Evacuation
Ventilation
Teacher Education
Bombing and Bomb Threats

MANAGEMENT DEVELOPMENT PROGRAM

The Management Development Program is designed to upgrade the supervisory and mid-management personnel in business and industry. Classes are scheduled in accordance with the needs of industry. Qualified instructors are provided without charge to the employee.

The courses listed below are available at Southwestern Technical Institute and may be credited toward the Diploma in Management Development Training awarded by the Department of Community Colleges for the comletion of any combination of courses totaling 160 hours. Credit may be given for courses previously taken at S. T. I. or elsewhere.

Course Title

Principles of Supervision
Job Relations Training
Science of Human Relations
Art of Motivating People
Economics in Business and Industry
Effective Communications
Effective Writing
Effective Speaking
Speed Reading
Work Measurement
Job Methods
Conference Leadership Training
Instructor Training
Creative Thinking
Industrial Safety and Accident Prevention
Industrial First Aid
The Supervisor in North Carolina
Job Analysis Training
Management Primer
Cost Accounting for Supervisors
Supervision in Hispitals

HOSPITALITY

The Department of Community Colleges offers Hospitality Training as one answer to North Carolina's need for more trained personnel in the area of food, lodging, recreation and travel. Some examples of classes are:

Food Purchasing
Food Preparation
Housekeeping
Hospital Human Relations, Services
Hotel-Motel Management
Menu Planning
Modified Diets
School Food Service
Quantity Food Production
Use and Care of Equipment
Waiter-Waitress Training

NEW AND EXPANDING INDUSTRIES

"One of the basic objectives of Southwestern Technical Institute is to stimulate the creation of more challenging and rewarding jobs for the people of our area by providing a customized training service to new and expanding industries. Subject to only minimal limitations, this institution, in cooperation with the Industrial Services Division of the State Department of Community Colleges, will design and administer a special program for training the production manpower required by any new or expanding industry creating new job opportunities in North Carolina."

This program includes the following services:

1. Consultation in determining training areas and developing appropriate courses.

2. Selection, training and salary for instructors for duration of training period.

3. Provision of suitable space for training prior to plant completion.

4. Assumption of equipment installment costs and some non-salvageable materials.

ADULT BASIC EDUCATION

Adult Basic Education is a federally funded program coordinated through the Department of Community Colleges. In the Southwestern Tech service area, two-thirds of the population over age 25 do not have a high school education. ABE classes are aimed at providing a beginning or continuing education for these people. Classes on three levels cover from beginning reading, writing and arithmetic to a more advanced study of English grammar and usage, mathematics and social sciences.

The materials and the instruction are designed to meet adults' interests. Special emphasis is given to developing "coping skills;" for example, reading and mathematics are presented through use of Consumer Education materials.

The program lays the groundwork for individuals to enter the High School Equivalency classes or take the G. E. D. examination.

At least one class in each county maintains open enrollment regardless of numbers throughout the school year to insure all adults an opportunity to continue their education. Special pre-service and in-service training is provided for all instructors to better enable them to provide meaningful educational experiences for all adults

OFF-CAMPUS CURRICULUM

Through the Continuing Education Division, almost any curriculum (credit) course can be offered off-campus. Exceptions are those courses which require facilities and materials which are available only on the STI campus. The classes are designed to suit the needs of our service area residents who cannot attend regular campus classes.

Courses are organized by requests from individuals or groups (minimum of 10) and held at a time and place convenient for class members.

The cost of off-campus classes is $2.75 per credit hour. Any adult 18 years of age and older may enroll. For specific information regarding admission requirements, see appropriate subject area elsewhere in the catalogue.

COUNSELING SERVICES

The Division of Continuing Education arranges off-campus counseling as the need arises. This is coordinated through Student Services. Referrals are made to other programs and assistance is given in arranging for G. E. D. testing through the Evening Director.

GENERAL EDUCATION DEVELOPMENT TESTS

In July, 1969, Southwestern Technical Institute became an official General Educational Development Testing Center. These tests cover five broad areas: English Expression, Literature, Mathematics, Social Studies, Natural Science.

Persons receiving a total passing score of 225 points with no single test score below 35 are awarded a High School Equivalency Certificate by the North Carolina Department of Public Instruction. This certificate is generally accepted in the same basis as a high school diploma for employment, job promotion and higher education.

Preparation: A person wishing to take the G.E.D. tests should come to the institute for an initial interview and preliminary counseling. If it appears that the individual is not yet fully ready to take the tests, he can select one of three ways to complete his preparation: The Adult Basic Education program, High School Equivalency classes, or Developmental Studies. Any of these will help him acquire the skills necessary for success on the tests.

Application requirements: In order to take the G.E.D. tests, a person must:

1. Be at least 18 years of age.
2. Be a resident of North Carolina.
3. File an application which is available at the institute or from his county Superintendent of Schools.

In the event that any single test score or the total score is unsatisfactory, a retest may be taken after six (6) months of further study.

At the time of application, a testing date will be set up. Every effort will be made to arrange a time which will be at the convenience of the applicant so that he will not have to take time off from work or other responsibilities.

HUMAN RESOURCE DEVELOPMENT

The Human Resource Development Program provides pre-employment training, job placement and job coaching for disadvantaged adults in the service area. Anyone eighteen (18) years of age or over who is unemployed or experiencing difficulty in retaining employment is eligible to participate in the program.

Adult Education (120 hours) is provided to assist students in expansion of academic skills in preparation for their G.E.D. Human Resource Development (120 hours) is provided to expand the students communication, human relations, and job survival skills necessary in maintaining more permanent employment.

The classes are eight weeks, with the cycles being repeated four to five times per year. For further information and class registration, contact the H.R.D. office located in the American Legion Building in Sylva. Phone: 586-6689.

COMMUNITY SERVICE PROGRAMS

The Continuing Education Department is always alert to possibilities of sponsoring public events for which no charge is made. Such programs may consist of art exhibits, dramatic presentations, poetry or other readings, lectures on a wide variety of subjects, or any other topic of special interest. With the completion this year of new facilities, the community services program will be expanded.

PERSONNEL

BOARD OF TRUSTEES

Robert C. Carpenter, Vice-Chairman (1977)	Franklin, N. C.
James Kent Coward (1981)	Sylva, N. C.
W. B. Dillard (1983)	Cullowhee, N. C.
W. Paul Holt, Jr. (1979)	Sylva, N. C.
Mrs. Dortha McDonald (1981)	Sylva, N. C.
James E. Searcy (1981)	Cullowhee, N. C.
Odell Shuler (1979)	Bryson City, N. C.
Charles S. Slagle, Chairman (1979)	Franklin, N. C.
Carl Stanford (1977)	Cherokee, N. C.
Mrs. Roberta Mae Swank (1983)	Franklin, N. C.
John M. Wikle (1977)	Bryson City, N. C.
James D. Wilson (1983)	Sylva, N. C.

ADVISORY COMMITTEES

AUTOMOTIVE MECHANICS

Mr. Roger Gunter
Mr. Ray Kinsland
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