

PITT COMMUNITY COLLEGE

General Catalog

1980-1982

LEARNING RESOURCES CENTER
Pitt Community College
P. O. Drawer 7007
Greenville, NC 27835-7007

ARCHIVES

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PITT COMMUNITY COLLEGE

GREENVILLE NORTH CAROLINA

Recognized and Approved By
North Carolina State Board of Education
North Carolina Department of Community Colleges
Division of Vocational Rehabilitation
North Carolina Commission for the Blind
North Carolina State Board of Nursing

Member of
American Association of Community and Junior Colleges
North Carolina Department of Community Colleges
Association of Institutional Administration
Student Government Association
Student Services Personnel Association
Southern Association of Student Financial Aid Officers
Carolinas Association of Collegiate Registrars and Admissions Officers
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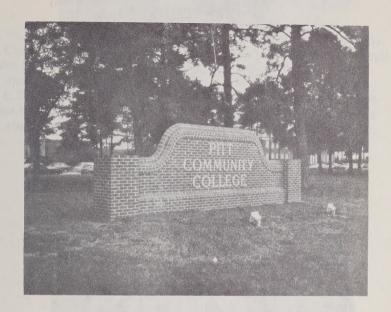
Southern Association of Colleges and Schools North Carolina State Board of Education

Catalog of Courses
Day and Evening School

Volume X 1980-82

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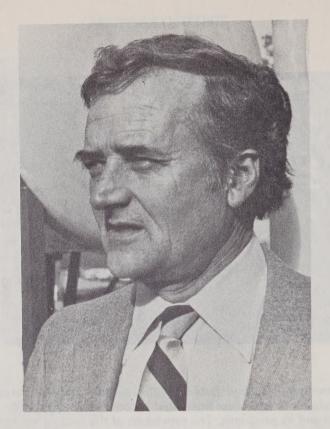
Pitt Community College publishes this catalog for the purpose of providing students and other interested persons with information about the college and its programs. The provisions of the catalog are not to be regarded as an irrevocable contract between students and Pitt Community College. The college reserves the right to change any provisions, requirements, or schedules at any time or to add or withdraw courses or program offerings.

Every effort will be made to minimize the inconvenience such changes create for students

Students having questions not answered in this publication may secure additional information from the Dean of Students, Pitt Community College, P.O. Drawer 7007, Greenville, North Carolina 27834. Telephone 756-3130.

It is the policy of Pitt Community College not to discriminate against any person on the basis of race, color, handicap, sex, religion, age, or national origin in the recruitment and admission of students, the recruitment, employment, training, and promotion of faculty and staff, and the operation of any of its programs and activities, as specified by Federal laws and regulations.

Pitt Community College is a equal opportunity/affirmative action institution.



PRESIDENT'S MESSAGE

Welcome to Pitt Community College. We are delighted that you are interested in our institution and look forward to this opportunity to serve you. We have a comprehensive array of courses and programs, and our purposes embrace a practical education with learning experiences designed to help you become a successful citizen in your chosen endeavor.

This catalog provides you with a detailed description of our requirements, procedures, and offerings. It provides information about everything from admissions to a map of our campus. In short, almost anything you need to know about Pitt Community College is contained herein. What it cannot convey, however, is the satisfaction that comes from attending a college where the staff and faculty have a committed concern for the welfare and future success of students. You will need to enroll to realize this experience. The opportunity is here for you, and I urge you to take full advantage as you develop your abilities in your chosen profession.

Dr. William E. Fulford, Jr. President

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CALENDAR 1980-81

FALL QUARTER

Faculty Orientation and Registration September 8 Day and Evening Registration - Day and Evening September 9 First Day of Classes September 10 Last Day to Drop/Add Classes September 15 Student Holiday-Staff Development September 26 Last Day to Officially Withdraw October 8 without valid reason (See Page 31) Pre-Registration for Winter Quarter October 27-31 Last Day to Remove Incompletes November 5 Prepayment November 10-14 Last Day of Classes November 26

WINTER QUARTER

Registration - Day and Evening December 4 First Day of Classes December 5 Last Day to Drop/Add Classes December 10 First Day of Christmas Holidays December 22 Classes Begin After Christmas Holidays January 5 Last Day to Officially Withdraw January 15 without valid reason (See Page 31) Pre-Registration for Spring Quarter February 2-6 Prepayment February 16-20 Last Day of Classes March 5

SPRING QUARTER Registration - Day and Evening March 11 First Day of Classes March 12 Last Day to Drop/Add Classes March 16 Last Day to Officially Withdraw April 8 without valid reason (See Page 31) Easter Holiday April 10 Easter Holiday April 13 Pre-Registration for Summer Quarter April 27-May 1 Last Day to Remove Incompletes May 8 Prepayment May 11-15 Last Day of Classes May 29 Graduation May 31

SUMMER QUARTER

Registration Summer Quarter and First Summer Session - Day and Evening	June 2
First Day of Classes	June 3
Last Day to Drop/Add Classes	June 5
Last Day to Officially Withdraw	June 30
without valid reason	
(See Page 31)	
Independence Day Holiday	July 3
First Summer Session Ends	July 10
Summer Break	July 13-17
Registration Second Summer Session	July 20
First Day of Classes	July 21
Last Day to Drop/Add Classes	July 23
Last Day to Remove Incompletes	August 5
New Student Orientation	August 11
New Student Orientation	August 12
Last Day of Classes	August 26
Graduation	August 27



CALENDAR 1981-82

FALL QUARTER

September 8 Faculty Orientation and Registration Day and Evening September 9 Registration - Day and Evening September 10 First Day of Classes Last Day to Drop/Add Classes September 14 October 7 Last Day to Officially Withdraw without valid reason (See Page 31) Pre-Registration for Winter Quarter October 26-30 Last Day to Remove Incompletes November 4 November 9-13 Prepayment November 25 Last Day of Classes

WINTER QUARTER

Registration - Day and Evening December 3 First Day of Classes December 4 Last Day to Drop/Add Classes December 8 First Day of Christmas Holidays December 21 Classes Begin After Christmas Holidays January 4 Last Day to Officially Withdraw January 14 without valid reason (See Page 31) Pre-Registration for Spring Quarter February 1-5 Last Day to Remove Incompletes February 11

February 15-19 Prepayment Last Day of Classes March 4

SPRING QUARTER

Registration - Day and Evening March 10 First Day of Classes March 11 Last Day to Drop/Add Classes March 15 Last Day to Officially Withdraw April 7 without valid reason (See Page 31) Easter Holiday April 9 Easter Holiday April 12 Pre-Registration for Summer Quarter April 26-30 Last Day to Remove Incompletes May 7 Prepayment May 10-14 Last Day of Classes May 28 Graduation May 30

SUMMER QUARTER

Registration Summer Quarter	June 1
and First Summer Session - Day and Evening	
First Day of Classes	June 2
Last Day to Drop/Add Classes	June 4
Last Day to Officially Withdraw	June 29
without valid reason	
(See Page 31)	
Independence Day Holiday	July 5
First Summer Session Ends	July 9
Summer Break	July 12-16
Registration Second Summer Session	July 19
First Day of Classes	July 20
Last Day to Drop/Add Classes	July 22
Last Day to Remove Incompletes	August 4
New Student Orientation	August 10
New Student Orientation	August 11
Last Day of Classes	August 25
Graduation	August 26



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Helena Woodard, M.A	English and Social Science Health and Physical Education

^{*}Asterisk indicates Departmental Chairperson.





STUDENT LIFE



HISTORY OF THE COLLEGE

In March, 1961, Pitt Community College was chartered and designated by the State Board of Education as an Industrial Education Center. The College began its operation as Pitt Industrial Education Center during the same year. The programs developed and expanded, and in 1964, the school was designated a technical institute by the State Board of Education. The name was changed in July, 1964, to Pitt Technical Institute, and it opened in its new facilities in September, 1964, with nine curricula and 96 students.

In 1970, a second building was completed, providing an additional 31,458 square feet to serve the citizens of Pitt County. The Administration Building and the Humber Building have approximately 120,000 square feet of usable space with well designed laboratories, shops, and classrooms.

In 1975, an addition was made to the Administration Building. A new student lounge with various recreational facilities is now available to students. This addition also accommodated the entire Nursing and Electronic Data Processing curricula.

The summer of 1979 brought about two important changes to Pitt Technical Institute. A 26,000 square feet classroom building was completed on campus. Also, the North Carolina Legislature enacted a bill that changed Pitt Technical Institute to Pitt Community College. The change brought about the addition of the two-year college transfer programs.

Presently, Pitt Community College offers 26 technical programs, 14 diploma programs, 3 certificate programs and 4 college transfer programs.

LOCATION

The College is located on Highway 11, South, between Greenville and Winterville.



STATEMENT OF PURPOSE

The purpose of Pitt Community College is to provide an environment and atmosphere conducive to occupational education designed to fill the manpower need in our society and to provide for the fullest possible development of the potential of students so that they may attain effective citizenship in society.

Toward this end, Pitt Community College is committed To provide expanded educational opportunities for young people and adults who desire to continue their education:

To provide relatively inexpensive, nearby educational opportunities for high school graduates, school dropouts, and adults:

To provide vocational programs of less than technical level, preparing students for jobs requiring different levels of ability and skill:

To provide technical programs preparing students for jobs of this level in industry, agriculture, business, and service occupations;

To provide college transfer programs consisting of the first two vears of general college studies;

To provide programs of technical and vocational education for employed and underemployed adults who need training or retraining or who can otherwise profit from the programs;

To provide short courses that will meet the general adult and community service needs of the people.

AREAS OF STUDY AT PITT COMMUNITY COLLEGE ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAMS

(Two-Year)

Business

Accounting Agricultural Business Technology Agricultural Chemicals Technology Agricultural Science Air and Water Resources Technology Architectural Drafting Technology Banking and Finance* **Business Administration** Commercial Art and Graphic Design Correctional Science Early Childhood Associate **Educational Associate** Electronic Data Processing -

Electronics Technology **Energy Technology** General Office Technology Human Services Technology Industrial Maintenance Engineer** Industrial Management

Technology* Medical Secretary Nursing Education* Paralegal Technology Police Science Radiologic Technology Secretarial Science

DIPLOMA PROGRAMS (One-Year)

Automotive Mechanics***

Carpentry and Cabinet Making

Cosmetology

Electric Motor Repair

Electrical Installation and

Maintenance

Electronics Servicing***

Farm Machinery Mechanics

Heating, Refrigeration and

Air Conditioning

Machinist***
Masonry

Practical Nurse Education*

Surgical Technology

Teacher Assistant

Welding

*Satisfactory admissions test results, interview, high school record, and physical examination are some of the requirements for enrollment.

**Evening Programs Only

***Two-Year Option

CERTIFICATE PROGRAMS

Hospital Ward Clerk (3-month program) Nurses' Assistant (3-month program) Veterans Cooperative Program

ASSOCIATE IN ARTS DEGREE PROGRAMS (College Transfer, Two-Year)

Pre-Liberal Arts

Pre-Business Administration

Pre-Education (Secondary)

Pre-Education (Elementary)

SPECIAL CREDIT

Students may enroll in available courses from different curricula for possible transfer or self-improvement.

ACCREDITATION AND PROFESSIONAL ORGANIZATIONS Department of Community Colleges

Pitt Community College is accredited by the North Carolina Department of Community Colleges under the State Board of Education, as specified in Chapter 115A of the General Statutes of North Carolina.

The Department of Community Colleges and the State Board of Education has granted the college board of trustees the authority to award the Associate in Applied Science Degree for the completion of the two-year technology curricula and the two-year business curricula, the Associate in Arts for completion of the two-year college transfer curricula, and the Diploma for all vocational curricula.

Regional Accreditation

Pitt Community College is accredited by the Southern Association of Colleges and Schools.

Pitt Community College is recognized by the U.S. Department of Education as being an institution of higher learning and qualified to receive Federal assistance in all of its higher education programs.

Pitt Community College is an institutional member of the American Association of Community and Junior Colleges.

The programs at Pitt Community College are approved for V.A. benefits.

ADMISSION PROCEDURES

General

The admission procedures of Pitt Community College are designed to facilitate the personal development of each applicant.

- A. Pitt Community College operates under the open-admissions policy as established by the North Carolina Department of Community Colleges and the State Board of Education. Specifically, the State Board recommends that all technical institutes and community colleges shall maintain an open-door admissions policy for all applicants who are high school graduates or high school leavers 18 years of age or older. The college has the right to selectively place these applicants.
 - B. The basic requirements for curriculum programs are as follows:
- (1) High school graduation is required for all programs except vocational trade programs, which require a student to have at least 8 units of high school work or its equivalent as established by institutional test scores.
- (2) High school equivalency diplomas will be accepted in lieu of graduation from a regular high school.
 - (3) A completed application blank must be submitted.
- (4) A placement test is administered to all day students with the exception of those making satisfactory scores on the SAT and those transfer students who have previously successfully completed a unit each in mathematics and English. Students who wish tests to be waived based on transcripts or SAT scores are responsible for bringing in that transcript or SAT scores and presenting it to a counselor. The placement test is given to evening students upon the recommendation of the department head.
- (5) Applicants for Electronics Technology and Architectural Drafting should have completed two units of mathematics, one of which is in algebra and the other in plane geometry or the equivalent in modern mathematics. (The college will waive the math requirements if a student,

in the judgment of the department head and counselor, has the necessary mathematical aptitude.)

- (6) All applicants should make an appointment with one of the admissions counselors for a personal interview prior to their enrollment in the college. The counseling session is designed to acquaint the student with the college and to help the student make a wise choice in program selection.
- (7) All new students are expected to participate in the orientation program.
- C. Pitt Community College will accept students from other institutes or colleges provided:
 - (1) Formal application is submitted.
- (2) Transcript of college or technical institute credit is furnished by all previously attended institutions.
 - (3) Student is in good standing with former institution.
- D. Readmission of curriculum students Students re-entering after one or more quarters out of school, with the exception of summer quarter, will follow normal admission procedures. Students out of school as a result of disciplinary action must appear before the Judiciary Council and petition for readmission to the college.
- E. Admission procedures for the allied health programs differ from the above. See Allied Health Admissions.

Provisional Admissions

A student applying too late to complete pre-entrance requirements may be admitted as a provisional student. In such case, all requirements should be completed within the first quarter of attendance, including mailing of official transcripts (high school and post secondary) directly to the Registrar's Office.

High School Admission Enrollment (Dual Enrollment)

Selected high school students may be admitted to appropriate courses in Pitt Community College under the following conditions:

- (1) be approved by the board of trustees of the college and the local board(s) of education upon recommendation by the college president and the applicable school unit superintendent;
- (2) be 16 years of age and older upon the initiation of such action by the public school;
- (3) individual student programs be jointly approved by the principal of the secondary school and the admissions office of the college;
 - (4) be taking at least three courses at the high school and be making

appropriate progress toward graduation as determined by the school principal;

(5) be permitted to fill in as space permits. Classes at Pitt Community College shall not be started solely for high school students. Once admitted, however, they shall be treated as all other students.

Pitt Community College may approve the enrollment of high school students only when no more than five percent of the enrollment from that high school is or has been enrolled in the Community College System during the regular ten month public school year. Exceptions to this maximum will require approval of the State Superintendent of Public Instruction and the President of the Community College System.

High school students sixteen years old or older, upon the recommendation of the superintendent and principal, may seek admission to Pitt Community College during the summer quarter. These students may be admitted when a need for the instruction has been demonstrated and space is available.

High school students will pay regular tuition and fees.

Admission Procedure for Allied Health Curricula

- 1. A prospective student should have an initial information interview with a Pitt Community College admissions counselor and fill out the preliminary application.
- 2. The entrance test should be taken on the dates prearranged by the Admissions Office. Entrance tests will be given once each month from January until June. The student will be notified by mail or check with an admissions counselor for the exact dates.
- 3. If entrance test scores are satisfactory, the student will be sent three reference forms. These forms should be given to individuals who are neither relatives nor friends and who can account for the student's potential ability to perform in an allied health occupation. A high school transcript and transcripts of all education after high school should be sent by the schools to the registrar at Pitt Community College.
- 4. When all transcripts and references have been received and reviewed by the department to which application has been made, the student will be notified of an interview date and time. Students must report at the scheduled time for their interviews.
- 5. Students who have completed the admission procedure including the interview by the end of March will be notified by mail after April 1 of their acceptance or rejection. Students who complete the admission procedure after April 1 will be notified of acceptance or rejection at the beginning of the month following interviews.
- 6. When the class is filled, the admission committee will evaluate all additional applicants including test scores, references, and transcripts to determine the applicant's eligibility for the alternate list.

International Students Admission

Pitt Community College has been approved by the U.S. Immigration and Naturalization Service to enroll international students. Three categories of students are: permanent residents with the Alien Registration ("green card"); refugees; or student visa holders ("F-1" Student Visa). International students who are present in the United States on a student visa ("F-1") are considered non-residents for the purpose of tuition payments. Length of stay, payment of taxes, or ownership of property, in themselves, do not qualify international students for the status of legal residence or domicile. For further information concerning international students' admissions, contact the office of the Dean of Students.

GRADUATION REQUIREMENTS

- I. Pitt Community College offers four documents of graduation.
- (1) The Associate in Applied Science Degree for completion of a two-year program of specialized training in a technical field.
- (2) The Associate in Arts Degree for completion of a two-year program of training in the college transfer curriculum.
- (3) A diploma for the completion of a one-year program of specialized training in a vocational field; a diploma for the completion of a two-year (six quarters) program of specialized training in auto mechanics.
- (4) A certificate for the completion of short term programs in vocational education.
- II. (1) The specific requirement for the Associate in Applied Science Degree is successful completion of the courses listed in the school catalog.
- (2) The specific requirement for the Associate in Arts Degree is successful completion of the courses listed in the school catalog.
- (3) The specific requirement for the diploma is successful completion of the courses listed in the school catalog.
- (4) The specific requirement for the certificate is successful completion of the requirements for a given program.

Graduation exercises are held each year in late May and late August. All students who were graduates since the previous year's commencement programs are invited to attend. Degrees, diplomas and certificates are paid for by Student Government Association funds. All graduating students are encouraged to participate in the graduation ceremonies. Caps and gowns are worn. A reception for graduates and their guests is held immediately following graduation exercises.

Candidates for graduation at the beginning of the quarter in which they plan to graduate and no later than the third week of that quarter should complete the following requirements: Meet with advisor and complete a graduation check list which is to be submitted to the Registrar.

After a complete check, the Registrar will notify the Dean of Students of students eligible for graduation. Those students determined ineligible will be notified.

After receipt of a favorable notification, the Dean of Students will order the proper document.

No student may graduate unless he has at least a 2.0 grade point average.

NOTE: No degree, diploma, certificate, or transcript of a record will be issued to a student who has not made satisfactory settlement with the Accounting Office for all indebtedness to the college. This regulation applies also during each quarter's registration.

EXPENSES, TUITION, AND FEES

Financial support from local, state, and Federal sources allows each student an educational opportunity at minimum cost. Tuition fees are set by the State Board of Education and are subject to change without notice. Textbooks, laboratory fees, and supplies are additional expenses which vary according to the program of study. The payment of all fees is required at the time of registration.

NOTE: TUITION IS SET BY STATE POLICY AND SUBJECT TO CHANGE WITHOUT NOTICE.

TUITION SCHEDULE Full-Time Students

All college transfer, vocational, technical, and audit students who are enrolled for twelve (12) or more credit hours are charged a maximum of \$39.00 per quarter.

Part-Time Students

The tuition charge for curriculum credit students and audit students is \$3.25 times the number of credit hours for which the student is enrolled. Example: 9 credit hours x \$3.25 equals \$29.25.

Out-of-State Students

The entrance requirements and admission procedures for persons who reside outside North Carolina are the same as for residents. Tuition for non-residents is \$198.00 per quarter for full-time enrollment. For out-of-state students, the fee is \$16.50 per credit hour.

Residence Classification for Tuition Purposes

Under North Carolina law, a person may qualify as a resident for tuition purposes in North Carolina, thereby being eligible for a tuition rate lower than that for nonresidents. Copies of the applicable law and of implementing regulations are available for inspection in the Office of the Dean of Students and also in the Library Resource Center where they may be examined upon request.

TUITION FOR SENIOR CITIZENS

North Carolina residents 65 years of age and older shall be exempted from the payment of curriculum tuition and extension registration fees.

STUDENT ACTIVITY FEE

The Student Activity Fee for each full-time student (12 credit hours or more) is \$6.00 per quarter. Those students registered for nine through eleven credit hours are charged \$4.00 per quarter. Students registered for six through eight credit hours are charged \$2.00 per quarter and students registered for less than six credit hours are charged \$1.00 per quarter. There will be no change to the above regulation, with the exception that only day students are subject to the activity fee.

REFUND POLICY

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 withdraws within ten 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 \$5.00 or less, unless a course or curriculum fails to materialize due to no fault of the student.

EXCEPTION: Those students who are veterans or war orphans receiving benefits under U.S. Code, Title 38, Chapters 32 and 35, may be refunded the pro rata portion of the tuition fee not used at the time of withdrawal of such students.

There is no refund on such payments as activity fee, and insurance premium fee.

Students desiring a tuition refund are asked to follow the steps listed below.

- 1. Read the above paragraphs.
- 2. Contact the Registrar's Office for approval to officially withdraw

from classes (see Official Withdrawal) and obtain the appropriate withdrawal form.

- 3. Complete the withdrawal form.
- 4. Contact the Dean of Students for approval and a written request to receive a tuition refund.
- 5. Submit the completed withdrawal form and the written request for tuition refund to the Business Office.

GRADE POINT AVERAGE (G.P.A.)

The grade point average is determined by dividing the total number of quality points by the total number of credit hours of work attempted.

DEAN'S LIST AND HONOR ROLL

All full-time technical, vocational, and college transfer students maintaining a quarterly grade point average between 3.50 and 4.00 will be recognized on the Dean's List.

A quarterly grade point average between 3.00 and 3.49 will entitle fulltime technical, vocational, and college transfer students to be listed on the Honor Roll.

The Dean's List and Honor Roll are prepared by the Registrar's Office and mailed to all local or area newspapers of the students who qualify for either of these two.

A student with an "Incomplete" grade is not eligible for the Dean's List or Honor Roll in the quarter the "Incomplete" is received.

TEXTBOOKS AND SUPPLIES

The cost of textbooks and supplies varies according to the program of study. These items may be purchased from the Bookstore.

ACCIDENT INSURANCE

Accident insurance, covering hours in school and transportation to and from school, is available for \$4.00 per year. This insurance is strongly recommended, though not required. Students must submit claims for injury covered under the accident insurance provisions immediately, but in no instance later than 30 days, in order to expect coverage.

The premium for accident insurance is subject to change annually.

GRADING SYSTEM

The following grading system is used by Pitt Community College.

Letter	Numerical Equivalent	Quality Points Per Quarter Hour
Α	93-100	4
В	85-92	3
С	77-84	2
D	70-76	1
F	Below 70-Failing	0
W	Withdrew	0
Χ	Never Attended	0
*1	Incomplete	0
*	Audit	Aud 0

^{*}Not included in computing grade point average.

EXPLANATION OF GRADESIncomplete

An Incomplete is given at the discretion of the instructor when a student is demonstrating progress in a course but needs more than one quarter to complete the requirements of the course. To qualify for a grade of I, a student must be enrolled in a course during the last ten days of the quarter and must have completed at least 50 percent of the course with a passing grade. The instructor has the discretion to require that more than 50 percent of the course be completed before giving an I.

Guidelines for Removal of Incomplete

A student who does not re-enroll in a course to remove an I must make arrangements to remove the I during the first eight weeks of the next quarter the student is enrolled in school. Otherwise, the grade becomes an F, unless an extension of time limit is approved by the instructor, department head, and Assistant Dean of Instruction for Curricular Programs. The student has the responsibility to contact the instructor regarding a grade of I and to make arrangements to complete the necessary work to remove the I within the time allowed. It is recommended that a contract of conditions for completion and time limit be executed at the time the I is given by the instructor and signed by both instructor and student.

The instructor or, if absent, the department head will set the criteria for the removal of the I grade. The criteria is to be in line with the guidelines of departmental policy. A student may be required to retake the course.

A student receiving an I in a prerequisite course may not proceed to the sequential course without permission of the instructor or, if absent, the department head.

REGISTRATION PROCEDURES

The college year consists of four quarters. Students who are pursuing a curriculum must preregister or register at the beginning of each quarter as they progress toward their educational objectives. Returning students must make satisfactory settlement with the Accounting Office for all indebtedness before registering. All students will register during the prescribed registration period for that quarter (refer to school calendar).

PREREGISTRATION

Preregistration is usually held around the middle of the quarter and is a time when students and advisors can review students' academic progress and plan courses for the coming quarter.

It is an important part of student's programs. Students, with advisors, have an opportunity to discuss academic problems on an individual basis and keep abreast of progress.

Only those students currently enrolled and not on academic probation are allowed to preregister.

Those students failing to preregister at their designated time must complete registration on registration day.

PREPAYMENT

Prepayment is held each quarter, except for fall quarter, one week after preregistration.

Only those students currently enrolled and not on academic probation are allowed the privilege of prepaying.

LATE REGISTRATION

A student may register for class(es) provided:

- (1) The class is not cancelled or closed;
- (2) The student was pre-advised or otherwise fully admissible to the courses for which registration is sought;
- (3) The student convinces the advisor and the Dean of Students that it was impossible or would have involved extreme hardship to register at the appointed time. Negative decisions may be appealed;
- (4) A late registration fee of \$5 is charged for those who are allowed to register after the first class day.

AUDITING COURSES

Students who wish to audit courses must register for such courses. Auditors receive no credit but are encouraged to attend class, participate in discussions, and take examinations. Fees and tuition for auditors are the same as for regular students.

The student must clearly indicate on the registration form which classes are to be audited. This must be done at the time of registration, and the decision to audit or not to audit classes may not be changed after the initial registration.

CREDIT BY EXAMINATION (PROFICIENCY)

Credit by examination may be allowed for a given course if a regularly enrolled student can demonstrate the required level of proficiency as a result of independent study and experience. This credit will be based on a department examination under the direction of the chairperson of the department in which the course is offered. Credit hours will count toward graduation; these will be computed in quality point average as grades and quality points will be recorded. A minimum grade of *C* will be accepted.

Exams may be scheduled at the discretion of the department chairperson involved.

TRANSFER CREDIT

Curricular students are responsible for requesting transcripts from all previously attended institutions.

Transcripts for all students enrolled in a currciular program will be evaluated automatically.

Students transferring to Pitt Community College may transfer all courses with comparable course content so long as the GPA of all courses being transferred does not fall below a 2.0.

A maximum of 60 credit hours may be transferred from institutions outside the North Carolina Community College System toward completing an associate degree or diploma program. The final 12 credit hours must be completed at Pitt Community College.

Pitt Community College awards credit for appropriate scores on various exams of the College-Level Examination Program (CLEP). The chairperson of the department in which the courses would be taught determines credit.

TRANSFER TO OTHER INSTITUTIONS

Students planning to transfer to four-year colleges or universities are responsible for becoming acquainted with that institution's departmental requirements in the intended major and being guided by those requirements in selecting curriculum and electives. The college maintains a file of catalogs of many other colleges and universities in the counseling department. The counseling department and the college transfer advisors will assist the student in the selection of an appropriate institution and aid in the interpretation of its requirements.

COURSE LOAD

A two-year technical, vocational, or college transfer student who carries a 12 quarter-hour load is considered a full-time student. The normal load is 15 to 18 hours. A vocational student must carry a minimum of 12 credit hours and 22 contact hours to be classified full time. A student registering for more than 20 credit hours must have a cumulative grade point average of 2.0 or above or permission of the department chair-person.

Students who are employed more than 15 hours per week should reduce their class load accordingly. Beginning students who have full-time employment are urged to limit class loads to 9 to 12 hours until they have demonstrated ability to carry a heavier schedule.

One-year vocational students will take the courses as prescribed in the curricula outlines, or they may choose to limit themselves.

ATTENDANCE

Regular and punctual class attendance is expected of all students in order for them to achieve their highest potential in the curriculum they have chosen and to develop desirable personal traits necessary to obtain employment after graduation. Students who anticipate absence should contact their instructor prior to the absence if possible. It is the student's responsibility to make up work missed as soon as possible.

A student will be dropped from a class for the following reasons:

- 1. Students will be dropped from any class when their absences from the class begin to affect the quality of their class work and their class grades. This effect will be determined by the judgment of the class instructor.
- 2. Any student who is absent five consecutive class meetings will be dropped from the class.
- 3. For evening students, any student who is absent two consecutive class meetings must secure permission from the Evening Director or the Dean of Students to continue in the class.

Students who have been dropped and have a valid reason for the absence may be reinstated at the discretion of the instructor. Should the instructor deny reinstatement, the student has recourse to appeal to the Office of the Dean of Students.

CLASS SCHEDULE

Pitt Community College offers classes between the hours of 8:00 A.M. and 10:00 P.M. five days per week, except on Friday when all classes end at 6:00 P.M. The majority of the credit courses are offered between the hours of 8:00 A.M. and 6:00 P.M. When demand justifies, at least one section of each curriculum course is offered during the evening hours.

Non-credit courses for personal, occupational, and community improvement are offered during both day and evening hours.

With careful planning a person can complete most of the work required for a degree or diploma in certain programs, by attending evening classes.

CHANGES IN REGULATIONS

Pitt Community College reserves the right to make changes in the regulations, courses, fees, and other matters of policy and procedure as deemed necessary.

CHANGE IN MAJOR COURSE OF STUDY

Students desiring to change major course of study must receive counseling. A request for change of curriculum is initiated with a student counselor, signed by both previous and new advisors, and returned to the Registrar's Office. No registration schedule should be completed by an advisor until this is done.

STUDENT CLASSIFICATION

Freshman	A student who has earned fewer than 54 quarter hours of credit.
Sophomore	A student who has earned 54 or more quarter hours of credit.
Full-time Technical or	

College Transfer Student... A student who is registered for twelve or more quarter

hours of credit

Part-time Student A student who is registered for eleven quarter hours of credit or fewer.

Special Student..... A full-time or part-time student not seeking a de-

gree or diploma.

Full-time Vocational Student A student who is registered for twelve or more credit hours and at least 22 clock

hours.

WITHDRAWALS FROM THE COLLEGE Unofficial Withdrawal

An unofficial withdrawal from one or more classes is given to students who leave school or stop attending classes without qualifying for or following procedures for official withdrawal status. This includes students who are dropped after five consecutive absences and not reinstated and those never attending classes after registration. Unofficial withdrawals count as hours attempted with quality points of 0 in determining the grade point average. Students who leave school without officially withdrawing will lower their GPA and jeapordize future readmission to the college. For more information see the student counselors or the registrar.

NOTE VETERANS:

Any course for which an unofficial withdrawal or an I (Incomplete) is received may not be retaken for pay purposes under Title 38, U.S. Code as amended by Public Law 93-508.

Official Withdrawal

During the first twenty class days of a quarter a student may withdraw from courses without penalty. (See school calendar for applicable date each quarter.) After the fourth week, official withdrawals from one or more courses or from the institution are permissible when circumstances beyond control of the students prevent them from completing courses. Official withdrawals do not count as hours attempted. Official withdrawals after the first twenty days may be secured for the following reasons:

verification of personal illness; illness or death in immediate family; change in employment status; relocation to another area.

An official withdrawal may be allowed at the discretion of the Dean of Students for reasons other than the previous reasons, if in his judgment such a withdrawal is warranted.

Students qualifying for an official withdrawal must use the following procedures in applying for one:

- (1) Present a verification that the student qualifies for official withdrawal status to the registrar to obtain a withdrawal form;
 - (2) Have advisor sign it;
 - (3) Have instructor(s) sign it;
 - (4) Have registrar sign it;
 - (5) Have the form validated by the Business Office staff.

Students who officially withdraw from all courses and from the college before the end of the quarter will receive no grades. Only the course(s) for which they registered and the date of the official withdrawal will appear on the transcript. For more information, see the student counselors or the registrar.

ACADEMIC STANDING

The policy governing academic progress at Pitt Community College is intended to assist the student to successfully complete a chosen program of study. Since a 2.00 quality point average is required for graduation in all programs, a student is expected to strive to reach this average in order to be considered in good academic standing. Any second year student who falls below a 1.50 grade point average and any first year student who falls below a 1.00 grade point average will be required to have periodic counseling. Students not attaining this required grade point average in any quarter will be placed on academic probation. Students will have one quarter on academic probation to earn the required grade point average before they are terminated from the college or financial aid. Federal regulations require that a student receiving federal financial aid of any kind (BEOG, SEOG, CWSP, NDSL, GUARANTEED STUDENT LOAN, NURSING STUDENT LOAN and NURSING SCHOLARSHIP) be making satisfactory progress. Those students whose cummulative grade point average is less than 1.00 after any quarter of academic probation will not be classified as "making satisfactory academic progress," and all federal financial aid will be terminated. Special provisions may be made for students enrolled in Special Services and students receiving incompletes in developmental courses.

TRANSCRIPTS

Student transcripts are available under the provisions of The Family Educational Rights and Privacy Act of 1974 (P.L. 93-380). Under this Act, written consent from the student is required before the student records can be released to anyone. Additional information may be obtained from the Registrar's Office.

The first two transcripts are free; subsequent transcripts will carry a charge of \$1.00 each.

DROPPING AND/OR ADDING COURSES

In some instances it is necessary for students to make adjustments in their schedule. To insure that the student receive proper credit, a Drop-Add Form should be completed and returned to the Registrar's Office. The college's calendar, published in the Student Handbook and the General Catalog, indicates the last day to drop or add courses. This date is subject to change with proper notification.

Students should pay particular attention to procedural directions as no course is officially dropped or added until the required procedure is completed.

The following steps should be followed:

- (1) Obtain drop-add form from the Registrar's Office;
- (2) Have instructor(s) involved initial it;
- (3) Have advisor sign it;
- (4) Have registrar sign it;
- (5) Have it validated by the Accounting Office staff.

PLEASE NOTE: If a class for which a student is enrolled is cancelled by the institution, it is the student's responsibility to withdraw from the class as outlined above.

THE FACULTY ADVISOR SYSTEM

The faculty advisor system is designed to make a contribution to the student's educational progress. Students who have declared curriculums are assigned a faculty advisor. Students may know their advisors not only as instructors, but also as one to whom they may go and receive assistance in program planning, scheduling, and registration. Faculty members are responsible to the Assistant Dean of Instruction for Curricular Programs for effectively carrying out the advisor duties. The objectives of the faculty advisors are as follows:

To have a conference with each new advisee as soon as possible to get acquainted.

To be alert to student problems in order to assist the student in both academic and personal matters. (Problems which the advisor feels unqualified to handle should be referred to the counselors' office.)

To assist the individual student in planning an academic schedule to meet course prerequisites and curriculum requirements.

To maintain an academic progress file on each advisee. (This file should include grade slips, an academic plan sheet, an advisor card, and an information sheet.)

To post office hours, showing when available for consultation with students.

To serve, upon request of the student, as the student's representative in conferences where decisions affecting status are made.

STUDENT SERVICES

COUNSELING SERVICES

Counseling services are provided by trained personnel. These services are available to every curriculum student from pre-admission through graduation. Counseling services are also available to evening students. There is no charge for these services.

Students may come to the counselor's office at any time when a problem arises which could affect progress in school. Faculty members are asked to encourage students to use this service. The counselor will try to have at least one conference per year with each student. A counselor is on duty on Monday and Thursday nights until 8:30 P.M.

Tests are administered by the counselors on a group or individual basis for admission, placement, career development, and personal problem solving (interest inventories or personal interviews). Test results are available and are interpreted by the counselors at the request of faculty members or students.

In addition to the counseling services available, every student is assigned a faculty advisor who serves to assist the student with specific course planning and registration.

PLACEMENT SERVICES

The Placement Service is available to all students, both part-time and full-time, and to graduates who wish to locate employment that will meet their personal career needs. Information about job opportunities in business, government, and industry is available. Students must first register with the Placement Office, file a resume, and complete an interview with Placement personnel. This office coordinates on-campus interviews, schedules off-campus interviews, employer visitation, orientation sessions, and maintains career and employer files and information. The Placement Office is located in Room 6, Administration Building.

Counselors are available to students for career exploration and planning. This service is offered to both day and evening students.

HEALTH SERVICES

Pitt Community College maintains no health facilities other than first aid supplies, which are located in the office of the Dean of Students and in the laboratories and shops. The responsibility for medical services rests with students and their parents or guardians. Emergency facilities are available at Pitt Memorial Hospital. Entering students are required to answer the health questionnaire on the application for admittance form. Student accident insurance is available at a cost of \$4.00 per year.

FOOD SERVICE

The college has a hot food service which is operated in the student lounge. Hot sandwiches, other short order items, and fountain drinks are available in the snack bar. Vending machines for soft drinks, cigarettes, and sundries are also provided in the snack bar and in the lounge area of the Humber Building and Whichard Building.

HOUSING

The college does not provide housing facilities for students either on or off campus. It does, however, maintain a list of housing available in the Greenville area. In addition, the services of the Director of Housing at East Carolina University are available on a space-available basis to students. There is no other involvement on the part of the college. Students are responsible for obtaining their own housing.

STUDENT GOVERNMENT ASSOCIATION

Pitt Community College has a Student Government Association. Each curriculum has one representative and alternate in the association. Officers are elected from this body annually. Activities supported by the SGA include the Pitt Community College basketball, softball, and tennis teams, field days, dances, cookouts, community projects, and intramural sports.

IDENTIFICATION CARDS

All day students must secure an ID card from the Student Services office during the second or third week of each quarter. This card will admit students to social, cultural, and educational events that are sponsored by the college.

GAMMA BETA PHI

Gamma Beta Phi is an honor society chartered in 1975. Membership is based upon a GPA of 3.0. Gamma Beta Phi comes under the supervision of the SGA.

SCHOOL PUBLICATIONS

Pitt Community College publishes the following periodicals:

- A. Student Handbook
- B. College Catalog
- C. Program Brochures
- D. New Student Information Sheet
- E. Co-Op Newsletter
- F. College Newsclips

GUIDED TOURS

Many groups visit Pitt Community College during the year for the purpose of inspecting the facilities and opportunities available in vocational, technical and college transfer education.

Groups are assembled in the lobby where they are greeted by the Dean of Students. Larger groups are divided into smaller groups and then they are taken on a guided tour of the college. All programs are explained to groups as the tour progresses. In addition to seeing classes and shops, the groups are also taken to the library and the learning center.

CLASS RINGS

All orders for class rings will be made through the Office of Student Services. Notices will be posted relevant to dates for measurements. Students are urged to be prompt when making these orders.

FINANCIAL ASSISTANCE PROGRAMS

Pitt Community College provides limited assistance to students who are in need of financial aid to meet their educational expenses. All inquiries concerning financial aid should be addressed to the Financial Aid Officer, Pitt Community College, Post Office Drawer 7007, Greenville, North Carolina 27834. Applications for financial aid should be submitted six weeks before the quarter begins. Applications received later will be processed on first-come, first-served basis as funds and time permit.

Students should apply for financial aid by submitting a Financial Aid Form (FAF) to the College Scholarship Service. The FAF may also be used to apply for the Basic Educational Opportunity Grant Program and for the North Carolina Student Incentive Grant. Students should specify 5556 as the code number for Pitt Community College in the appropriate section of the FAF.

A letter from the Financial Aid Officer explaining the award decision and detailing information about any aid offered will be sent to each student.

To receive financial aid, a student must maintain satisfactory academic progress according to the standards of the institution and not owe a refund on a grant, or be in default on a loan. Student must be enrolled in an eligible program and carrying at least six credit hours.

BASIC EDUCATIONAL OPPORTUNITY GRANT

The purpose of the Basic Educational Opportunity Grant Program, a Federal aid program, is to provide financial assistance to those who need it to attend post-secondary educational institutions. This grant is available to students who began their post-secondary education after April 1, 1973. Students may contact the Financial Aid Officer concerning eligibility.

THE SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT PROGRAM (SEOG)

The purpose of the SEOG program is to make post-high school education available to high school graduates of exceptional financial need who, without the grants, would be unable to continue their education.

Any student in extreme financial need who has been accepted for admission or who is already enrolled and is in good standing as a full-time student is eligible for SEOG.

The institution is responsible for selecting eligible students and handling the daily operation of the program.

NORTH CAROLINA 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 the College Scholarship Service. 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.

Application forms may be obtained from the Financial Aid Office or directly from College Foundation. After the student completes the application, the Institutional Financial Aid Officer must certify it and for-

ward it to the Foundation. Requests are processed according to the date the properly completed application forms and need analysis reports are received. Applications received after March 15 will be processed if funds are available.

Please note that all students applying for North Carolina Incentive Grants must first apply for Basic Educational Opportunity Grants. Both Incentive Grant and Basic Grant applications are available from financial aid offices at eligible North Carolina post-secondary educational institutions.

LAW ENFORCEMENT ASSISTANCE GRANTS

In-service students in the Police Science Technology program may be eligible for outright grants to cover the cost of their training and other allied costs.

THE NATIONAL DIRECT STUDENT LOAN PROGRAM (NDSL)

The purpose of the NDSL Program is to identify and educate more of the talent in our nation. Borrowers must be in need of the amounts of their loans to pursue courses of study in the institution. Borrowers must be capable, in the institution's opinion, of maintaining good standing. Borrowers must be enrolled, or accepted for enrollment, as students in the institution. Borrowers must be carrying at least one-half the normal full-time academic load as determined by the institution.

Whenever students who have received a National Direct Student Loan terminate their education at Pitt Community College, they must contact the Financial Aid Officer for an exit interview where arrangements will be made for repayment of the loan.

COLLEGE FOUNDATION LOAN FUND

Through the College Foundation, Incorporated, a student who has been approved for admission may borrow up to \$2,500 per year as provided by the Higher Education Act of 1965, Section IV-B. The Financial Aid Officer gives institutional approval and awards the loan through the college's Accounting Office. Application must be made prior to July 1 of the school year.

Repayment shall begin on the first of the tenth month after the student ceases to carry a full-time load. The repayment period may not exceed 10 years. The borrower may accelerate repayment without penalty.

OUT-OF-STATE LOANS

Out-of-state students should contact their family banks or state higher education assistance agencies concerning state-administered guaranteed student loan programs.

DORIS HALL PHELPS MEMORIAL LOAN FUND

Eligible students may borrow money from this fund to pay tuition charges only. There will be a 5% interest charge assessed on any money loaned. These loans are for short terms not to exceed two quarters. A cosigner will be required before any of these funds can be loaned.

This fund was established in memory of Mrs. Doris Hall Phelps, who for several years was a loyal and devoted employee of Pitt Community College in the Learning Resources Center.

EDUCATIONAL LOAN

Licensed Practical Nurses accepted for enrollment in the Associate Degree Nursing Program and other students who have successfully completed their first academic year of the Associate Degree Nursing Program may apply to the N.C. Department of Human Resources, Department of Facility Services, Raleigh, North Carolina, for an Educational Loan. The applicant must be a North Carolina resident. The maximum amount of loan each year is \$1,500 and is secured by a promissory note endorsed by the applicant's parents or by two other sureties approvable to the N.C. Medical Care Commission. The loan recipient agrees, upon completion of the required training, to practice as a registered nurse in approved shortage areas in North Carolina a full year for each \$1,500 loan.

BURROUGHS-WELLCOME LOAN FUND

Pitt Community College administers a loan fund which is supported by the Burroughs-Wellcome Company. Eligible students may secure short-term loans at no interest. Money obtained through this loan fund must be used for direct educational expenses which are limited to the costs of tuition, insurance fees, supplies, and books. These loans must be repaid before the end of the current quarter. All loans must be secured by a promissory note with the signature of the borrower and the signature of one other person as surety. Responsibility for recollection of these loans rests with the Financial Aid Office.

SCHOLARSHIPS

Two scholarships of \$200 each are granted to qualified students. These scholarships are provided by Prepshirt, Incorporated, a Greenville industry.

NURSING LOANS AND SCHOLARSHIPS

Students enrolled in the Career Option Nursing Program are eligible to apply for a loan. Scholarships to certain nursing students will be awarded by the Financial Aid Committee. These scholarships will be awarded based on the student's aptitude and needs.

FINCH VOCATIONAL EDUCATION SCHOLARSHIP

This scholarship is furnished by Mr. and Mrs. Willard Finch in the amount of \$100 per year to cover the cost of tuition only. This scholarship is renewable for the second year if the recipient has successfully passed the first year's work.

COMPREHENSIVE EMPLOYMENT TRAINING ACT (C.E.T.A.)

This program is offered in cooperation with the N.C. Employment Security Commission and is available to students who qualify. Students should file an application for admission to Pitt Community College and then visit the Employment Security Commission office nearest the applicant.

MIGRANT AND SEASONAL FARMWORKERS ASSOCIATION

For information concerning this program, write or contact Migrant and Seasonal Farmworkers Association, Inc., District I Office, P.O. Box 970, Bethel, N.C. 27812.

COLLEGE WORK-STUDY, VOCATIONAL WORK-STUDY PROGRAMS OF EMPLOYMENT

Students, particularly those from the low-income families, who need a job to help pay for school expenses are potentially eligible for employment by Pitt Community College under federally supported workstudy programs.

Students may work up to 15 hours per week while attending classes full-time.

To work under these programs, students must be enrolled and be in good standing, or be accepted for enrollment as a full-time student. The student's eligibility depends upon need for employment to defray school expenses, with preference given to applicants from low-income families. Payment for work performed is made on the basis of a time sheet certified by the signature of the person supervising the student's work.

VOCATIONAL REHABILITATION

Any physically handicapped student may be eligible for scholarship assistance under the provision of Public Law 565. Applications for this scholarship aid should be processed through the District Vocational Rehabilitation Office nearest the applicant. Inquiries may be directed to any Rehabilitation Office.

LOCAL SOURCES OF FINANCIAL AID

Students are encouraged to keep in touch with their respective high school guidance counselors in order that they may be aware of the various kinds of scholarships granted by hometown civic clubs, church groups, or other non-profit associations or foundations.

Various fund regulations require that an individual application be completed for that specific fund. More detailed information relating to specific programs is available in the Financial Aid Office.

VETERANS BENEFITS

The Veterans Benefits Law provides financial assistance to any veteran who is eligible for benefits under the G.I. Bill. When veterans enroll in an approved curriculum, they must pursue the exact curriculum listed in the school catalog; they must provide the Veterans Administration with exact records of attendance and must maintain satisfactory academic progress, attendance, and conduct for continuing eligibility for payments.

V.A. payments for veterans in a technical or college transfer program are based on credit hours per quarter as indicated below:

Technical and College Transfer Programs

12 or more								 											Full	Time
9-11		 a		,	7		4	 							0				. 3/4	Time
6-8																				

V.A. payments for veterans in a vocational program are based on contact (hours in class per week) and credit hours per quarter as indicated below.

Vocational Programs

22 clock hours and 12 credit hours	ull Time
16-21 clock hours and 9-11 credit hours	3/4 Time
11-15 clock hours and 6-8 credit hours	½ Time

CHILDREN OF VETERANS

The Veterans Administration offers educational assistance up to 45 months, for sons and daughters of certain deceased or totally and permanently disabled veterans. Recipients are generally between 18 and 23 years of age. An allowance up to \$311 per month is made to students under the program. For further information, write the Veterans Administration in Winston-Salem or contact the local Veterans Affairs Office.

The following standards of progress will be in effect for veterans enrolled at Pitt Community College and receiving benefits. Veteran students must have achieved the grade point average listed on the following scale except that in each case, they will be given a one quarter probationary period before termination.

AA, AS, AAS Degree Credit Hours	Students Grade Point Average	Certificate or Diploma Students Credit Hours	Grade Point Average
0-25	1.00	0-15	1.00
26-40	1.25	16-25	1.25
41-55	1.50	26-35	1.50
56-70	1.75	36-50	1.75
71 or more	2.00	51-70	2.00

Any veteran receiving more than 12 credit hours of "F's", "W's" and/or "X's" will be terminated from VA benefits until written authorization is received from a VA Counselor to recertify the student. Other standards of progress for veterans as listed in the student handbook will be followed.

SOCIAL SECURITY

Sons and daughters of retired, disabled, or deceased workers are eligible for social security benefits up to the age of 22 while they are in college, if they are unmarried full-time students.

Payment of these benefits is not automatic. Students who are not yet 18 and want to continue receiving monthly benefits, or whose benefits were stopped because they had reached the age of 18, should notify the Social Security representative for further information.

TRAFFIC REGULATIONS

All automobiles operated on the campus by day students and college personnel must be registered with the Business Office. Parking permits are issued for each registered vehicle and must be displayed on the rear bumper, left side. The operators of automobiles on the campus are subject to specific parking and traffic regulations. The college reserves the right to withdraw the privilege of operating an automobile on the campus for failure to abide by the regulations. Parking permits are issued free of charge.

Because most students commute to Pitt Community College, the traffic and parking regulations in the Student Handbook will be enforced.

INCLEMENT WEATHER

The President will make the decision as to whether or not classes will be held during periods of inclement weather. Announcements will be made on local radio and television stations.

FIRE DRILLS

Fire drills will be held once a quarter. The fire alarm consists of a pulsating, repeated sounding of a bull horn. Personnel will exit at the outside door closest to where they are at the time the alarm is sounded and proceed in an orderly manner to a safe distance from the building. The all clear signal is a long sounding of the school bell system.

STUDENT RIGHTS AND RESPONSIBILITIES

Students are responsible for the proper completion of their academic program, for familiarity with all requirements of the curriculum from which they intend to graduate, for maintaining the grade average required and at all times knowing their academic standing, and for meeting all other degree requirements. Their advisors will counsel them, but the final responsibility remains that of the student.

Students are required to have knowledge of and observe all regulations pertaining to campus life and student behavior. They are responsible for maintaining communications with Pitt Community College by keeping on file with the Registrar's Office at all times their current address and telephone number.

Copies of the Rights and Freedoms of Students can be obtained from the office of the Dean of Students.

Due Process

Students who question the fairness of disciplinary action taken against them are entitled to due process by submitting a written notice of appeal. The appeal is heard by the Hearing Committee (Judicial Review Board), which is composed of the President and the Vice-President of the Student Government Association and two faculty members appointed by the President of the college. The decision of the committee is final, subject only to the student's right of appeal to the President of the college or ultimately to the Board of Trustees. Additional information may be obtained from the Dean of Students.

DISCIPLINARY ACTION Student Conduct

It is expected that at all times the student will conduct himself as a responsible adult. Destruction of school property, stealing, cheating, gambling, use of profane language, engaging in personal combat, possession of dangerous weapons, or the possession and/or use of alcoholic beverages and/or the possession and/or use of any drug as defined under the North Carolina Controlled Substance Act, G.S. 90-89 through G.S. 90-94 in or any part of the Pitt Community College campus

will not be tolerated. Any violation of these regulations will result in expulsion from the College. In addition, any infraction which is a violation of NC law may be turned over to the local authorities.

Dismissal

A student may be dismissed from a class or from the college for conduct or personal habits which are not in the best interest of the student and of the college.

Information on dismissal and reinstatement procedure may be obtained from the office of the Dean of Students.

The provisions of due process will be applicable to all actions involving suspensions, extensions, probation, and dismissal.

SPECIAL SERVICES LEARNING RESOURCES CENTER

The Learning Resources Center (LRC) at Pitt Community College includes Library Services, Audiovisual Services, and Media Production Services. The primary purpose of the LRC is to provide learning resources and services to support and enrich the educational programs of the College. These resources and services are available to students, faculty, and staff of Pitt Community College and to the adult citizens of Pitt County.

LRC resources and services include a wide variety of print and non-print materials, technical equipment, supportive facilities, and specialized services. The print materials collection includes books, magazines, newspapers, pamphlets, government publications, and other printed materials. Audiovisual materials in the LRC collection include films, filmstrips, film loops, transparencies, slides, audio and video tapes, and records. Microfilm copies of back issues of selected magazines and newspapers and certain historical records of the Pitt County area are also available for use in the LRC. Equipment needed for the utilization and duplication of certain instructional materials is provided by the LRC.

A staff of professional librarians, media specialists, technicians, and assistants provide instruction and assistance in the use of LRC materials, equipment, and services at all hours the LRC is open.

The LRC is open Monday through Thursday from 7:45 A.M. to 9:30 P.M. and on Friday from 7:45 A.M. to 5:00 P.M. (closed Saturdays, Sundays, and holidays). Located on the third floor of the Humber Building (easily reached by elevator), the LRC is arranged and furnished to provide a pleasant atmosphere conducive to study and to leisure-time use of the variety of resources of services available.

COLLEGE TRANSFER



REQUIREMENTS FOR THE ASSOCIATE IN ARTS DEGREE

The Associate in Arts degree is awarded upon completion of at least 96 quarter hours of credit with an overall grade point average of 2.0 (C) or better, to include:

	Hour
COMMUNICATIONS Grammar and Composition	9-10
HUMANITIES AND FINE ARTS	. 14-18
MATHEMATICS	5-10
SCIENCE	9-12
Courses, at least one of which is to include laboratory experience, will be chosen from the following areas: astronomy, biology, chemistry, geology, and physics	
SOCIAL SCIENCE	12-15
PHYSICAL EDUCATION	3-6
ELECTIVES	25-44
TOTAL CREDIT HOURS FOR DEGREE	96

* Electives should be selected on the basis of the student's major field of study and on the requirements of the institution to which the student intends to transfer.



PRE-BUSINESS ADMINISTRATION

Pre-Business Administration is designed for those students who wish to transfer to a senior college or university to pursue majors in the areas of Accounting, Banking, Business Administration, Economics, Finance, Management, Marketing, Quantitative Methods, or Real Estate. Degree plans may vary according to requirements of the senior institution.

PRE-BUSINESS ADMINISTRATION Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
*ENG 150 Composition I HEA 150	3	0	3	ENG 151 Composition II *MAT 150	3	0	3
Personal and Community	3	0	3	College Algebra	5	0	5
Health PSY 150	3	U	3	LIB 150 Library Research Skills	2	0	2
General Psychology I BUS 165	3	0	3	SOC 150 Sociology I	5	0	5
Introduction to Business	5	0	5	.SPH 150 Voice and Diction or	5	U	3
				SPH 160 Public Speaking	3	0	3
	14	-0	14	Tublic Speaking	18	0	18
	•						
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ENG 152 Composition III	3	0	3	ENG 250 British Literature I or FNG 260			
ART 160 Art Appreciation	3	0	3	American Literature I	3	0	3
EDP 150		0	5	BIO 250 General Biology I	3	2	4
 Introduction to Computer Humanities Elective 	s 5 1	0	1	Physical Education	0	2	1
Physical Education MAT 180	Ó	2	1	ECO 150 Economics I	3	0	3
Statistical Analysis I	5	0	5	ACT 150 Principles of Accounting	3	2	4
	17	2	18		12	6	15

C L CH

TOTAL QUARTER HOURS

. .

C

L CH

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

MAT 099, MAT 100R, MAT 100, MAT 101, MAT 103, ENG 100R1, ENG 100R2, ENG 100R3, ENG 100R4, ENG 100G, ENG 100GA, ENG 101 ORI 150.



PRE-EDUCATION (ELEMENTARY)

Pre-Education (Elementary) is designed for students who plan to transfer to senior institutions and major in elementary education and then teach in elementary schools. Students take many pre-liberal arts courses with a special science sequence, a special math sequence, and an introductory education course.

PRE-EDUCATION (ELEMENTARY) Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
*ENG 150 Composition I HEA 150	3	0	3	ENG 151 Composition II HIS 151	3	0	3
Personal and Community Health	3	0	3	American History II LIB 150	5	0	5
HIS 150	5	0	5	Library Research Skills SPH 150	2	0	2
American History I PSY 150				Voice and Diction	3	0	3
General Psychology I	3	0	3	SOC 150 Sociology I	5	0	5
	14	0	14		18	0	18
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
FNG 152							
ENG 152 Composition III POL 150				ENG 260			
POL 150	3	0	3	American Literature I GEO 150	3	0	3
	3 5	0	3	American Literature I GEO 150 Introduction to Geography	3	0	3
POL 150 Introduction to U.S. Government ART 170	5	0	5	American Literature I GEO 150 Introduction to			
POL 150 Introduction to U.S. Government ART 170 Color and Design HIS 160	5	0	5	American Literature I GEO 150 Introduction to Geography *MAT 250 Basic Concepts of Mathematics I			
POL 150 Introduction to U.S. Government ART 170 Color and Design	5	0	5	American Literature I GEO 150 Introduction to Geography *MAT 250 Basic Concepts of Mathematics I SCI 250 Biological Science for	5	0	5
POL 150 Introduction to U.S. Government ART 170 Color and Design HIS 160	5	0	5	American Literature I GEO 150 Introduction to Geography *MAT 250 Basic Concepts of Mathematics I SCI 250	5	0	5

TOTAL QUARTER HOURS

L CH

If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

> MAT 099, MAT 100R, MAT 100, MAT 101, MAT 103, ENG 100R1, ENG 100R2, ENG 100R3, ENG 100R4, ENG 100G, ENG 100GA, ENG 101 ORI 150.



PRE-EDUCATION (SECONDARY)

Pre-Education (Secondary) is designed for students who plan to transfer to senior institutions and major in secondary education and then teach in high school. Students take the same courses as pre-liberal arts students, with elective hours chosen in the area of major interest.

PRE-EDUCATION (SECONDARY) Suggested Curriculum By Quarters

Course Title	С	E	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
*ENG 150 Composition I HEA 150 Personal and Community Health	3	0	3	ENG 151 Composition II HIS 151 American History II or HIS 161	3	0	3
HIS 150 American History I or HIS 160				History of Europe Since 1500 PSY 151	5	0	5
World History to 1500 PSY 150	5	0	5	General Psychology II *MAT 150	3	0	3
General Psychology I	3	0	3	College Algebra LIB 150	5	0	5
	14	0	14	Library Research Skills	<u>2</u> 18	0	18
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ENG 152 Composition III SPH 150 Voice and Diction or	3	0	3	ENG 250 British Literature I or ENG 260 American Literature I	3	0	3
SPH 160 Public Speaking ART 160	3	0	3	BIO 250 General Biology I Physical Education	3	2 2	4
Art Appreciation Social Science Elective Physical Education	3 5 0 14	0 0 2 - 2	3 5 1 1 15	**Electives	8	0	8
	С	L	СН		С	L	СН
FIFTH QUARTER				SIXTH QUARTER			
ENG 251 British Literature II or ENG 261 American Literature II	3	0	3	BIO 252 General Biology III **Electives	3 12	2	4 12
BIO 251 General Biology II **Electives	3 10 16	2 0 2	4 10 17		 15		-

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

MAT 099, MAT 100R, MAT 100, MAT 101, MAT 103, ENG 100R1, ENG 100R2, ENG 100R3, ENG 100R4, ENG 100G, ENG 100GA, ENG 101 ORI 150.

** A minimun of 5 quarter hours of electives in humanities must be included in these elective hours. Remaining elective hours should be selected based on the student's prospective teaching field.



PRE-LIBERAL ARTS

The Pre-Liberal Arts curriculum is designed for students who intend to transfer to a senior college for their four-year degrees and for people who wish a liberal arts education ending in a two-year degree. Students take general college courses, including courses in English, math, biology, speech, health, physical education, and social science such as psychology, sociology, and history. Because the program is general, many students who have not decided on a major select pre-liberal arts. This flexible program can be adjusted to meet the general education requirements of most colleges and universities.

PRE-LIBERAL ARTS Suggested Curriculum By Quarters

Course Title	С	L	СН		C	L	СН
FIRST QUARTER				SECOND QUARTER			
*ENG 150 Composition I HEA 150 Personal and Community	3	0	3	ENG 151 Composition II HIS 151 American History II or	3	0	3
Health HIS 150 American History I or HIS 160	3	0	3	HIS 161 History of Europe Since 1500 PSY 151	5	0	5
World History to 1500	5	0	5	General Psychology II *MAT 150	3	0	3
PSY 150 General Psychology I	3	0	3	College Algebra	5	0	5
	_	_		LIB 150 Library Research Skills	_2	0	2
	14	0	14		18	0	18 ′
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ENG 152 Composition III SPH 150	3	0	3	ENG 250 British Literature I or ENG 260	3	0	3
Voice and Diction or SPH 160				American Literature I BIO 250	3		
Public Speaking ART 160	3	0	3	General Biology I Physical Education	3	2	4 1 8
Art Appreciation Social Science Elective Physical Education	3 5 0	0 0 2	3 5 1	**Electives	8	0	
	14	2	15		14	4	16

FIFTH QUARTER				SIXTH QUARTER			
ENG 251 British Literature II or ENG 261 American Literature II BIO 251 General Biology II **Electives	3 10 16	0 2 0 2	3 4 10 17	BIO 252 General Biology III **Electives	3 12 ———————————————————————————————————	2 0	12

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

MAT 099, MAT 100R, MAT 100, MAT 101, MAT 103, ENG 100R1, ENG 100R2, ENG 100R3, ENG 100R4, ENG 100G, ENG 100GA, ENG 101 ORI 150.

** A minimum of 5 quarter hours of electives in humanities must be included in these elective hours.

RECOMMENDED ELECTIVES:

FINE ARTS	HUMANITIES	SOCIAL SCIENCES	GENERAL ELECTIVES
ART 170 MUS 150	PHI 150 REL 150, 160, 161	ANT 150, 160 ECO 150, 151, 152 GEO 150 POL 150 SOC 150	ACT 150, 151, 152 BUS 165, 166, 167 EDP 150 EDU 250 ENG 290 MAT 180, 250, 251 PED SCI 250, 251, 252
			3 CT 230, 23 L 232



TECHNICAL



EDUCATION

AGRICULTURAL BUSINESS TECHNOLOGY

Many responsible positions in agricultural businesses and industries require technical training not available in high school or in four year colleges. The Agricultural Business Curriculum is designed to help students acquire knowledge, understanding, and abilities in the broad field of agriculture with business training to prepare the graduate for many of the varied employment opportunities in agriculture.

Successful completion of this curriculum should enable persons to assume responsibilities in an agricultural firm and should enable them to advance within such a business. Upon graduation from this curriculum, an individual should qualify for various jobs in agricultural business and industry, such as salesperson or store manager in farm supply stores; agricultural field serviceperson; salesperson demonstrator or plant manager of feed and food companies; farm products inspector; salesperson, or office managers of farm products marketing firms.

AGRICULTURAL BUSINESS TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	Н
FIRST QUARTER				SECOND QUARTER			
*ENG 101 Grammar *MAT 100	3	0	3	ENG 102 Composition AGR 185	3	0	3
Review of Fundamental Mathematics	5	0	5	Soil Science ACT 150	5	2	6
AGR 125 Animal Science Agricultural Elective	5	2 2	6	Principles of Accounting Business Elective	3 *	2	4
	16	4	18		14	4	16
THIRD QUARTER	С	L	СН	FOURTH QUARTER	С	L	СН
ENG 204 Oral Communications EDP 114 Introduction to Computer	3	0	3	ENG 103 Report Writing AGR 278 Weed Identification and	3	0	3
Concepts AGR 170	3	0	3	Control BUS 232	3	2	4
Plant Science BUS 102 Beginning Typewriting or	5	2	6	Sales Development AGR 228 Plant and Animal	3	0	3
BUS 103 Intermediate Typewriting	2	3	3	Diseases CHM 101	3	2	4
	12		15	Chemistry	4	2	5
	13	5	15		16	6	19

TITTIQOARIER				SIX IH QUARTER			
AGR 119				AGR 203			
Techniques of Welding	2	3	3	Pesticide and Fertilizer			
AGR 204				Application	3	2	4
Agricultural Economics a	nd			**AGR 247		_	7
Farm Records	3	2	4	Pesticides and Their Use			
AGR 225				in Home and			
Agricultural Pollution				Community	3	2	4
Control	3	2	4	BUS 110		_	
**AGR 205				Office Machines	2	2	3
Agricultural Marketing	3	2	4	AGR 245			
Social Science Elective	3	0	3	Crop Insects	3	2	4
				Social Science Elective	3	0	3
	14	9	18		14	-8	18
					1.4	0	10

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, 102-A, MAT 099, MAT 100R

The agricultural business technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES:

AGRICULTURAL: AGR 155, 218, 272, 273, 279, 290

ENGLISH: ENG 105

following list:

ENVIRONMENTAL: ENV 101, 103, 104

TOTAL QUARTER HOURS IN COURSES

SOCIAL SCIENCE: AGR 296, ECO 108, PSY 101, 102, 206, SOC 101, 102, 103, SSC 101,

COE 100

FIETH QUARTER

BUSINESS: BUS 100, 103, 166, 167, 123, 154, 229, 235, 239, ACT 151

^{**} AGR 218 may be substituted for AGR 205.

^{**} AGR 273 may be substituted for AGR 247.

AGRICULTURAL CHEMICALS TECHNOLOGY

Pitt Community College was selected by the North Carolina State Board of Education to offer this curriculum and it has been equipped with facilities consistent with needs reflected through an active industrial advisory committee. This curriculum is the only one of its kind in the state and the 15th in the nation. It is widely supported and advised by related industries statewide. The program will prepare a graduate with a sound, well rounded background that offers to industry a semi-professional employee who, with normal on-the-job orientation, can actively execute the many technical tasks demanded by this field of endeavor. Specific objectives of this curriculum are to develop the following student competencies:

- understanding the basic agricultural sciences such as crop production and pest control in their application to farming;
- 2. understanding applied chemistry within the agricultural chemicals industry;
- understanding business organizations, procedures, and management of firms producing, marketing, and applying agricultural chemicals;
- 4. understanding the formulation and use of farm chemicals and their relation to profitable agricultural production, including safety procedures.

A broad base of general technical courses is combined with selected courses in weed control, entomology, pathology and chemistry to give balance over a broad area with emphasis on particular chemical skills.

AGRICULTURAL CHEMICALS TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН	C L CI	Н
FIRST QUARTER				SECOND QUARTER	
*ENG 101				ENG 102	
Grammar	3	0	3		3
*MAT 100 Review of Fundamental				AGR 185 Soil Science 5 2	6
Mathematics	5	0	5	ACT 150	O
AGR 125				Principles of Accounting	
Animal Science	5	2	6	3 2	4
Agricultural Elective	3	2	4	CHM 102	
		~~~	_	Inorganic Chemistry I 4 2	5
	16	4	18	15 6 1	8
	C	L	СН	CLC	Н
THIRD QUARTER				FOURTH QUARTER	
ENG 204				ENG 103	
Oral Communications CHM 103	3	0	3	Report Writing 3 0 AGR 278	3
Inorganic Chemistry II	4	2	5	Weed Identification	
EDP 114					4
Introduction to Computer Concepts	3	0	3	BUS 232 Sales Development 3 0	3
AGR 170	3	U	3	AGR 228	3
Plant Science	5	2	6	Plant and Animal	
BUS 102				Diseases 3 2	4
Beginning Typewriting or BUS 103				CHM 106	
Intermediate Typewriting	2	3 .	2	Organic Chemistry 4 2	5
The internet and it is a second of the internet and	17	7			_
50	17	/	20	16 6 1	9

	C	L	СН		C	L	CH
FIFTH QUARTER				SIXTH QUARTER			
AGR 119				AGR 203			
Techniques of Welding AGR 204 Agricultural Economics	2	3	3	Pesticide and Fertilizer Applications  **AGR 247	3	2	4
and Farm Records AGR 225	3	2	4	Pesticides and Their Use in Home and			
Agricultural Pollution Control	3	2	4	Community BUS 110	3	2	4
**AGR 205		_	·	Office Machines	2	2	3
Agricultural Marketing	3	2	4	AGR 245		_	J
Social Science Elective	3	0	3	Crop Insects Social Science	3	2	4
				Elective	3	0	3
	14	9	18		14	8	18

#### **TOTAL QUARTER HOURS IN COURSES...**

110

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, 102-A, MAT 099, MAT 100R

The agricultural chemicals technology student may select elective credits from the list of recommended electives or from other related courses and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

#### **RECOMMENDED ELECTIVES:**

AGRICULTURAL: AGR 155, 218, 272, 273, 279, 290

ENGLISH: ENG 105

ENVIRONMENTAL: ENV 101, 103, 104

SOCIAL SCIENCE: AGR 296, PSY 101, 102, 206, SOC 101, 102, 103, SSC 101, ECO

108, COE 100

BUSINESS: BUS 100, 103, 166, 167, 123, 154, 229, 235, 239, ACT 151

^{**} AGR 218 may be substituted for AGR 205.

^{**} AGR 273 may be substituted for AGR 247.

# VETERANS FARM COOPERATIVE PROGRAM AGRICULTURAL SCIENCE AND MECHANIZATION (With Technical Specialty Option)

This curriculum provides a training program for developing the basic knowledge and skills needed for the successful operation and management of a general farming program involving crops and livestock. There is a growing scarcity of people trained in basic agricultural science and mechanization. Larger farming operations require more mechanization and tremendous outlays of capital; thus, the need for trained farmers becomes increasingly critical.

The graduates of the Agricultural Science and Mechanization Curriculum are trained to manage and operate a farm. In addition, they should be able to perform most of the repairs to buildings and equipment, as well as perform the necessary electrical, construction, and plumbing operations pertaining to the farm.

The satisfactory completion of a minimum of 18 hours of general education in addition to the technical specialty courses will lead to an Associate in Applied Science Degree.

# VETERANS FARM COOPERATIVE PROGRAM AGRICULTURAL SCIENCE AND MECHANIZATION (With Technical Specialty Option)

Course Title	С	L	СН	C L CH
FIRST QUARTER				SECOND QUARTER
AGR 215 Farm Machinery, Repair and Maintenance AGR 285 Soil Fertility	3 6	2 2 4	4 4 8	AGR 205 Agricultural Marketing 3 2 4 AGR 127 Animal Nutrition 3 2 4
	р	4	8	. 6 4 8
	С	L	СН	C L CH
THIRD QUARTER				FOURTH QUARTER
AGR 119				AGR 222
Techniques of Welding AGR 279	2	3	3	Farm Electrification 3 2 4 AGR 296
Farm Forestry	3	2	4	Agricultural Programs and Agencies 3 0 3 AGR 143
				New Sources of Farm Income 2 0 2
	5	5	7	Farm Income $\frac{2}{8} \frac{0}{2} \frac{2}{9}$

	С	L	СН		С	L	СН
FIFTH QUARTER				SIXTH QUARTER			
AGR 228				AGR 204			
Plant and Animal Diseases	3	2	4	Agricultural Economics and Farm Records	3	2	4
AGR 278 Weed Identification				AGR 223 Livestock Production	3	2	4.
and Control	3	2	4 8			_	_
	O	4	0		6	4	8
	С	L	СН		С	L	СН
SEVENTH QUARTER				EIGHTH QUARTER			
AGR 218				AGR 245			
Agricultural				Crop Insects	3	2	4
Mechanization	3	2	4	AGR 149			
AGR 105				Introduction to Plant			
Pasture and Forage Crops	3	2	4	Science and Horticulture	2	2	Л
01000		2 4		Horticultule	3	2	-4
	С	L	СН		С	L	СН
NINTH QUARTER				TENTH QUARTER			
A C D 201				AGR 227			
AGR 201 Agricultural Chemicals				Beef Production	3	2	4
(Pesticides)	3	2	4	AGR 290	J	_	-4
AGR 225				Soil and Water			
Agricultural Pollution				Conservation	3	2	4
Control	3	2	4		-		
	6	4	8		6	4	8
~							
	С	L	СН		С	L	СН
ELEVENTH QUARTER				TWELFTH QUARTER			
AGR 154				AGR 272			
Swine Production AGR 121	3	2	4	Tobacco Production AGR 254	3	2	4
Crop Production	3	2	4	Plant Propagation	3	2	4
	6	4	8		6	4	8

	С	L	СН		С	Ĺ	СН
THIRTEENTH QUARTER				FOURTEENTH QUARTER			
AGR 187 Fertilizers and Lime AGR 112 Small Engine Repair	3	2	4	AGR 207 Poultry Enterprises AGR 128	3	2	4
	2	3	3	Farm and Home Construction	2	3	3
	5	5	7		5	5	<u>3</u> 7
	С	L	СН				
FIFTEENTH QUARTER							
AGR 136 Agricultural Mathematics AGR 188 Cultural and Irrigation	5	0	5				
Practices	3 8	2 2	9				
TOTAL CREDIT HOURS IN CO	OURS	ES F	OR VE	TERANS FARM CO-OP			119



#### **AGRICULTURAL SCIENCE**

The Agricultural Science Curriculum provides a training program for developing the basic knowledge and skills needed for the successful operation and management of a general farming program involving crops and livestock. Agribusiness firms are seeking trained personnel with technical knowledge and skills in the Agricultural Sciences. Modern farm production units also require trained managers in economics, business management and technical skills in production practices. The objective of the curriculum is to provide technical trained personnel for managerial positions in agribusiness, as well as managerial and operative skills in production agriculture.

# AGRICULTURAL SCIENCE Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	CH
FIRST QUARTER				SECOND QUARTER			
AGR 215 Farm Machinery, Repair and Maintenance AGR 285 Soil Fertility	3 6	2 2 4	4 4 8	AGR 205 Agricultural Marketing AGR 127 Animal Nutrition	3 3 6	2 2 4	4 4 8
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
AGR.119 Techniques of Welding AGR 279	2	3	3	AGR 222 Farm Electrification AGR 296	3	2	4
Farm Forestry	3	2	4	Agricultural Programs and Agencies	3	0	3
_	<u>_</u>	5	7	AGR 143 New Sources of Farm Income	2 8	0 2	2 9
	С	L	СН		С	L	СН
FIFTH QUARTER				SIXTH QUARTER			
AGR 228 Plant and Animal Diseases AGR 278 Weed Identification	3	2	4	AGR 204 Agricultural Economics and Farm Records AGR 223 Livestock Production	3	2	4
and Control	$\frac{3}{6}$	2 4	8		6	4	8

	С	L	СН		С	L	СН
SEVENTH QUARTER				EIGHTH QUARTER			
AGR 218 Agricultural Mechanization AGR 105	3	2	4	AGR 245 Crop Insects AGR 149	3	2	4
Pasture and Forage Crops	3	2	4	Introduction to Plant Science and Horticulture	3	2	4
	6	4	8		6	4	8
	С	L	СН		С	L	СН
NINTH QUARTER				TENTH QUARTER			
AGR 201 Agricultural Chemicals (Pesticides)	3	2	4	AGR 136 Agricultural Mathematics AGR 290 Soil and Water	5	0	5
AGR 187 Fertilizers and Lime	<u>3</u> 6	2 4	<u>4</u> 8	Conservation	8	2 2	<u>4</u> 9
	С	L	СН		С	L	СН
ELEVENTH QUARTER				TWELFTH QUARTER			
AGR 128 Farm and Home Construction	2	3	3	AGR 272 Tobacco Production AGR 254	3	2	4
AGR 121 Crop Production	3 5	2 5	4 7	Plant Propagation	3 -6	2	_
	5	5	/		0	**	0
TOTAL QUARTER HOURS IN	I AGI	RICU	LTURAL	COURSES	• • • •	• • •	96
Required English Courses:	С	L	СН				
ENG 101 Grammar ENG 102	3	0	3				
Composition ENG 103	3	C	3				
Report Writing ENG 204	3	C	3				
Oral Communications	3	C	3				
TOTAL QUARTER HOURS II	N ENC	GLIS	H COUR	SES			12

### Required Electives: C L CH

Two Social Science Electives from the following:

PSY 102			
General Psychology PSY 206	3	0	3
Applied Psychology SOC 102	3	0	3
Principles of Sociology	3	0	3
SOC 103 Social Problems SSC 101	3	0	3
Introduction to Social Science	3	0	3

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* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, MAT 099, MAT 100R

Upon approval of the department chairperson, the agricultural science student may make course substitutions on an hour-for-hour basis from the agricultural science courses listed below.

RECOMMENDED AGRICULTURAL SCIENCE ELECTIVES: AGR 112, 135, 149, 150, 154, 155, 188, 203, 207, 227, 273, 297



# AIR AND WATER RESOURCES TECHNOLOGY CURRICULUM

The responsibility for solving environmental problems at the state level rests mainly with the N.C. Department of Natural and Economic Resources, Air and Water Resources Division, and the N.C. Department of Human Resources. In addition to these agencies, the Department of Transportation, private industry, and the municipalities and counties of the state must develop staffs knowledgeable in the solution of environmental problems to ensure compliance with state and federal antipollution regulations. Many of these staff positions can be filled by well-trained technicians knowledgeable in air pollution, water purification, water pollution, solid waste pollution, and other sanitation fields.

This curriculum is designed to train technicians to be aware of the impact their technical field exerts on the entire environment and to be able to communicate with those outside their technical field as well as those within. Graduates of the program will be knowledgeable about state and federal laws related to air and water pollution and the solutions to environmental problems. They will be trained to operate and maintain sampling, testing, and analytical equipment required in the area of water purification and air and water pollution detection and control.

A graduate of this program is qualified for entry into positions such as physical science technician GS-4, air pollution control technician, water pollution control technician, industrial waste technician, public health sanitation aide, laboratory technician, environmental monitoring technician, environmental engineering technician II, water treatment plant operator, waste water treatment plant operator, and technical sales and services of equipment and chemicals in related fields.

# AIR AND WATER RESOURCES TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
ENV 101 Environmental Orientation ENV 104	ո 4	2	5	ENV 102 Microbiology CHM 102	3	3	4
Environmental Biology *MAT 100	3	3	4	Inorganic Chemistry I MAT 101	4	2	5
Review of Fundamental Mathematics	5	0	5	Algebra I ENG 102	5	0	5
*ENG 101 Grammar	3	0	3	Composition	3	0	3
	15	5	17		15	5	17
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ENV 112 Air Resources Management	3	2	4	ENV 105 Water Resources Management and			
CHM 103 Inorganic Chemistry II PHY 105	4	2	5	Analysis ENV 212 Air Pollution Sources	4	4	6
Environmental Physics I MAT 103	3	2	4	and Control ENV 217	3	3	4
Algebra II	5	0	5	Waste Water Treatment PHY 106	4	3	5
				Environmental Physics II Social Science Elective	3	2	4
	15	6	18	300idi Ocienice Elective	17	12	22

#### TOTAL QUARTER HOURS IN COURSES . . . . . . . . .

11 9 15

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If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following

ENG 100R-1, 100R-2, 100R-3, 100G, 101-A, 102-A

C

L CH

The air and water resources technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

#### RECOMMENDED ELECTIVES:

AGR 185, 247, 290, 225, ARC 106, 107, 202, CHM 106, CIV 101, DFT 101, ECO 108, EDP 114, ENV 200, A, B, C; 220 A, B, C; 230 A, B, C, 240 A, B, C, ISC 102, MAT 102, 104, 120, PHO 116, PHY 101, PSY 102, 206, SOC 102, 103, SSC 101, COE 100

Environmental projects courses/cooperative education courses may be used as electives. (Cooperative education does not qualify for veterans' benefits.)

An additional graduation requirement is successful completion of one of the following certification tests:

- ٦. NCWPCA, Grade 1, waste water treatment plant operator
- NC State Board, sanitation technician or environmental engineer technician I 2.

Upon completion of six quarters of this program students are eligible for, and are encouraged to take, the following tests:

- NCWPCA, Grade II, waste water treatment plant operator 3.
- NC State Board, Laboratory Technician, Environmental Engineer Technician II, 4. Chemist Analyst I

Further, each graduate is eligible to apply for NC Civil Service Rating as Physical Science Technician (GS-4) rating without a required test.

#### ARCHITECTURAL DRAFTING TECHNOLOGY

Architectural drafting technicians are concerned with turning the architect's design sketches into complete and accurate working plans and detailed drawings for construction purposes. They may prepare floor plans, elevation drawings, construction details, mechanical equipment layouts, door, window and room schedules and site plans. The drafting technician may be involved in work in areas such as engineering, building construction, specification writing, construction models, or architectural rendering. The technician communicates the architect's designs to the builder.

Graduates should be competent drafting personnel, well informed on the building industry in general, the operation of architect's offices, and knowledgeable about materials and techniques of construction. Their training includes an appreciation of the mechanical, electrical, and structural aspects of building. Basic training in oral and written communication offers graduates a background for developing their potential in broader aspects of architectural practice, such as specification writing and supervision of construction.

# ARCHITECTURAL DRAFTING TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
CIV 105 Architectural Materials and Methods I	3	3	4	ARC 107 Architectural Drafting AHR 106	2	6	4
ARC 106 Architectural Drafting *ENG 101	2	6	4	Architectural Mechanical Equipment ENG 102	3	3	4
Grammar *MAT 101	3	0	3	Composition MAT 102	3	0	3
Algebra I Social Science Elective	5 3	0	5 3	Trigonometry PHY 101	5	0	5
	16	9	19	Technical Physics	4 17	2 11	<u>5</u> 21
	С	L	СН		С	L	СН
THIRD QUARTER	С	L	СН	FOURTH QUARTER	С	L	СН
ARC 108 Architectural Drafting DFT 236	<b>c</b>	9	<b>СН</b> 3	ARC 201 Architectural Design I CIV 106	<b>c</b>	9	<b>CH</b> 6
ARC 108 Architectural Drafting DFT 236 Construction Estimating and Field Inspecting				ARC 201 Architectural Design I CIV 106 Architectural Materials and Methods II			
ARC 108 Architectural Drafting DFT 236 Construction Estimating	0	9	3	ARC 201 Architectural Design I CIV 106 Architectural Materials	3	9	6
ARC 108 Architectural Drafting DFT 236 Construction Estimating and Field Inspecting ENG 204 Oral Communications	0	9	3	ARC 201 Architectural Design I CIV 106 Architectural Materials and Methods II ARC 202	3	9	6

In lieu of the fourth quarter courses, students, with department chairperson's approval, may work as a cooperative education intern full time in a related area of employment. (Cooperative Education Courses do not qualify for veterans benefits.)

	C	L	СН	CLC	Н
FIFTH QUARTER				SIXTH QUARTER	
CIV 114	_			CIV 216	
Statics CIV 101	5	0	5	Strength of Materials 3 2 ARC 221	4
Surveying ARC 220	2	6	4	Architectural Drafting 2 9 DFT 235	5
Architectural Drafting PHY 103	2	9	5	Codes, Specifications,	
Technical Physics	4	2	5	ARC 233	4
ENG 103 Report Writing	3	0	3	Office Practice Seminar 2 0 Social Science Elective 3 0	2
	16	17	22		8
	С	L	СН		
SEVENTH QUARTER					
CIV 221 Reinforced Concrete					
Construction ARC 222	3	2	4		
Architectural Drafting DFT 230	2	9	5		
Structural Drafting	2	6	4		
	7	17	13		

* If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, 102-A, MAT 100R, MAT 100

TOTAL QUARTER HOURS IN COURSES ......

The architectural drafting technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's chairperson.

**RECOMMENDED ELECTIVES: ENG 105, PSY 101, 102, 206, SOC 101, 102, 103, SSC 101, COE 100** 



#### **ACCOUNTING**

Opportunities in accounting are increasing. With the increasing population, the industrial development and the growth in large and small businesses in North Carolina, the need for competent accountants is rapidly increasing.

The accounting curriculum is designed to help students take advantage of these employment opportunities. Students are given training in the accounting theories and skills necessary for entry into the accounting profession.

The accounting curriculum aims to develop the following competencies:

- understanding of the principles of organization and management in business operations;
- 2. ability to practice accounting, including tax and cost accounting;
- knowledge in specific elements of business law, finance, economics, and data processing;
- knowledge of human relations as they apply to successful business operations in a rapidly expanding economy;
- 5. understanding and skill in effective communication for business.

Graduates in accounting may qualify for any of the following positions: accounting clerk, payroll clerk, ledger accountant, junior auditor, and junior cost accountant. This training plus further work experience should prepare students to become office managers, accounting supervisors, and to fill other responsible positions in a business firm. Job opportunities are also available in federal, state, and local government offices.

# BUSINESS EDUCATION ACCOUNTING Suggested Curriculum By Quarters

Course Title	С	i.	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
ACT 150				ACT 151			
Principles of Accounting BUS 165	3	2	4	Principles of Accounting BUS 102	3	2	4
Introduction to Business ECO 150	5	0	5	Beginning Typewriting BUS 166	2	3	3
Economics I *ENG 101	3	0	3	Business Law I ECO 151	3	0	3
Grammar *MAT 110	3	0	3	Economics II ENG 102	3	0	3
Business Mathematics	5	0	_5	Composition	3	0	. 3
	19	2	20		14	5	16

	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ACT 152				BUS 222			
Principles of Accounting BUS 110	3	2	4	Intermediate Accounting BUS 235	5	0	5
Office Machines BUS 167	2	2	3	Business Management EDP 223	3	0	3
Business Law II EDP 115	3	0	3	Introduction to RPG II ENG 103	2	4	4
FORTRAN ENG 204	2	4	4	Report Writing	3	0	3
Oral Communications	3	0	3	Electives	3	0	3
	13	8	17		16	4	18
	С	Ł	СН	С	L		СН
FIFTH QUARTER				SIXTH QUARTER			
BUS 123				BUS ' 227			
Business Finance BUS 223	3	0	3	Advanced Accounting or 5	0		5
Intermediate Accounting BUS 225	5	0	5	BUS 229 Taxes 3	2		4
Cost Accounting BUS 268	3	2	4	BUS 224	~		4
Auditing Theory ENG 206	3	0	3	Intermediate Accounting 5	0		5
Business				BUS 269 Auditing 3	2		4
Communications	$\frac{3}{17}$	<u>0</u> 2	3 18	11-13	0-2	13	3-14

^{*} If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:
ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099, MAT 100R

**RECOMMENDED ELECTIVES:** BUS 103, 112, 153, 231, 219, ECO 108, EDP 105, ENG 105, ENG 106, POL 102, 103, PSY 102, 206, SOC 102, SOC 103, SSC 101, COE 100

^{**} The accounting student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

#### **BANKING AND FINANCE**

The purposes of the banking and finance curriculum are to prepare the individual to enter the banking and finance industries, to provide an educational program for the banking employee wanting to receive the American Institute of Banking certificate and to provide an educational program to upgrade or retrain individuals presently employed in the banking or finance industry. These purposes will be fulfilled through study in areas such as banking and finance principles, theories and practices; teller operation; lending and collections procedures; financial analysis; marketing and public relations.

This curriculum will provide the opportunity for an individual to enter a variety of banking or finance jobs in retail banks, commercial banks, government lending agencies, mortgage banks and credit companies.

# BUSINESS EDUCATION BANKING AND FINANCE TECHNOLOGY Suggested Curriculum By Quarters

Course Title FIRST QUARTER	С	L	СН	SECOND QUARTER	С	L	СН
AIB 120 Accounting I AIB 202	4	0	4	AIB 111  Business Administration  AIB 121	4	0	4
Principles of Bank Operation	4	0	4	Accounting II AIB 210	4	0	4
ECO 150	4	0	4	Money and Banking	4	. 0	4'
Economics I *ENG 101	3	0	3	EDP 114 Introduction to Computer			
Grammar *MAT 110	3	0	3	Concepts ENG 102	3	0	.3
Business Mathematics	5	0	5	Composition	3	0	3
	19	0	19		18	0	18
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
AIB 205							
Rank Management				AIB 203			
Bank Management AIB 212	4	0	. 4	AIB 203 Bank Investments AIB 206	4	0	4
	0	0	. 4	Bank Investments AIB 206 Bank Letters and Reports	4	0	4
AIB 212 Planning Management Development AIB 214	0	2	1	Bank Investments AIB 206 Bank Letters and Reports AIB 208 Conference Planning	·		·
AIB 212 Planning Management Development AIB 214 Effective Speaking AIB 231	·			Bank Investments AIB 206 Bank Letters and Reports AIB 208	·		·
AIB 212 Planning Management Development AIB 214 Effective Speaking AIB 231 Savings, and Time Deposit Banking	0	2	1	Bank Investments AIB 206 Bank Letters and Reports AIB 208 Conference Planning and Leadership	4	0	4
AIB 212 Planning Management Development AIB 214 Effective Speaking AIB 231 Savings, and Time	0 4	2	1	Bank Investments AIB 206 Bank Letters and Reports AIB 208 Conference Planning and Leadership AIB 219 Credit Administration	4	0	4
AIB 212 Planning Management Development AIB 214 Effective Speaking AIB 231 Savings, and Time Deposit Banking PSY 206	0 4	2 0	1 4	Bank Investments AIB 206 Bank Letters and Reports AIB 208 Conference Planning and Leadership AIB 219 Credit Administration AIB 234 Loss Prevention	0 4	0 2 0	1 4

SIXTH QUARTER

AIB 209	4	0	4	AIB 204			
Installment Credit	4	0	4	Bank Management by			
BUS 232				Objectives	0	2	1
Sales Development	3	0	3	AIB 213			
AIB 233				Trust Functions	Δ	0	4
Analyzing Financial				AIB 235	7	U	-77
Statements	Λ	0	4		_	_	_
AIB 239	7	U		Loan and Discount	3	0	3
				AIB 236			
Bank Public Relations				Home Mortgage Lending	4	0	4
and Marketing	4	0	4	AIB 272			
AIB 259				Supervision and Personne			
Law and Banking	4	0	4	Administration	Λ	Λ	А
		_		Administration	_		
	19	0	19		15	2	16

FIFTH QUARTER

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* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099, MAT 100R

The banking and finance student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

**RECOMMENDED ELECTIVES:** BUS 102, 110, AIB 123, 207, 232, 237, ENG 105, COE 100



#### **BUSINESS ADMINISTRATION**

The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in administrative work that might be encountered in the average business.

The Business Administration Curriculum aims to develop the following competencies:

- 1. understanding of the principles of organization and management in business operations;
- understanding the economy through study and analysis of the role of production and marketing;
- 3. knowledge in specific elements of accounting, finance, and business law;
- 4. understanding and skill in effective communication for business;
- 5. knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

The graduate of the Business Administration Curriculum may enter a variety of positions from beginning salesperson or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms, including making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising personnel.

### BUSINESS ADMINISTRATION Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
*ENG 101 Grammar BUS 165	3	0	3	ENG 102 Composition ECO 151	3	0	3
Introduction to Business ECO 150	5	0	5	Economics II BUS 166	3	0	3
Economics I *MAT 110	3	0	3	Business Law I ACT 151	3	0	3
Business Mathematics ACT 150	5	0	5	Principles of Accounting BUS 102	3	2	4
Principles of Accounting	3	2	<u>4</u> 20	Beginning Typewriting	2	3	3
					14	5	16
	C	L	CH		C	- 8	CH
						-	٠
THIRD QUARTER				FOURTH QUARTER		_	· · ·
ENG 204				FOURTH QUARTER ENG 103		-	
	3	0	3		3	0	3
ENG 204 Oral Communications BUS 167 Business Law II ACT 152	3	0		ENG 103 Report Writing		0	
ENG 204 Oral Communications BUS 167 Business Law II			3	ENG 103 Report Writing BUS 239 Marketing BUS 232 Sales Development	3		3
ENG 204 Oral Communications BUS 167 Business Law II ACT 152 Principles of Accounting BUS 110 Office Machines	3 3 2	0 2 2	3 3 4 3	ENG 103 Report Writing BUS 239 Marketing BUS 232 Sales Development BUS 235	3 5 3	0	3 5 3
ENG 204 Oral Communications BUS 167 Business Law II ACT 152 Principles of Accounting BUS 110	3	0	3 3 4	ENG 103 Report Writing BUS 239 Marketing BUS 232 Sales Development	3	0	3

#### FIFTH QUARTER SIXTH QUARTER ENG 206 BUS 229 **Business Communications 3** 3 0 Taxes 3 4 BUS 243 BUS 271 Advertising 2 4 Office Management 3 3 BUS 123 BUS 272 **Business Finance** 3 0 3 Principles of Supervision 3 0 3 EDP 114 Elective 6 6 Introduction to Computer Concepts 3 0 3 3 Elective 3 0 2 15 16 15 2 16

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* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099, MAT 100R

The business administration student may select elective credits from the list of recommended electives or from other related courses and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

**RECOMMENDED ELECTIVES:** BUS 103, 112, 219, 222, 223, 225, 231, ECO 108, EDP 105, ENG 105, 106, POL 102, 103, PSY 206, SOC 102, 103, SSC 101, COE 100



### GENERAL OFFICE TECHNOLOGY

The General Office Technology Curriculum is designed to prepare students for a variety of office-related jobs that do not require shorthand. Machine transcription is stressed and the usual skills courses such as typewriting, office machines, and keypunch are supplemented with general education courses as well as other related business courses.

The graduate of the General Office Technology Curriculum will be trained for jobs such as transcribing-machine operator, file clerk, clerk-typist, accounting clerk, bookkeeper, keypunch operator, general office worker, receptionist, and a variety of related jobs.

### GENERAL OFFICE TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
BUS 100  Business Education  Orientation  BUS 102	1	0	1	BUS 103 Intermediate Typewriting BUS 231 Sales and Inventory	2	3	3
Beginning Typewriting BUS 165	2	3	3	Procedures ENG 102	3	0	3
Introduction to Business	5	0	5	Composition ENG 106	3	0	3
COE 100 Student, Career, and				Spelling Techniques *MAT 110	3	0	3
Society *ENG 101S	3	0	3	Business Mathematics	5	0	5
Secretarial Grammar	5 16	3	5 17		16	3	17
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
BUS 104 Advanced Typewriting BUS 112	2	3	3	ACT 150 Principles of Accounting BUS 113	3	2	4
Filing BUS 117	3	0	3	Machine Transcription I BUS 258	5	0	5
Office Machines BUS 134	3	2	4	Speed Typewriting ENG 206	2	3	3
Personal Grooming ENG 204	3	0	3	Busines Communications Business Elective	3	0	3
Oral Communications	3 14	<u>0</u> 5	3 16		16	5	18

FIFTH QUARTER				SIXTH QUARTER			
BUS 114 Machine Transcription II	5	0	5	BUS 164			
BUS 216				Magnetic Tape Selectric Typewriter	2	3	3
Office Procedures ECO 108	5	0	5	BUS 205	2	2	0
Consumer Economics	3	0	3	Production Typewriting BUS 213	2	3	3
Social Science Elective	3	0	3	Machine Transcription III	5	0	5
				BUS 215 Office Application or			
				COE 101A			
				Cooperative Education			
				Intern BUS 259	0	10	1
				Office Simulation	2	3	3
	16	0	16		11	19	15

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

TOTAL QUARTER HOURS IN COURSES ......

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101, 101-A, 102-A, MAT 099, MAT 100R

The general office technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

**RECOMMENDED ELECTIVES: BUS 106, 107, 108, 206, 207 (and accompanying labs), 123, 151, 152, 166, 167, 183L, 184M, 235, ECO 150, 151, EDP 105, 114, ENG 105, PSY 101, 102, 206, POL 102, 103, SOC 102, 103, SSC 101** 



#### SECRETARIAL SCIENCE

The Secretarial Curriculum is designed to offer students secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, and personality development.

The graduate of the Secretarial Curriculum should have a knowledge of business terminology, skill in dictation, and skill in transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcription, is given more responsibility including meeting office callers, screening telephone calls, and assisting an executive. The graduate may enter a secretarial position in a variety of businesses such as insurance companies, banks, marketing institutions, and financial firms.

### SECRETARIAL SCIENCE CURRICULUM Suggested Curriculum By Quarters

Course Title	С	L	СН		С	Ł	СН
FIRST QUARTER				SECOND QUARTER			
BUS 100				ENG 102			
Business Education				Composition	3	0	3
Orientation *ENG 101S	1	0	1	BUS 103 Intermeditate Typewriting	2	3	3
Secretarial Grammar	5	0	5	*MAT 110	2	3	3
BUS 102				Business Mathematics	5	0	5
Beginning Typewriting COE 100	2	3	3	BUS 106	_	_	-
Student Career and				Beginning Shorthand BUS 106A	5	0	5
Society	3	0	3	Shorthand Lab	0	5	0
BUS 165 Introduction to Business	5	0	5	BUS 117			
BUS 134	5	0	5	Office Machines	3	2	4
Personal Grooming	3	0	3				
	19	3	20		18	10	20
	С	L	СН		С	L	СН
THIRD QUARTER	С	L	СН	FOURTH QUARTER	С	L	СН
THIRD QUARTER ENG 204	С	L	СН	FOURTH QUARTER ENG 206	С	L	СН
	<b>c</b>	0	<b>CH</b>				<b>CH</b>
ENG 204 Oral Communications BUS 104 Advanced Typewriting				ENG 206  Business Communications BUS 108  Advanced Shorthand			
ENG 204 Oral Communications BUS 104 Advanced Typewriting BUS 107	3 2	0	3	ENG 206  Business Communications BUS 108  Advanced Shorthand BUS 108A	3	0	. 3
ENG 204 Oral Communications BUS 104 Advanced Typewriting	3	0	3	ENG 206  Business Communications BUS 108  Advanced Shorthand	3	0	. 3
ENG 204 Oral Communications BUS 104 Advanced Typewriting BUS 107 Intermediate Shorthand BUS 107A Shorthand Lab	3 2	0	3	ENG 206  Business Communications BUS 108  Advanced Shorthand BUS 108A  Shorthand Lab BUS 112  Filing	3	0	. 3
ENG 204 Oral Communications BUS 104 Advanced Typewriting BUS 107 Intermediate Shorthand BUS 107A Shorthand Lab BUS 187	3 2 5	0 3 0	3 3 5	ENG 206 Business Communications BUS 108 Advanced Shorthand BUS 108A Shorthand Lab BUS 112 Filing BUS 258	3 5 0 3	0 0 5	. 3 5 0
ENG 204 Oral Communications BUS 104 Advanced Typewriting BUS 107 Intermediate Shorthand BUS 107A Shorthand Lab	3 2 5	0 3 0	3 3 5	ENG 206 Business Communications BUS 108 Advanced Shorthand BUS 108A Shorthand Lab BUS 112 Filling BUS 258 Speed Typewriting	3 5 0	0 0 5	. 3 5
ENG 204 Oral Communications BUS 104 Advanced Typewriting BUS 107 Intermediate Shorthand BUS 107A Shorthand Lab BUS 187 Introduction to Transcription ACT 150	3 2 5 0	0 3 0 5	3 3 5 0	ENG 206 Business Communications BUS 108 Advanced Shorthand BUS 108A Shorthand Lab BUS 112 Filing BUS 258	3 5 0 3	0 0 5	. 3 5 0
ENG 204 Oral Communications BUS 104 Advanced Typewriting BUS 107 Intermediate Shorthand BUS 107A Shorthand Lab BUS 187 Introduction to Transcription	3 2 5 0	0 3 0 5	3 3 5 0	ENG 206 Business Communications BUS 108 Advanced Shorthand BUS 108A Shorthand Lab BUS 112 Filling BUS 258 Speed Typewriting ECO 108	3 5 0 3 2	0 0 5 0 3	. 3 5 0 3

FIFTH QUARTER				SIXTH QUARTER			
BUS 206 Dictation and				BUS 207 Dictation and			
Transcription BUS 206A	5	0	5	Transcription BUS 207A	5	0	5
Shorthand Lab BUS 216	0	5	0	Shorthand Lab BUS 259	0	5	0
Office Procedures Elective	5 3	0	5	Office Simulation BUS 271	2	3	3
BUS 205				Office Management	3	0	3
Production Typewriting	2	3	3	BUS 215 Office Application or COE 101 Cooperative Education			
	 15	8	16	Intern	0	10	1
	15	8	10		10	18	12
TOTAL QUARTER HOURS IN	COU	RSES					103

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101, 101-A, 102-A, MAT 099, MAT 100R

The secretarial science student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES: BUS 113, 114, 123, 151, 152, 153, 160, 161, 162, 161, 164, 166, 167, 183L, 184M, 213, 229, 231, 235, ECO 150, 151, EDP 105, 114, ENG 101, 106, PSY 102, 103, 206, SSC 101



#### MEDICAL SECRETARY

### (Machine Transcription or Shorthand Option)

The purposes of the Medical Secretarial curriculum are to: prepare the individual to enter the medical secretarial profession through work in a doctor's office in city, county, state or government offices, provide an educational program for individuals wanting education for upgrading (moving from one medical position to another) or retraining (moving from present position to medical secretarial position); and provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in the areas of medical typewriting, shorthand, transcription and machines operation. Through these skills the individual will be able to perform medical, office-related activities and through the development of personal competencies and qualities will be provided the opportunity to enter the medical secretarial profession.

#### **BUSINESS EDUCATION**

MEDICAL SECRETARY (Machine Transcription or Shorthand Option) ¹ Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
BIO 101  Basic Life Science BUS 102	4	2	5	ACT 150 Principles of Accounting BUS 103	3	2	4
Beginning Typewriting *ENG 101S	2	3	3	Intermediate Typewriting BUS 117M	2	3	3
Secretarial Grammar *MAT 110	5	0	5	Office Machines: Medical	3	2	4
Business Mathematics	5	0	5	BUS 184M Terminology and		_	_
				Vocabulary, Medical I ENG 106	3	0	3
	-	_		Spelling Techniques	3	0	3
	16	5	18		14	7	17
	С	L	СН		С	L	СН
THIRD QUARTER	С	L	СН	FOURTH QUARTER	С	L	СН
BUS 104				BUS 134			
BUS 104 Advanced Typewriting BUS 113	2	3	3		<b>c</b>	L 0	<b>с</b> н 3
BUS 104 Advanced Typewriting BUS 113 Machine Transcription I BUS 185M	2 5			BUS 134 Personal Grooming			
BUS 104 Advanced Typewriting BUS 113 Machine Transcription I BUS 185M Terminology & Vocabulary Medical II	2 5	3	3	BUS 134 Personal Grooming BUS 188 Medical Transcription I BUS 186M Terminology and	3 5	. 0	3 5
BUS 104 Advanced Typewriting BUS 113 Machine Transcription I BUS 185M Terminology & Vocabulary Medical II EDP 105	2 5 7 3	3 0	3 5	BUS 134 Personal Grooming BUS 188 Medical Transcription I BUS 186M Terminology and Vocabulary, Medical II BUS 258	3 5	0 0	3 5
BUS 104 Advanced Typewriting BUS 113 Machine Transcription I BUS 185M Terminology & Vocabulary Medical II EDP 105 Keypunch ENG 102	2 5 7 3 3	3 0 0 2	3 5 4	BUS 134 Personal Grooming BUS 188 Medical Transcription I BUS 186M Terminology and Vocabulary, Medical II	3 5	. 0	3 5
BUS 104 Advanced Typewriting BUS 113 Machine Transcription I BUS 185M Terminology & Vocabulary Medical II EDP 105 Keypunch	2 5	3 0	3 5	BUS 134 Personal Grooming BUS 188 Medical Transcription I BUS 186M Terminology and Vocabulary, Medical II BUS 258 Speed Typewriting	3 5 3 2	0 0	3 5

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TOTAL QUARTER HOURS IN COURSES.....

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* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G-A, 101, 101-A, 102-A, MAT 099, MAT 100R

The medical secretary student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chair-person.

¹ Medical secretary students who wish to take the shorthand option must take the following shorthand courses as additional credits: BUS 106, 106A, 107, 107A, 108, 108A and 187 or satisfactory demonstrate a speed of 80 words per minute on 3 three-minute writings with 95 percent accuracy on new material. BUS 113 is not required for the shorthand option. Students electing the shorthand option will earn a total of 114 quarter hours of credit.



### COMMERCIAL ART & GRAPHIC DESIGN

Surveys have shown an increase in the demand for graduates possessing training in the field of commercial art and graphic design. This curriculum will prepare graduates with broad backgrounds of technical and creative achievement throughout their professional lives. Design and illustration for commerce is continually advancing its standards; therefore, the background offered the students must be well developed to prepare them 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 competency and the potential for continuing growth and improvement, graduates are qualified for employment in advertising agencies, design studios, department stores, industrial advertising departments, government agencies, newspapers, television studios, printing and publishing houses.

Their activities may include designing layouts and illustrations for printing; creating posters, sign boards, billboards, and show cards; or illustrating package designs. Such a career affords the individual an opportunity for creativity and continuing professional growth and improvement.

### COMMERCIAL ART AND GRAPHIC DESIGN Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
CAT 121 Design I CAT 102 Drawing I *ENG 101 Grammar CAT 107 Drafting for Art BUS 102 Beginning Typewriting	3 1 3 1 2	6 4 0 3 3	6 3 3 2 3	CAT 122 Design II CAT 103 Drawing II CAT 110 Survey of Art History ENG 102 Composition CAT 108 Drafting for Art	3 3 3	6 4 0 0	6 3 3 3 2
	10	16	17		11	13	17
THIRD QUARTER	С	L	СН	FOURTH QUARTER	С	L	СН
CAT 123 Layout and Design I CAT 101	2	6	5	CAT 224 Layout and Design II CAT 210	3	6	6
Advertising Principles PHO 116	3	0	3	Production Techniques PHO 217	1	4	3
Photography CAT 104	2	4	4	Photography CAT 212	2	4	4
Drawing III ENG 204	1	4	3	Advertising Illustration	1	4	3
Oral Communications	3 11	<u>0</u> 14	3 18	Report Writing	3 10	<u>0</u> 18	3 19

	C	L	CH		C	L	СН
FIFTH QUARTER				SIXTH QUARTER			
CAT 225 Graphic Design I CAT 214 Type and Letter Form	3	6	6	CAT 226 Graphic Deisgn II CAT 218 Photomechanical	3	6	6
Design CAT 213	1	4	3	Techniques CAT 235	2	6	5
Advertising Illustration MAT 100 Review of Fundamental	1	4	3	Portfolio Development Social Science	1	4	3
Mathematics Social Science Elective	5 3	0	5 3	Elective	3	0	3
	13	14	20		9	16	17

#### TOTAL QUARTER HOURS IN COURSES ...

108

* If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099, 100R

The commercial art and graphic design student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

**RECOMMENDED ELECTIVES: CAT 105, 106, 201, 212, 250, ENG 105, PHO 218, 219, 220, PSY 102, 206, SOC 102, 103, SSC 101, COE 100** 



### EARLY CHILDHOOD ASSOCIATE

This curriculum is designed to prepare students for directing or teaching in a day care center. Courses in administration, food for children, working with parents and planning and directing learning activities for young children are emphasized.

The graduate of the Early Childhood Associate Program will be qualified to work in developmental child care centers, day care facilities, and public and private schools and preschools.

### EARLY CHILDHOOD ASSOCIATE Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
BUS 102 Beginning Typewriting EDU 102	2	3	3	BUS 103 Intermediate Typewriting EDU 231	2	3	3
Child Health & Safety	3	0	3	Creative Activities *ENG 101	5	0	5
*MAT 100R Computational Skills	5	0	5	Grammar HEA 150	3	0	3
PSY 115 Child Growth and Development: Prenatal-				Personal and Community Health PSY 116	3	0	3
Early Childhood SPH 150	3	0	3	Child Growth and Development: Middle			
Voice and Diction	3	0	3	Childhood-Adolescence PSY 150		0	3
	16	3	17	General Psýchology I	3 19	3	3 20
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
Elective EDU 111 Language Arts	3	0	3	ENG 103 Report Writing	3	0	3
Techniques I EDU 115 Audiovisual and Media	5	0	5	EDU 203 Exceptional Child Elective	5 4	0	5 4
Instruction ENG 102	3	0	3				
Composition SOC 150	3	0	3				
Sociology I	5 19	$\frac{0}{0}$	5 19		12		<u></u>

	С	L	СН		С	L	СН
FIFTH QUARTER				SIXTH QUARTER			
EDU 202 Discipline Strategies in				ECO 108			
the Classroom	3	0	3	Consumer Economics EDU 204	3	0	3
EDU 225A Seminar-Practicum EDU 230 Preschool Education NUT 102 Food For Children	1	15	6	Parent Education EDU 225B	3	0	3
	5	0	5	Seminar-Practicum EDU 232 Preschool Administration	1	15	6
	2	2	3	and Supervision Elective	3	0	3
	11	17	17		13	15	18
	С	L	СН				
SEVENTH QUARTER							
EDU 225C							
Seminar-Practicum ENG 217	1	15	6				
Children's Literature PSY 220	3	0	3				
Psychology of Learning SOC 221 ·	5	0	5				
Family	3	0	3				
	12	15	17				

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099

TOTAL QUARTER HOURS IN COURSES .....

The early childhood associate student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

**RECOMMENDED ELECTIVES:** BUS 110, 112, 134, CAT 110, ECO 102, ENG 105, 106, MAT 120, POL 102, PSY 206, SOC 103, SSC 101, 201.

^{*} If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

### **EDUCATIONAL ASSOCIATE**

This curriculum is designed to prepare students as assistants to classroom teachers in school and educational fields. The program provides a course of study for individuals who have the desire and capability to work with primary and elementary school children under the supervision of the classroom teacher. Study and application will be employed in areas such as language arts, math, child growth and development, curriculum activities, and preparation of educational materials.

The graduate of the Educational Associate Program will be qualified to enter the field of education as a paraprofessional, performing duties required of a teacher aide. The role of the teacher aide will vary from school to school. The aide may be assigned as a general instructional aide, clerical aide, or tutorial aide, depending on the particular needs of the school.

## EDUCATIONAL ASSOCIATE Suggested Curriculum By Quarters

Course Title	С	Ł	CH		С	L	СН
FIRST QUARTER				SECOND QUARTER			
BUS 102 Beginning Typewriting EDU 102	2	3	3	BUS 103 Intermediate Typewriting EDU 231	2	3	3
Child Health and Safety *MAT 100R	3	0	3	Creative Activities *ENG 101	5	0	5
Computational Skills PSY 115 Child Growth and	5	0	5	Grammar HEA 150 Personal and Community	3	0	3
Development: Prenatal- Early Childhood	3	0	3	Health PSY 150	3	0	3
SPH 150 Voice and Diction	3	0	3	General Psychology I PSY 116 Child Growth & Development: Middle Childhood-	3	0	3
				Adolescence	3	0	3
	16	3	17		19	3	20
	16 <b>C</b>	3 	17 CH		19 <b>c</b>	3 L	20 CH
THIRD QUARTER				FOURTH QUARTER			
THIRD QUARTER  Elective EDU 111				Elective			
Elective	С	L	СН	Elective EDU 203 Exceptional Child	С	L	СН
Elective EDU 111 Language Arts	<b>c</b>	L 0	<b>СН</b>	Elective EDU 203	<b>C</b>	<b>L</b>	<b>CH</b>
Elective EDU 111 Language Arts Techniques I EDU 115	<b>c</b>	L 0	<b>СН</b>	Elective EDU 203 Exceptional Child ENG 103	<b>c</b> 4 5	<b>L</b> 0 0	<b>CH</b> 4 5
Elective EDU 111 Language Arts Techniques I EDU 115 Audiovisual and Media Instruction ENG 102 Composition	<b>c</b> 3	<b>L</b> 0	<b>CH</b> 3	Elective EDU 203 Exceptional Child ENG 103	<b>c</b> 4 5	<b>L</b> 0 0	<b>CH</b> 4 5
Elective EDU 111 Language Arts Techniques I EDU 115 Audiovisual and Media Instruction ENG 102	<b>c</b> 3 5	<b>L</b> 0 0	<b>CH</b> 3 5	Elective EDU 203 Exceptional Child ENG 103	<b>c</b> 4 5	<b>L</b> 0 0	<b>CH</b> 4 5

	-	L	СН		C	L	CH
FIFTH QUARTER				SIXTH QUARTER			
EDU 202 Discipline Strategies in the Classroom EDU 212	3	0	3	ECO 108 Consumer Economics EDU 204	3	0	3
Language Arts				Parent Education EDU 225	3	0	3
Techniques II EDU 225 Seminar-Practicum	5	15	5	Seminar-Practicum EDU 250	1	15	6
MAT 210 Concepts of Modern	'	15	0	Introduction to Education	4	2	5
Math	5 14	0 15	5 19		11	17	17
	С	Ł	СН				
SEVENTH QUARTER							
EDU 225 . Seminar-Practicum ENG 217	1	15	6				
Children's Literature PSY 220	3	0	3				
Psychology of Learning SOC 221	5	0	5				
Family	$\frac{3}{12}$	0 15	3 17				

C L CH

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A

The educational associate student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES: BUS 110, 112, 134, CAT 110, ECO 102, ENG 105, 106, MAT 120, POL 102, PSY 206, SOC 103, SSC 101, 201

^{*} If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

### **ELECTRONIC DATA PROCESSING-BUSINESS**

The Electronic Data Processing-Business Curriculum provides the student with functional competence in the solution of business data processing problems using the computer. An understanding of business operations, techniques of handling data and development of management information systems is combined with experience in computer programming through extensive laboratory work. The related skills, such as business mathematics, accounting, English, and communications are part of the curriculum to give the student the basic abilities of all well-qualified technicians.

## ELECTRONIC DATA PROCESSING-BUSINESS Suggested Curriculum By Quarters

Course Title

Course Title	С	L	CH		С	L	СН
FIRST QUARTER				SECOND QUARTER			
EDP 114				ACT 150			
Introduction to Computer	_	0	0	Principles of Accounting	3	2	4
Concepts EDP 115	3	0	3	BUS 166 Business Law I	3	0	3
FORTRAN	2	4	4	EDP 223			
*MAT 110  Business Mathematics	5	0	5	Introduction to RPG II ENG 102	2	4	4
*ENG 101	_	0	0	Composition	3	0	3
Grammar Business Elective	3	0	3	Business or Social Science Elective	3	0	3
	16	4	18		14	6	17
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ACT 151				ACT 152			
Principles of Accounting	3	2	4	Principles of Accounting	3	2	4
EDP 118 COBOLI	2	4	4	EDP 214 Computer Systems I	2	2	2
EDP 224	_			EDP 119	2	2	3
RPG II ENG 204	2	4	4	COBOL II MAT 111	2	4	4
Oral Communications	3	0	3	Computer Mathematics	5	0	5
Business or Social Science Elective	3	0	3				
Science Licetive	13	10	18		12	8	16
	С	L	СН		С	L	СН
FIFTH QUARTER				SIXTH QUARTER			
BUS 225				EDP 212			
Cost Accounting BUS 235	3	2	4	Applications II	2	4	4
Business Management	3	0	3	EDP 230 Internship I	0	10	5
EDP 211 Applications I	2	4	4	EDP 231			
ENG 206	_	4	4	Internship II EDP 232	0	10	5
Business Communications Business or Social	3	0	3	Communications Control			
Science Elective	3	0	3	Programming	2	2	3
	14	6	17		4	26	17
0.0							

* If entering students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099, 100R

The electronic data processing student may select credits from the list of recommended electives or from other related courses, and make substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES: BUS 101, 167, 134, 150, 151, 152, 153, 222, 229, 272, COE 100, 101-A, 106-D, ECO 102, 104, 108, ENG 103, 105, EDP 116, 117, PSY 102, 206, SOC 102, 103, SSC 101



#### **ELECTRONICS TECHNOLOGY**

This curriculum provides a basic background in electronic theory with practical applications for business and industry. Courses are designed to develop competent electronics technicians who may take their place as an assistant to an engineer or as a liaison between the engineer and the skilled craftsman.

The electronics technician may start in research, design, development, production, maintenance, or sales. Possible starting positions include assistant to an engineer, engineering aide, laboratory technician, supervisor, and equipment specialist. Maintaining liaison between the engineer and the skilled craftsman may also be the responsibility of the electronics technician. Training, similar to that of an engineer, has less depth and is more practical in application.

### **ELECTRONICS TECHNOLOGY**Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
DFT 101 Technical Drafting *ENG 101	0	6	2	DFT 102 Technical Drafting ELC 101	0.	6	2
Grammar ELN 100 Introduction to	3	0	3	Fundamentals of Electricity I ENG 102	4	4	6
*MAT 101	3	2	4	Composition MAT 102	3	0	3
Algebra I MEC 112	5	0	5	Trigonometry PHY 101	5	0	5
Machine Shop Processes	1	3	2	Technical Physics	4	2	5
	12	11	16		16	12	21



		No.	CIT		C	L	CH	
THIRD QUARTER				FOURTH QUARTER				_
ELC 102				ELN 101				
Fundamentals of				Electronic Instruments				
Electricity II	5	4	7	and Measurements	1	4	3	
ENG 204				ELN 105				
Oral Communications	3	0	3	Control Devices	5	4	7	
MAT 103 Algebra II	_	0	E	MAT 104	-		_	
PHY 102	5	0	5	Calculus I PHY 104	5	0	5	
Technical Physics	4	2	5	Technical Physics	4	2	5	
roommour rivolos			J	Social Science Elective	3	0	3	
	17	6	20		18	10		
• •	17		20		10	10	23	
	С	L	CH		С	L	СН	
						_		
FIFTH QUARTER				SIXTH QUARTER				
ENG 103				FIN 040				
Report Writing	3	0	3	ELN 210 Semiconductor Circuit				
ELC 210	3	U	3	Analysis'	5	4	7	
Rotating Devices	2	2	3	ELN 211P	Ü	4	/	
ELN 205				Communication Circuits	4	4	6	
Application of Vacuum				ELN 214				
Tubes and Transistors	5	6	8	Fundamentals of Digital				
MAT 201	_		_	Electronics I	3	3	4	
Calculus II	5	0	5	Social Science Elective	_3	0	3	
	15	8	19		15	11	20	
			СН					
SEVENTH QUARTER	L		СП					
SEVERITI QUARTER								
ELN 215								
Fundamentals								
of Digital								
Electronics								
II 3 ELN 220	3		4					
Electronic								
Systems 5	4		7					
ELN 235								
Industrial Instru-								
mentation 3	3		4					
Technical								
Elective 0-3	3-7	_	2-4					
11-14	13-17	1	7-19					

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, 102-A, MAT 099, MAT 100R, MAT 100

The electronics technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES: ELN 218, 230, 245, ENG 105, MAT 204, PSY 102, 206, SOC 102, 103, SSC 101, COE 100

^{*} If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

#### ENERGY TECHNOLOGY

Since the early 1960's predictions have been echoing an impending energy crisis resulting in electrical brownouts, shortages of gasoline, diesel fuel, and heating oil. The reality of these predictions and the skyrocketing prices of energy have given rise to the need for more technically trained energy specialists.

The Energy Technology Program is a two-year technical curriculum designed to give a broad base technical background resulting in an associate of applied science degree. A graduate will be prepared to work with industry, contractors, and government agencies performing services related to energy utilization, production, conservation and management. Energy technologists are capable of performing various technical functions including: conducting audits, monitoring facility operations for energy efficiency, operating and servicing energy management systems and devices, assisting engineering staff in energy utilization and management, and making energy-related recommendations including cost-benefit analysis.

### ENERGY TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	CH		С	L	СН
FIRST QUARTER				SECOND QUARTER			
ARC 106 Architectural Drafting	2	6	4	DFT 106 Blueprint Reading and			
CIV 105 Architectural Materials				Technical Sketching ENG 102	2	0	2
and Methods I *ENG 101	3	3	4	Composition ELN 110	3	0	3
Grammar	3	0	3	Fundamentals of Electric	ity		
EGY 101				and Electronics	2	4	. 4
Energy Technology	2	2	3	MAT 102			
*MAT 101				Trigonometry	5	0	5
Algebra I	_5	0	5	PHY 101			
	15	11	19	Technical Physics	4	2	5
					16	6	19



THIRD QUARTER				FOURTH QUARTER
AHR 106 Architectural Mechanical Equipment	3	3	4	EDP 114 Introduction to Computer
ENG 103				Concepts 3 0 3
Report Writing ELN 111 Electronic Components	3	0	3	EGY 110 Energy Audits and
and Systems PHY 102	2	2	3	Procedures 2 4 4 EGY 111
Technical Physics PSY 206	4	2	5	Energy Conservation
Applied Psychology	3	0	3	Techniques 2 2 3 EGY 112 Special Projects:
				Energy or 1 6 3 COE 101C Cooperative
				Education
				Intern 0 30 3 MAT 103
				Algebra II 5 0 5
	15	7	18	12-13 12-36 18
	С	L	СН	C L CH
FIFTH QUARTER				SIXTH QUARTER
AHR 101				BUS 272 Principles of Supervision 3 0 3
Air Conditioning and Refrigeration	3	3	4	EDP 202 Microcomputer Hardware 2 2 3
CHM 101 Chemistry	4	2	5	EGY 202
EDP 201 Microcomputer Concepts	2	2	3	EGY 203
EGY 201 Fundamentals of Solar				Energy Management and Planning 3 2 4
Energy PHY 103	2	2	3	EGY 205 Heat Transfer and
Technical Physics	4	2	5	Energy Conversions 3 2 4
	15	11	20	13 9 17

	С	L	СН	
SEVENTH QUARTER				
ARC 114  Building Codes and  Regulations  ECO 201	2	0	2	
Cost Benefit Analysis (Energy) ENG 204	3	0	3 .	0
Oral Communications ELN 236	3	0 ′	3	
Instrumentation and Controls	2	4	4	
Social Science Elective	3 13	$\frac{0}{4}$	15	
TOTAL QUARTER HOURS IF	N COU	RSES		· P. 7

* If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, 102-A, MAT 099, MAT 100R, MAT 100

The energy technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit for credit basis upon approval of the student's chairperson.

RECOMMENDED ELECTIVES:



### **HUMAN SERVICES TECHNOLOGY**

The greatest challenge in the field of human services is to help people rediscover a meaningful and productive life. Human service workers are people who like to work with people. The student learns how to deliver services to the client or help others meet their human needs. Problem solving skills, both performance and conceptual, are learned in the classroom work and in practical experience through the field placement agencies. The student will grow academically, personally and professionally.

The human services program is a two year course of study leading to an Associate of Applied Science Degree. Graduates are qualified to take the N.C. Department of Human Resources Examination to qualify for many state positions in human service agencies and institutions. Jobs are possible in mental retardation centers, mental hospitals, mental health centers, developmental day care centers, school systems as well as many other agencies.

## HUMAN SERVICES TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
*ENG 101 Grammar HSA 111	3	0	3	†ENG 102 Composition HSA 100	3	0	3
Introduction to Human Services HSA 112	3	3	4	Basic Health Science HSA 112P Practicum I	3	6	3
Group Processes I PSY 150	1	3	2	HSA 113 Group Processes II	1	3	2
General Psychology I SOC 150	3	0	3	HSA 220 Activities in Human	0	2	3
Sociology I	5	0	5	Services PSY 211  Behavior Disorders	2 5	0	5
	15	6	17	Deflavior Disorders	15	11	19
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ENG 103 Report Writing HSA 113P	3	0	3	HSA 115 Field Internship	1	39	14
Practicum II HSA 114	1	6	3				
Interviewing and Counseling PSY 120	3	2	4				
Human Growth and Development PSY 222	3	0	3				
Exceptionality	5 15	<u>0</u> 8	5 18				

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†ENG 204				MHA 201			
Oral Communications	3	0	3	Mental Health Care	4	3	5
MHA 211P				MHA 215P			
Practicum IV	1	6	3	Practicum V	1	6	3
†PSY 219				PSY 221			
Personality Theories	3	0	3	Learning and Behavior	3	4	5
PSY 230				PSY 225			
Psychology and				Tests and			
Physiology of Aging	3	0	3	Measurements	3	0	3
SOC 221				†MHA			
Family	3	0	3	Elective			1-3
†MHA							
Elective			1-3			Message	
			16-18				17-19

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### SEVENTH QUARTER

FIFTH QUARTER

MHA	209			
Trea	tment Modalities	2	4	4
MHA	116			
Grou	p Processes III	1	3	2
MHA	215			
Men	tal Health			
Se	eminar	2	2	3
MHA	225			
Crisi	s Intervention	2	2	3
MHA				
Elec	tive or College			
Ti	ansfer Elective			1-3
				13-15

TOTAL QUARTER HOURS IN COURSES.....

* In the event students, as a result of placement tests or grades, are found to be deficient in English skills, they will be required to take the appropriate courses from the following

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, 102-A

† College Transfer courses may be substituted.

The human services associate/mental health associate student may select elective credits from the list of recommended electives or from other related courses or college transfer courses and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

### **RECOMMENDED ELECTIVES:**

BUS 102, EDU 203, 204, 231, ENG 105, MHA 210P, 131, 132, 133, 231, 232, MHA 233, 213, 208, 216

College Transfer Courses

**COF 100** 

(Students may elect to participate in Co-op field experience; COE 101-106.) (Cooperative Education courses do not qualify for veterans benefits.)

### INDUSTRIÀL MAINTENANCE ENGINEER

The Industrial Maintenance Engineer Curriculum is designed to educate students in technical areas in which there is a need for trained and skilled people. This program is designed to prepare graduates for employment as industrial maintenance engineers. Training in theory and practical skills will provide the knowledge needed to inspect, diagnose, repair and install industrial, electrical, and mechanical equipment. Special emphasis will be in following directions from blueprints and sketches, in using hard tools and metal working machines, and in checking the work with measuring and testing instruments. The Industrial Maintenance Engineer Curriculum is flexible in that courses in major fields may be supplemented by a wide selection of courses in related curricula such as welding, machine shop, hydraulics and pneumatics, metallurgy, and electricity.

## INDUSTRIAL MAINTENANCE ENGINEER Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
ELC 112 Alternating and Direct Current	2	6	4	ELC 113  Alternating Current and  Direct Current Machines			
*MAT 100 Review of Fundamental				and Controls MAT 120	2	6	4
Mathematics	5	0	5	Metric Mathematics WLD 120	3	0	3
			**********	Oxyacetylene Welding	<u>2</u> 7	3	3
	7	6	9		7	9	10
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
ELC 119 Industrial Electrical				ELC 121 Electrical Trouble			
Controls and Systems	2	6	4	Shooting WLD 121	2	3	3
*ENG 101 Grammar ISC 102	3	0	3	Arc Welding	2	6	4
Industrial Safety	3	0	3				<del>-</del> 7
	8	6	10		4	9	/
					С	,	СН
	С	L	CH			-	CII
FIFTH QUARTER				SIXTH QUARTER			
DFT 104				DFT 105 Blueprint Reading and			
Blueprint Reading- Mechanical	3	0	3	Sketching ISC 201	3	0	3
ENG 204 Oral Communications MEC 101	3	0	3	Industrial Organization and Management	3	0	3
Machine Processes	3	3	4	MEC 102 Machine Processes	3	3	4
	9	3	10		9	3	10

	С	L	СН		С	L	СН
SEVENTH QUARTER				EIGHTH QUARTER			
AHR 101 Air Conditioning and Refrigeration MEC 210	3	3	4	MEC 114 Shop Practice MEC 222 Rigging and Material	1	6	3
Physical Metallurgy	<u>3</u>	$\frac{3}{6}$	4	Handling	2 3	3 9	<u>3</u> 6
	6	6	8		3	9	6
	С	L	СН		С	L	СН
NINTH QUARTER				TENTH QUARTER			
BUS 272 Principles of Supervision WLD 122 Commercial and Industrial	3	0	3	ISC 205 Maintenance Management MEC 235	3	0	3
Practice	2	3	3	Hydraulics and			
Elective	3	0	3	Pneumatics PSY 206	3	3	4
	_			Applied Psychology	3 9	0 3	3 10
	8	3	9		9	3	10
	С	L	СН		С	L	СН
ELEVENTH QUARTER				TWELFTH QUARTER			
ISC 202				AHR 201			
Quality Control MEC 298	3	0	3	Principles of Heating MEC 299	3	3	4
Maintenance Problems I	2	3	3	Maintenance Problems II	2	3	3
Social Science Elective	3 8	0	$\frac{3}{9}$	Social Science Elective	3	0	3
	8	3	9		8	6	10

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099, 100R

TOTAL QUARTER HOURS IN COURSES .....

The industrial maintenance engineer student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES: DFT 101, EDP 114, ENG 105, ISC 110, 120, 130, 209, 231, MAT 101, PSC 102, PSY 101, 102, 104, 120, 217, 228, SOC 101, 102, 103, SSC 101, 201, COE 100

### INDUSTRIAL MANAGEMENT TECHNOLOGY

Industry's needs in positions of supervision and mid-management have grown extensively with the development of new methods of manufacturing and with the increase in the national economy. This need has added emphasis to the necessity for well-trained individuals who can understand new methods and keep abreast of trends in the economy. The supervisor and persons in mid-management must be concerned daily with human behavior and the psychological factors which affect personnel working under their direction. They must also be conscious of the responsibilities of their position toward the total economic well being of the industry.

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

The curriculum is designed for presently employed persons to work toward a degree in the evening. On-the-job training is a desirable and recommended part of the program.

The supervisor coordinates the activities of workers in one or more occupations. Duties may encompass interpreting company policies to workers, planning production schedules, estimating time required for job completion, adjusting work problems and motivating workers to achieve work goals.

### INDUSTRIAL MANAGEMENT TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
EDP 114 Introduction to Computer Concepts	3	0	3	ENG 102 Composition ISC 120	3	0	3
*ENG 101 Grammar **ISC 110	3	0	3	Readings in Industrial Management ISC 231	1	0	1
Readings in Industrial  Management	1	0	1	Manufacturing Processes MAT 120	5	0	5
*MAT 101 Algebra I	5	0	5	Metric Mathematics	3	0	3
Aigebiai	<u>5</u> 12	0	12		12	0	12
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
BUS 128 Basic Accounting I	. 3	0	3	BUS 129 Basic Accounting II ENG 204	3	0	3
ENG 103 Report Writing	3	0	3	Oral Communications	3	0	3
ISC 102 Industrial Safety	3	0	3	ISC 202 Quality Control ISC 204	3	0	3
ISC 203 Motion Economy	3 12	0 0	3 12	Value Analysis	3 12	$\frac{0}{0}$	3 12

	C	L	СН	C L Ch
FIFTH QUARTER				SIXTH QUARTER
BUS 123 Business Finance BUS 166	3	0	3	BUS 229 Taxes 3 2 4 ECO 104
Business Law I ECO 102	3	0	3	Economics 3 0 3 ISC 130
Economics SOC 102	3	0	3	Readings in Industrial  Management 1 0 1 ISC 213
Principles of Sociology	3	0	3	Production Planning 4 0 4 11 2 12
	С	L	СН	C L CF
SEVENTH QUARTER				EIGHTH QUARTER
BUS 235 Business Management	3	0	3	BUS 272 Principles of Supervision 3 0 3
BUS 239 Marketing ISC 209	5	0	5	DFT 101
Plant Layout	4	0	4	Technical Drafting 1 3 2 ISC 232 Labor Relations 4 0
				PSY 206
	12	0	12	Applied Psychology 3 0 1

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, MAT 099, 100R, 100

The industrial management technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

Cooperative Education credits will substitute for social science and reading courses on a credit-for-credit basis up to nine hours maximum.

^{**}Recommended electives: ISC 140 & 150

### **CRIMINAL JUSTICE - CORRECTIONS**

Correctional officers must be knowledgeable in many areas if they are to function effectively in our complex society. They study specialized areas such as interviewing, counseling, drug abuse, rehabilitation techniques, probation, parole, community based corrections, recreational services, testing, and community relations. In addition, they must be familiar with the law and the criminal justice system.

To this end, the correctional science program is dedicated to developing proficiency in both pre-service high school graduates and in-service correctional personnel. It offers theoretical and practical instruction to meet the needs and requirements of the various correctional agencies and provides the student with the knowledge, skills and attitudes necessary for a successful career in the corrections field.

Employment opportunities for graduates of this curriculum are available at state and federal correctional institutions as correctional officers or as correctional program assistants. Youth development correctional officer positions are also available to graduates of this program.

### In-service Officer Program

In addition to the regular curriculum, the criminal justice department offers the degree program on a rotating schedule, designed to coincide with the in-service officer's work schedule. The courses are being offered during the day and again at night so the working officer can attend without missing any classes.

In recognition that the in-service officer must divide his time between his personal life, his job, and his school, only one-half of the courses normally offered to full-time students are offered on the rotating schedule. Since the officer is taking a reduced load, four rather than two years are required to complete the requirements for the associate in applied science degree.

### CRIMINAL JUSTICE - CORRECTIONS Suggested Curriculum By Quarters

Course Title	С	L	СН		С	Ł	СН
FIRST QUARTER				SECOND QUARTER			
BUS 102 Beginning Typewriting **CJC 101 Introduction to	2	3	3	CJC 109 Interviewing CJC 116 Criminal Law II	3	0	3
Criminal Justice	5	0	5	CJC 120 Principles of	Ü		
Motor Vehicle Laws	3	0	3	Organization *ENG 101	3	0	3
Criminal Law I HEA 110	3	0	3	Grammar *MAT 101	3	0	3
First Aid and Medical Terminology	2	2	3	Algebra I POL 102	5	0	5
PSY 102			2	National Government	3	0	3
General Psychology	3 18	<u>0</u> 5	20		20	0	20

С	L	CH		С	L	СН
			FOURTH QUARTER			
			CHM 101			
3	0	3	Chemistry	4	2	5
3	0	3	Marriage and Family	3	0	3
3	0	3	CJC 205 Evidence	3	0	3
			CSC 203			
3	0	3		3	0	3
3	0	3	Abnormal Psychology	3	0	3
			Principles of Sociology	3	0	3
3	0	3				
18	0	18		19	2	20
С	L	СН		С	L	СН
			SIXTH QUARTER			
			CSC 224			
3	3	4		2	0	3
			CSC 226	3	U	3
3	0	3	Administration and			
				2	0	3
3	0	3	CSC 234	3	U	3
			Community Based			
3	2	4		3	0	. 3
3	0	3				
	Ŭ		Relations	2	0	2 '
3	0	3		-	0	5
			PSC 240	5	U	5
			Firearms and			
_	_		Defensive Tactics	_2	2	_3
18	5	20		18	2	19
	3 3 3 3 3 3 3 3 3 3 3 3	3 0 3 0 3 0 3 0 3 0 3 0 6 L 3 3 0 18 0 6 L	3 0 3 3 0 3 3 0 3 3 0 3 3 0 3 3 0 3 18 0 3 18 C L CH  3 3 4 3 0 3 3 0 3 3 2 4 3 0 3 3 0 3	CHM 101   Chemistry   CSC 201	CHM 101   Chemistry	CHM   101

### TOTAL QUARTER HOURS IN COURSES .....

* If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100-G, 100G-A, 101-A, 102-A, MAT 099, 100R, 100

Course substitutions may be made from appropriate subject areas on a credit-for-credit basis upon approval by the department chairperson.

** CJC 151, 152, 153, 154, 155, and 156 totaling 6 quarter hours of credit may be substituted for CJC 101, Introduction to Criminal Justice, which is a 5 credit hour course.

### PARALEGAL TECHNOLOGY

The increased need for legal sevices in all aspects of law has placed a heavy demand on the attorney's time. In response to this situation, a special committee of the American Bar Association has recommended the use of paralegals to relieve the lawyers of many routine legal matters.

Paralegals are highly trained men and women who occupy an important position in the legal profession. Neither legal secretaries nor practicing attorneys, they are trained specialists who have studied legal procedure and can apply their knowledge as important members of the legal service team. Paralegal graduates will be able to assist the attorney in many facets of law, including work on probate matters, conducting investigations, searching public records, preparation of tax forms, serving and filing legal documents, bookkeeping, library research, and providing office management. In no case will the paralegal give legal advice, enter into courtroom procedure, or be involved in litigation.

Pitt Community College has been approved to offer the paralegal program by the North Carolina State Bar, the Third Judicial District Bar, and the Pitt County Bar. Its curriculum, developed in conjunction with an advisory board of prominent practicing attorneys, offers a balanced course of study in law, accounting, management, and investigation. These courses will provide both the theoretical knowledge and practical skills necessary for a career as a paralegal.

### **Evening Program**

In addition to the regular day curriculum program, the paralegal degree program is offered during the evening in order that working secretaries and other interested persons might obtain a degree or upgrade their skills in the paralegal area.

In recognition that persons attending the evening program usually have to divide their time between their job, family, social responsibilities, and school, evening students will take approximately one-half of a full-time day student's load. With this reduction in load, evening students should expect to take between three and four years to complete the degree requirements.

# PARALEGAL CURRICULUM Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
BUS 102  Beginning Typewriting  **CJC 101	2	3	3	CJC 109 Interviewing CJC 116	3	0	3
Introduction to Criminal Justice CJC 112	5	0	5	Criminal Law II CJC 120 Principles of			
Motor Vehicle Laws	3	0	3	Organization *ENG 101	3	0	3
Criminal Law I	3	0	3	Grammar *MAT 101	3	0	3
HEA 110 First Aid and				Algebra I	5	0	5
Medical Terminology PSY 102	2	2	3	POL 102 National Government	3	0	3
General Psychology	3 18	<u>0</u> 5	3 20		20	0	20

	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
CJC 102 Legal Research I	3	0	3	CHM 101 Chemistry ENG 206	4	2	5
CJC 113 Corrections Law	3	0	3	Business Communications LEC 203	3	0	3
CJC 125 Criminal Procedure	3	0	3	Legal Research II LEC 220	3	0	3
ENG 102 Composition	3	0	3	Family Law LEC 224	3	0	3
Oral Communications POL 103	3	0	3	Torts			
State and Local Government	3	0	3		3	0	3
	18	0	18		16	2	17
	С	L	СН		С	L	СН
FIFTH QUARTER				SIXTH QUARTER			
ACT 150				BUS 166			
Principles of Accounting	3	2	4	Business Law I CJC 204	3	0	3
CJC 205 Evidence	3	0	3	Evidence Photography ENG 103	3	3	4
CJC 211 Criminalistics LEC 207	4	2	5	Report Writing LEC 211	3	0	3
Law Office Management LEC 210	3	0	3	Real Property and Title Abstracting II	2	2	3
Real Property and Title Abstracting I	2	2	3	LEC 232 Estate Administration LEC 240	3	0	3
				Litigation Preparation	$\frac{3}{17}$	. 0	3 19
	15	6	18		17	5	19
	С	L	СН				
SEVENTH QUARTER							
BUS 167 Business Law II	3	0	3				
CJC 210 Criminal Investigation	4	2	5				
CJC 235 Forensic Science	3	2	4				
LEC 212 Real Estate Transactions	2	2	3				
LEC 229							
Taxes	15	0					

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses, as additional credits, from the following lists:

ENG 100R-1, 100R-2, 100R-3, 100G, 100G-A, 101-A, 102-A, MAT 099, 100R, 100 Course substitutions may be made from appropriate subject areas on a credit-for-credit basis upon approval by the department chairperson.

RECOMMENDED ELECTIVES: LEC 250, **CJC 151, 152, 153, 154, 155, 156 may be substituted for CJC 101 Introduction to Criminal Justice, which is a 5 credit-hour course.



#### **CRIMINAL JUSTICE - LAW ENFORCEMENT**

Today's law enforcement officer is expected to handle matters dealing with human relations; he frequently has to act in legal matters; he must be skilled in the most recent operations techniques in order to insure equality of justice to all. The Police Science Program offers theoretical and practical instruction to meet the requirements of various law enforcement agencies and provides the student with the skills, knowledge, and attitudes necessary for employment in the law enforcement profession. Demand for properly trained law enforcement officers in industry and municipal, county, state, and federal agencies is increasing, and the highly trained law enforcement officer will find challenging opportunities with public and private law enforcement services.

To the original and primary police function of preserving the peace and maintaining law and order, the ever-widening scope of government activity has added a host of other duties to the various law enforcement agencies, ranging from the regulation of traffic and the suppression of vice to the enforcement of minor laws and ordinances that regulate the minutiae of business and private life in a modern society.

### **In-service Officer Program**

In addition to the regular curriculum, the Police Science Department offers the degree program on a rotating schedule, designed to coincide with the in-service officer's work schedule. The courses are being offered during the day and again at night so the working officer can attend without missing any classes.

In recognition that the in-service officer must divide his time between his personal life, his job, and his school, only one-half of the courses normally offered to full-time students are offered on the rotating schedule. Since the officer is taking a reduced load, it requires four rather than two years to complete the requirements for the associate in applied science degree.

### CRIMINAL JUSTICE — LAW ENFORCEMENT Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
BUS 102  Beginning Typewriting  **CJC 101	2	3	3	CJC 109 Interviewing CJC 116	3	0	3
Introduction to Criminal Justice CJC 112	5	0	5	Criminal Law II CJC 120 Principles of	3	0	3
Motor Vehicle Laws CJC 115	3	0	3	Organization *MAT 101	3	0	3
Criminal Law I HEA 110	3	0	3	Algebra I	5	0	5
First Aid and Medical Terminology	2	2	3	Grammar POL 102	3	0	3
PSY 102 General Psychology	3	0	3	National Government	3	0	3
	18	5	20		20	0	20

	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
CJC 102				CHM 101			
Legal Research I CJC 113	3	0	3	Chemistry CJC 205	4	2	5
Corrections Law CJC 125	3	0	3	Evidence CJC 211	3	0	3
Criminal Procedure ENG 102	3	0	3	Criminalistics CSC 203	4	2	5
Composition ENG 204	3	0	3	Survey of Corrections	3	.0	3
Oral Communications POL 103	3	0	3	PSY 228 Abnormal Psychology SOC 102	3	0	3
State and Local Government	2	^	_	Principles of Sociology	3	0	3
dovernment	18	0	3 18		20	4	22
	С	L	СН		С	L	СН
FIFTH QUARTER				SIXTH QUARTER			
CJC 204	_	_		0.10 040			
Evidence Photography CSC 213 Dynamics of Substance	3	3	4	CJC 210 Criminal Investigation CJC 235	4	2	5
Abuse PSC 201	3	0	3	Forensic Science PSC 110	3	2	4
Patrol Procedures PSC 213	4	2	5	Juvenile Delinquency PSC 202	5	0	5
Identification				Police-Community -			
Techniques ENG 103	3	2	4	Relations PSC 240	2	0	2
Report Writing	3	0	3	Firearms and Defensive Tactics	2	2	3

### TOTAL QUARTER HOURS IN COURSES ......

. . . 118

16 6 19

ENG 100R-1, 100R-2, 100R-3, 100-G, 100G-A, 101-A, 102-A, MAT 099, 100R, 100

16 7 19

Course substitutions may be made from appropriate subject areas on a credit-for-credit basis upon approval by the department chairperson.

^{*} If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

^{**} CJC 151, 152, 153, 154, 155, and 156 totaling 6 quarter hours of credit may be substituted for CJC 101 Introduction to Criminal Justice, a 5 credit hour course.

### CAREER OPTION NURSING EDUCATION PROGRAM

The Career Option Nursing Program is based on the concept that two levels provide training leading to a career either as a Licensed Practical Nurse or Registered Nurse. Level I is basic to the LPN and the Associate Degree programs. Upon completing Level I, students will either take the LPN examination or continue with level II in order to complete the requirements to qualify for the licensing examination for Registered Nurses.

Level I, the LPN portion of the instruction, is concerned with the knowledge and techniques necessary for bedside nursing care, meeting the daily needs of patients, and assisting the registered nurse with complex nursing procedures. Instruction for Level II or the remaining requirements for the Associate Degree is concerned with the knowledge and skills needed in all aspects of the patient's daily needs, assisting the patient in becoming independent or rehabilitated, and directing the patient's care. Level II presents progressively more complex technical theory, experience, and responsibility as a professional nurse trainee.

Students are selected on the basis of demonstrated aptitude for nursing, as determined by entrance tests, interviews with faculty members, high school records, character references, and physical examinations.

### CAREER OPTION NURSING EDUCATION PROGRAM Suggested Curriculum By Quarters

Course Title	С	L	CL	СН		С	L	CL	СН
FIRST QUARTER					SECOND QUARTER				
NUR 101 Fundamentals of					NUR 102 Medical Surgical				
Nursing BIO 101	6	6	0	9	Nursing I NUR 110 .	8	0	15	13
Basic Life Sciences *ENG 101	4	2	0	5	Pharmacology PSY 104	3	0	0	3
Grammar NUT 101	3	0	0	3	Human Relations	3	0	0	3
Basic Nutrition MAT 114 Basic Math (Health	3	0	0	3					
Professions)	3	0	0	3					
	19	8	0	23		14	0	15	19
	С	L	CL	СН					
THIRD QUARTER						С	L	CL	CH
NUR 103 Medical-Surgical					FOURTH QUARTER				
Nursing II PSY 120	9	0	15	14	NUR 104 Maternal Child Healt				
Human Growth and					Nursing NUR 131	8	0	15	13
Development *SOC 102-H Principles of	3	0	0	3	Nursing Seminar †BIO 206	3	0	0	3
Sociology (Health Professions)	3	0	0	3	Microbiology	2	2	0	3
	15	0	15	20		13	_	15	19
TOTAL QUARTER HOU	RS IN	COL	JRSES	FOR	PRACTICAL NURSES				. 78

	С	L	CL	СН	C L CL CH
FIFTH QUARTER					SIXTH QUARTER
NUR 201 Advanced Maternity Nursing	3	0	8	6	NUR 204 Clinical Nursing II 6 0 16 11 BIO 202
NUR 203 Clinical Nursing I BIO 201	2	0	8	5	Integrated Science II 4 2 0 5 PSY 150
Integrated Science I *ENG 102 Composition	3	2	0	5	General Psychology I 3 0 0 3
	12	2	16	19	13 2 16 19
	С	L	CL	СН	C I CI CH
SEVENTH QUARTER					EIGHTH QUARTER
BIO 203 Integrated Science III	4	2	0	_	NUR 205 Clinical
NUR 202			0	5	Nursing III 5 0 18 11 NUR 231
Psychiatric Nursing	6	$\frac{0}{2}$	15	11	Nursing Seminar 3 0 0 3
	10	2	15	16	8 0 18 14 NUR 235 Elective-Special
					Problems in Nursing 0 4 0 2 (Not Required) Total Credit Hours for Second Level 71
					Total Credit Hours for First Level 78

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- † Required only for students entering the fifth quarter.
- * · Course substitutions from appropriate subject areas on a credit-for-credit basis may be made upon approval by the student's department chairperson.



### RADIOLOGIC TECHNOLOGY

This curriculum is designed to meet the ever-increasing need for technologists in the rapidly growing branch of medicine known as radiology. The aim of the Radiologic Technology Program is to prepare qualified persons for positions in the area of radiologic technology and to enable them to further their education, if they wish, in nuclear medicine, radiation therapy, other imaging modalities, or a baccalaureate program.

Students are selected on the basis of demonstrated aptitude for radiology, as determined by entrance tests, interviews with faculty members, high school records, character references and physical examinations. Graduates of accredited programs are eligible for examination by the American Registry of Radiologic Technologists. After passing the examination, they are certified as registered technologists in x-ray technology and entitled to use the legal title Registered Technologist (R.T.). They are then eligible for membership in the American Society of Radiologic Technologists, an organization dedicated to maintaining high educational standards of training and professional stature.

Radiologic technologists work in hospitals, clinics, doctor's offices, public health institutions, and industrial medical clinics. They assist radiologists in the use of x-rays to examine for broken bones, ulcers, tumors, disease or malfunctions of various organs.

The radiologic technologists take x-ray films, called radiographs. They adjust radiographic equipment to the correct settings for a specific examination, position the patient, make the required number of radiographs and develop and file them.

X-ray technologists also aid the physician in administering chemical mixtures to the patient to make certain organs show up clearly in x-ray examinations. Technologists may need to use mobile x-ray equipment at a patient's bedside and in surgery.

## RADIOLOGIC TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	CL	СН		С	L	CL	СН
FIRST QUARTER					SECOND QUARTER				
*ENG 101					ENG 102				
Grammar	3	0	0	3	Composition	3	0	0	3
*MAT 101					PSY 104				
Algebra I	5	0	0	5	Human				
SOC 102H					Relations	3	0	0	3
Principles of					BIO 108				
Sociology (Health		_	_		Anatomy and				
Professions) BIO 107	3	0	0	3	Physiology II	4	2	0	5
BIO 107 Anatomy and					RDT 102				
Physiology I	4	2	0	5	Radiologic		0	_	
RDT 101	~+		U	5	Technology II RDT 112	4	3	0	5
Radiologic					Clinical				
Technology I	4	2	0	5	Education	1	0	15	6
PHY 107			_		Elective	3-5	2-3	0	3-5
Radiologic Physics	3	3	0	4	21001110	5-5	2-5	U	3-3
RDT 111									
Clinical Education	2	0	6	4					
	24	7	6	29	1	8-20	7-8	15	25-27

	С	L	CL	СН		С	L	CL	СН
THIRD QUARTER					FOURTH QUARTER				
ENG 103 Report Writing RDT 103 Radiologic	3	0	0	3	RDT 204 Radiologic Technology IV RDT 114	4	3	0	5
Technology III BUS 272	4	2	0	5	Clinical Education	1	0	33	12
Principles of Supervision RDT 201 Topographic	3	0	0	3					
Anatomy RDT 113	2	0	0	2					
Clinical Education	1 13	0 2	24 24	$\frac{9}{22}$		<u>-</u>	3	33	<del>-</del>
	С	L	CL	СН		С	L	CL	СН
FIFTH QUARTER					SIXTH QUARTER				
RDT 215 Clinical Education	1	0	39	14	BUS 166 Business Law BIO 208	3	0	0	3
					Pathology RDT 205 Radiologic	3	0	0	3
					Technology V RDT 216	4	3	0	5
					Clinical Education PSY 102	1	0	24	9
					General Psychology	3 14	0 3	<u>0</u> 24	$\frac{3}{23}$
	С	L	CL	СН		С	L	С	СН
SEVENTH QUARTER					EIGHTH QUARTER			CL	
RDT 206					RDT 208				
Radiologic Technology VI	4	0	0	4	Radiologic Technology VII	6	0	0	6
RDT 217 Clinical Education	1	0	26	12	RDT 218 Clinical Education	1	0	22	12
clinical Education	<u>1</u> 5	$\frac{0}{0}$	36 36	13 17	Clinical Education	7	$\frac{0}{0}$	33	12 18

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

TOTAL QUARTER HOURS IN COURSES.....

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099, 100R, 100

The radiologic technology student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES: BIÓ 203, BUS 183M, CHM 101, MAT 100, 101, 110, PHO 116, PHY 101, COE 100



# **VOCATIONAL**









**EDUCATION** 

#### **AUTOMOTIVE TECHNOLOGY**

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair, or adjust automotive vehicles. Manual skills are developed in practical shop work.

Automobile designs are rapidly changing as a result of different buyer markets, rising fuel and production costs, and the passage of new state and federal regulations. These changes cause an increase in the amount of knowledge required by an auto mechanic. To keep up with these changes, auto mechanic students as well as professionals must continue to update.

Basic beginning knowledge of the diesel engine will be taught since this engine seems promising in the fight against pollution.

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some communities and rural areas, they also may service tractors or inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or repairing only automatic transmissions. Usually such specialists have a general knowledge of automotive repair and may occasionally be called upon to do other types of work.



## AUTOMOTIVE MECHANICS Suggested Curriculum By Quarters

Course Title	С	L	SH	СН		С	L	SH	СН
FIRST QUARTER					SECOND QUARTER		No.	311	CIT
*ENG 1101									
Reading Improvement	2	0	0	2	ENG 1102 Communication Skills	3	0	0	3
*MAT 1101 Fundamentals of					MEC 1147 Systems of Measure		U	U	3
Mathematics PME 1100 Engine Shop	5	0	0	5	ment and Measur Tools PHY 1103	ing 1	0	0	1
Practice PME 1101	0	0	3	1	Principles of Electricity	3	2	0	4
Internal Combustion Engine (Gasoline a Diesel)		0	10	9	PME 1102 Electrical Systems	5	0	12	9
Diesei)	12	$\frac{0}{0}$	12	17		12	_	12	17
	С	Ł	SH	СН		С	L	SH	СН
THIRD QUARTER					FOURTH QUARTER				
PME 1104					AHR 1101				
Fuel Systems (Gaso and Diesel) PME 1123	line 5	0	9	8	Automotive Air Conditioning PME 1124	3	0	6	5
Brake, Chassis and Suspension	3	0	9	6	Power Trains WLD 1129	3	0	9	6
PSY 1101 Human Relations	3	0	0	3	Basic Gas and Electric Welding	2	0	6	4
numan nelations	11	0	18	17	Eloctric vvoiding	8	0	21	15
TOTAL QUARTER HOU GRADUATING AFT ADVANCED DIPLOMA	ER FO	UR G	QUAR	TERS					. 66
₩.*	С	L	SH	СН		С	L	SH	СН
FIFTH QUARTER					SIXTH QUARTER				
PME 1125 Auto Servicing	3	0	9	6	MEC 1112 Machine Shop		•	0	0
PME 1204 Emission Controls	5	0	6	7	Processes PME 1202 Electricity/	1	0	3	2
					Electronics PME 1227	3	0	9	6
	<u></u>	_	 15	13	Power Accessories	<u>2</u> 6	$\frac{0}{0}$	6 18	4 12
	0	U	10	10					

#### SEVENTH QUARTER

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* If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, 1000

The automotive mechanics student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.



### CARPENTRY AND CABINETMAKING

Carpentry is one of the basic trades in the construction field. Carpenters construct, erect, install, and repair structures of wood, plywood, and wallboard, using hand and power tools. The work must conform to local building codes for both residential and commercial structures.

The curriculum in carpentry is designed to train individuals to enter the trade with a background in both shop skills and related information. They must have a knowledge of mathematics, blueprint reading, methods of construction, building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, and the installation of cabinets and fixtures.

Most carpenters are employed by contractors in the building construction fields. Specialists may work as layout carpenters, framing carpenters, concrete form carpenters, scaffolding carpenters, accoustical and insulating carpenters, and finish carpenters.

### CARPENTRY AND CABINETMAKING Suggested Curriculum By Quarters

Course Title	С	L	SH	СН		С	Ł	SH	СН
FIRST QUARTER					SECOND QUARTER				
CAR 1101 Carpentry DFT 1110	3	0	15	8	CAR 1102 Carpentry: Millwork a Cabinetmaking		0	15	8
Blueprint Reading: Building Trades *ENG 1101 Reading	3	0	0	3	DFT 1111 Blueprint Reading an Sketching I	d 3	0	0	3
Improvement *MAT 1101 Fundamentals of	2	0	0	2	ENG 1102 Communication Skills	3	0	0	3
Mathematics	5	0	0	5	MAT 1112 Building Trades Mathematics	3	0	0	3
	 13	0	15	18	11100110111011	12	0	15	17
	C	L	SH	СН		С	L	SH	СН
THIRD QUARTER					FOURTH QUARTER				
CAR 1103 Carpentry: Framing CAR 1113	3	0	15	8	BUS 1103 Small Business Operations CAR 1104	3	0	0	3
Carpentry: Estimating PSY 1101	3	0	3	4	CAR 1104 Carpentry: Finishing I	3	0	18	9
Human Relations	3	0	0	3	CAR 1114 Building Codes	3	0	0	3
	9	0	18	15		9	0	18	15
TOTAL QUARTER HOL	JRS IN	CO	URSE	s					65

* If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, MAT 1000

The carpentry student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

### **ELECTRICAL INSTALLATION AND MAINTENANCE**

Electrical Installation and Maintenance provides a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction designed to give the student practical knowledge and experience in applying the fundamentals taught in class.

Graduates of the electrical trades program will be qualified to enter an electrical trade as on-the-job trainees or apprentices, where they will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. They will have an understanding of the fundamentals of the national Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. They will have a basic knowledge of motor and motor control systems; industrial electronic control systems; business procedures; organization, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training.

## ELECTRICAL INSTALLATION AND MAINTENANCE Suggested Curriculum By Quarters

Course Title	С	L	SH	СН	C L SH	СН
FIRST QUARTER					SECOND QUARTER	
DFT 1110  Blueprint Reading: Building Trades ELC 1112 Direct and Alternati	3	0	0	3	DFT 1113  Blueprint Reading and  Sketching III 3 0 0  ENG 1102  Communication	3
Current ELC 1114	5	0	12	9	Skills 3 0 0	.3
Electrical Safety *ENG 1101	3	0	0	3	Alternating Current and Direct Current Machines	
Heading Improvement *MAT 1101	2	0	0	2	and Controls 5 0 12  ELC 1126  Electrical Safety/	9
Fundamentals of Mathematics	5	0	0	5	OSHA 2 0 0 PHY 1101	2
	18	0	12	22	Applied Science 3 2 0 12	4 21
					10 2 12	21
	С	L	SH	СН	C L SH	СН
THIRD QUARTER					FOURTH QUARTER	
ELC 1124 Residential Wiring ELN 1118	5	0	9	8	BUS 1103 Small Business	
Industrial Electronic PHY 1102	cs 3	0	6	5	Operations 3 0 0  ELC 1125  Commercial and	3
Applied Science PSY 1101	3	2	0	4	Industrial Wiring 5 0 12 ELN 1119	9
Human Relations	$\frac{3}{14}$	<u>0</u> 2	<u>0</u> 15	$\frac{3}{20}$	Industrial Electronics 3 0 6	<u>5</u> 17

* If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, 1000

The electrical installation and maintenance student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.



#### **ELECTRIC MOTOR REPAIR**

The purpose of this four quarter program is to prepare the student for employment in the electric motor and generator rewinding and repair field, or in industry, as a technician with specialized skills in electric motor application, maintenance, and control.

There are no prerequisites to this course; however, the student should have mechanical aptitude. The basic fundamentals of electricity are taught by demonstration and lecture. Principles and effects are demonstrated by the student on training devices under the instructor's supervision.

Upon satisfactorily completing the first and second quarter of this course, the student will be prepared to accept employment as a single phase motor repairman and rewinder, in electric motor shops, small industry, the appliance industry, the heating, ventilating and air conditioning industry and others.

Upon satisfactorily completing the entire course, the student should be qualified to perform the duties of an entrance journeyman electric motor repairman.

## ELECTRIC MOTOR REPAIR Suggested Curriculum By Quarters

Course Title	С	L	SH	СН		L	SH	СН
FIRST QUARTER					SECOND QUARTER			
ELC 1114 Electrical Safety ELM 1101 Basic Electric Moto Theory and	3 r	0	0	3	ELM 1110 Shaded Pole Induction Motors 2 ELM 1111 Split Phase Induction	2 0	9	5
Terminology ELM 1102 Fundamentals of	4	0	6	6	Motors 2 ELM 1112 Capacitor Start	. 0	6	4
Electric Motors *ENG 1101	4	0	6	6	Motors 2 ELM 1113	. 0	3	3
Reading Improvement	2	0	0	2	Universal Motors 2 PSY 1101	. 0	3	3
*MAT 1101 Fundamentals of					Human Relations 3	0	0	3
Mathematics	5	0	0	5	_			
	18	0	12	22	11	_	21	18
	С	L	SH	СН	С	L	SH	СН
THIRD QUARTER					**FOURTH QUARTER			
ELM 1114					ELM 1121 Direct Current Motors			
Three Phase Induc Motors ELM 1120	tion 4	0	6	6	and Generators 3 ELM 1115	0	3	4
Alternators ELM 1130 Auxiliary Shop	0	0	3	1	Wound Rotor Induction Motors 3 ELM 1122	0	3	4
Procedures ENG 1102	0	0	6	2	Transformers 4 ELM 1123	0	6	6
Communication Skills MAT 1102	3	0	0	3	Motor and Generator Controls 4 ELM 1131	0	6	6
Algebra	5	0	0	5	Motor Maintenance Procedures 1	0	3	2
	12	0	15	17	15	0	21	22

* If entering students, as a result of placement tests, are found to be deficient in English and math skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 099, 1000

The electric motor repair student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

** In lieu of the fourth quarter courses, students, with department chairperson's approval, may elect to participate full time (40 hours per week) in a co-op field experience in a related area of employment. Students that elect the cooperative work experience will graduate with 61 quarter hours of credit. (Cooperative Education courses do not qualify for veterans benefits.)



#### **ELECTRONIC SERVICING**

Within recent years, improved electronic techniques have provided increased need for the electronic service representative. These developments require expanded knowledge and skill of the individuals who would qualify as competent and up-to-date service representatives.

Electronic Servicing offers a training program of the knowledge and skills involved in the installation, maintenance, and servicing of electronic systems. A large portion of the time is spent in the laboratory verifying electronic principles and developing servicing techniques.

A service representative may be required to install, maintain, and service many types of electronic systems. The service representative may be employed in one or more of the following areas: electrician, radio and television servicing, broadcast technician, and as a technician in many industrial applications including manufacturing, quality control and sales of electronic equipment. Other opportunities are available in other phases of industry depending upon the individual's interest and ability.

## ELECTRONIC SERVICING Suggested Curriculum By Quarters

Course Title	С	L	SH	СН		С	L	SH	СН
FIRST QUARTER					SECOND QUARTER				
DFT 1120 Drafting: Electronic Servicing ELC 1112A Direct Current Theo	3	0	3	4	ELC 1112B Alternating Current and Practice ENG 1102 Communication	Theor 5	y 0	15	10
and Practice *ENG 1101	5	0	15	10	Skills MAT 1102	3	0	0	3
Reading Improvement	2	0	0	2	Algebra · PHY 1101A	5	0	0	5
*MAT 1101 Fundamentals of					Applied Science	2	0	0	2
Mathematics	5 15	$\frac{0}{0}$	0 18	<u>5</u> 21		15	0	15	20
	С	ι	SH	СН		С	L	SH	СН
THIRD QUARTER	С	ι	SH	СН	FOURTH QUARTER	С	L	SH	СН
ELN 1103 Introduction to Cont Devices ELN 1125		0	<b>SH</b> 15	<b>CH</b> 10	FOURTH QUARTER  ELN 1127  Television Receiver and Servicing			<b>SH</b> 18	<b>CH</b>
ELN 1103 Introduction to Cont Devices ELN 1125 Radio Receiver Servicing MAT 1103	trol 5				ELN 1127 Television Receiver	· Circui	ts		
ELN 1103 Introduction to Cont Devices ELN 1125 Radio Receiver Servicing	trol 5	0	15	10	ELN 1127 Television Receiver	· Circui	ts		

Students who desire to graduate from the two-year program must graduate from the fourquarter program, and then in September enroll full-time and complete the last three quarters, thereby earning an advanced diploma.

	С	L	SH	СН		С	L	SH	СН
FIFTH QUARTER					SIXTH QUARTER				
ELN 1104 Application of Contr					BUS 1103 Small Business				
Devices ELN 1107	5	0	15	10	Operations ELN 1105	3	0	0	3
Communications ELN 1108	5	0	0	5	Industrial Electronics a Instrumentation	nd 5	0	15	10
Digital Concepts	5	0	0	5	ELN 1111 Electronic				10
		_	_			3	0	0	_3
	15	0	15	20	1	1	0	15	16
	С	L	SH	СН					

### SEVENTH QUARTER

ELN 1106											
Maintenance and Analysis											
of Electronic											
Systems	5	0	15	10							
ELN 1109											
Television											
Broadcasting	5	0	0	5							
PSY 1101											
Human Relations	s 3	0	0	3							
	13	0	15	18							

### NUMBER OF HOURS REQUIRED FOR GRADUATION

If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, 1000

The electronic servicing student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chair-

#### **FARM MACHINERY MECHANICS**

This curriculum is designed to provide broad training to permit entrance into the field best suited to the interest and aptitude of the graduate. Emphasis is placed on the basic theories of farm machinery mechanics and techniques of maintenance, troubleshooting, and repair of general farm machinery with specialization to be developed later in employment.

Graduates of this curriculum can quickly adapt themselves for employment in the areas of sales, service, distribution, and installations or provide the service that must be done in the field. They make inspections and tests to determine the causes of faulty operation, and repair or replace defective parts to restore the tractor or other gasoline-powered equipment to proper operating condition.

## FARM MACHINERY MECHANICS Suggested Curriculum By Quarters

Course Title	С	L	SH	СН		С	L	SH	СН
FIRST QUARTER					SECOND QUARTER				
*ENG 1101 Reading Improvement *MAT 1101 Fundamentals of	2	0	0	2	COE 100 Student, Career, and Society ENG 1102 Communication	d 3	0	0	3
Mathematics PME 1105A Fundamentals of	5	0	0	5	Skills PME 1105B Fundamentals of	3	0	0	3
Diesel Engines PME 1135 Basic Fuel Systems	5	0	6	7	Diesel Engines PME 1137 Basic Power	1	0	6	6
(Gasoline and Diesel)	3	0	3	4	Transmission PME 1010	4	0	6	6
WLD 1129 Basic Gas Welding	2	0	3	3	Air Conditioning PME 1126 Small Engine	2	0	3	3
		_	_	_	Repair	_1	0	3	2
	17	0	12	21		14	0	18	20
	С	L	SH	СН		С	L	SH	СН
THIRD QUARTER					FOURTH QUARTER				
COE 101D Cooperative Education Intern	on 0	0	40	4	PME 1136 Fundamental Hydraulics PME 1030	2	0	6	4
					Electrical Systems in Farm Equipment PME 1040	3	0	3	4
					Farm Harvesting Equipment PME 1050 New Tractor and	3	0	6	5
					Equipment Setup PSY 1101	1	0	3	2
					Human Relations	_3	0	. 0	3
						12	0	18	18

### FIFTH QUARTER

COE	102D	
Coo	perative	Education
1	A	0

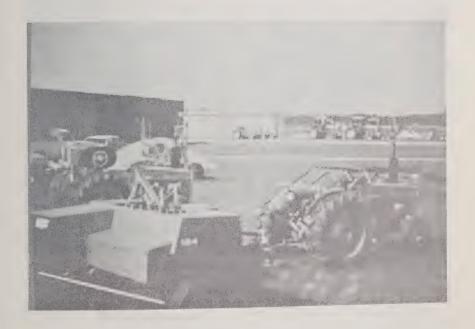
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* If entering students, as a result of placement tests, are found to be deficient in English and math skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, 1000

The farm machinery mechanics student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.



### HEATING, REFRIGERATION, AND AIR CONDITIONING

The Heating, Refrigeration and Air Conditioning Curriculum is designed to prepare the student to assist in planning, installing, operating, and maintaining air conditioning equipment. Technical information is presented and related skills are developed to enable the graduate to function efficiently when working with engineers, systems designers, skilled craftsmen, salesmen, and others in the field. Considerable emphasis is placed on self-development in an effort to encourage the graduate to continue to study and grow as the industry advances.

Heating, refrigeration, and air conditioning technicians may be employed in areas of sales, installation, maintenance, production drafting, systems design, or research engineering (assistant). They are involved with equipment for regulating temperature and humidity. They work with control systems, ducts, and piping for distribution of air, water, steam, and refrigerants.

## HEATING, REFRIGERATION AND AIR CONDITIONING Suggested Curriculum By Quarters

Course Title	С	L	SH	CH	C L S	н сн
FIRST QUARTER					SECOND QUARTER	
AHR 1121					AHR 1122	
Principles of Refrigeration	3	0	12	7	Domestic and Commercial Refrigeration 3 0	6 5
PHY 1111				,	ELC 1102	0 5
*MAT 1101	3	2	0	4	Applied Electricity 3 3	0 4
Fundamentals of					AHR 1115	0 4
Mathematics *ENG 1101	5	0	0	5	Fundamentals of Heating 2 0	6 4
Reading					Heating 2 0 ENG 1102	6 4
Improvement	2	0	0	2	Communication	
DFT 1104 Blueprint Reading	3	0	0	3	Skills 3 0 DFT 1116	0 3
					Blueprint Reading:	
	16		12	<u></u>	~ ~ ~ ~	0 2
	10	2	12	21	12 6 1	2 18
	С	L	SH	СН	C L SH	СН
THIRD QUARTER					FOURTH QUARTER	
AHR 1123					AHR 1124	
Principles of					Air Conditioning, Heating, &	
Air Conditioning AHR 1128	3	0	12	7	Refrigeration Serv. 3 0 6 AHR 1126	5 5
Automatic Control	3	0	6	5	All-Year Comfort	
PSY 1101 Human Relations	3	0	0	3	Systems 3 0 6 MEC 1120	5 5
WLD 1102	3	U	U	3	Duct Construction &	
Basic Gas					Installation 3 0	5 5
Welding	0	0	3	_1	Elective 3 0 (	3
	9	0	21	16	12 0 18	3 18
TOTAL QUARTER HOL	JRS IN	CO	JRSE:	S	* * * * * * * * * * * * * * * * * * * *	73

* If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, 1000

Heating, air conditioning and refrigeration students may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.



#### **MACHINIST TRADE**

The Machinist Curriculum is designed to provide basic skills and the related technical information necessary to gain employment and build a profitable career in the machine shop industry.

Machinists are skilled metal workers who shape metal parts by using machine tools and hand tools. Their training and experience enables them to plan and carry through all the operations needed in turning out a machined product and to switch readily from one kind of product to another. Machinists are able to select the proper tools and materials required for each job and to plan the cutting and finishing work according to blueprint or written specifications. They make standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining. They often use precision measuring instruments such as micrometers and gauges to measure the accuracy of their work to thousandths of an inch.

These skilled workers must be able to set up and operate most types of machine tools. They also must know the composition of metals so that they can heat and quench cutting tools and parts to improve machine ability. Their wide knowledge enables them to turn a block of metal into an intricate, precise part.

## MACHINIST TRADE Suggested Curriculum By Quarters

Course Title FIRST QUARTER	С	L	SH	СН	C L SH CH SECOND QUARTER
DFT 1104 Blueprint Reading Mechanical *ENG 1101 Reading	3	0	0	3	DFT 1105 Blueprint Reading Mechanical 3 0 0 3 ENG 1102
Improvement *MAT 1101	2	0	0	2	Communication Skills 3 0 0 3 MAT 1102
Fundamentals of Mathematics MEC 1101	5	0	0	5	Algebra 5 0 0 5 MEC 1102
Machine Shop Theo and Practice	ory 3	0	12	7	Machine Shop Theory and Practice 3 0 12 7 PHY 1101
ISC 1101 Industrial Safety	3	0	0	3	Applied Science 3 2 0 4
	16	0	12	20	17 2 12 22
THIRD QUARTER					**FOURTH QUARTER
DFT 1106 Blueprint Reading:					DFT 1201 Drafting;
Mechanical MAT 1103	3	0	0	3	Mechanical I 1 3 0 2 MEC 1104
Basic Geometry and Trigonometry MEC 1103 Machine Shop Theo	5	0	0	5	Machine Shop Theory and Practice 3 0 12 7 MEC 1116 Metallurgy: Non-
and Practice MEC 1115	3	0	12	7	Ferrous Metals 2 3 0 3 WLD 1102
Metallurgy: Ferrous Metals PSY 1101	2	3	0	3	Basic Gas Welding 0 0 3 1
Human Relations	3	0	0	3	
	16	3	12	21	6 6 15 13

	С	L	SH	СН		С	Ł	SH	СН
FIFTH QUARTER					SIXTH QUARTER				
MAT 1123 Machinist					DFT 1202 Drafting:				
Mathematics MEC 1105 Machine Shop The	3	0	0	3	Mechanical II MEC 1106 Machine Shop The		3	0	2
and Practice MEC 1221	3	0	15	8	and Practice MEC 1107	3	0	12	7
Machine Maintenance	2	0	3	3	Jigs and Fixtures	2	0	6	4
	8	0	18	14		6	3	18	13

### **TOTAL QUARTER HOURS IN COURSES FOR STUDENTS**

If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, 1000

Two quarters of advanced training may be offered to outstanding students after satisfactory completion of the four quarter course of study and upon recommendation of their curriculum instructors.

The machinist student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.



#### **MASONRY**

Masons are the artisans in the building trades who work with artificial stone, brick, concrete masonry units, stone and the like. Most masons are employed by contractors in the building construction fields to lay brick and blocks made of tile, concrete, glass, gypsum or terra cotta. Also, they construct or repair walls, partitions, arches, sewers, furnaces and other masonry structures. Masons must have a knowledge of basic mathematics, blueprint reading, and masonry technology. They must also know the methods used in laying out a masonry job with specific reference to rigid insulation, refractories, and masonry units specified for residential, commercial, and industrial construction.

Most employment opportunities for masons may be found with contractors in new building construction. However, a substantial proportion of masons are self employed or work with contractors doing repair, alteration, or modernization of work.

After gaining experience in the various types of the masonry trade along with leadership training, it is possible for the artisan to become a technical inspector and eventually a contractor.

## MASONRY Suggested Curriculum By Quarters

TOTAL QUARTER HOURS IN COURSES . .

Course Title	С	L	SH	СН		С	L	SH	СН
FIRST QUARTER					SECOND QUARTER				
DFT 1110					DFT 1111				
Blueprint Reading: Building Trades MAS 1101	3	0	0	3	Blueprint Reading and Sketching I MAS 1102	3	0	0	3
Bricklaying I MAT 1112-M	3	0	21	10	Bricklaying II MAT 1113	3	0	21	10
Building Trades Mathematics	3	0	0	3	Building Trades  Mathematics	3	0	0	3
	9	0	21	16	·	9	0	21	16
	С	L	SH	СН		С	L	SH	СН
THIRD QUARTER					FOURTH QUARTER				
DFT 1112					DFT 1113-M				
DFT 1112  Blueprint Reading ar  Sketching II	nd 3	0	0	3	DFT 1113-M Blueprint Reading an Sketching III	d 3	0	0	3
DFT 1112  Blueprint Reading ar  Sketching II  MAS 1103  Bricklaying III  MAS 1113		0	0 21	3	DFT 1113-M Blueprint Reading an		0	0 21	3
DFT 1112  Blueprint Reading ar  Sketching II  MAS 1103  Bricklaying III	2	0		9	DFT 1113-M Blueprint Reading an Sketching III MAS 1104 Bricklaying IV	3		21	9
DFT 1112  Blueprint Reading ar  Sketching II  MAS 1103  Bricklaying III  MAS 1113  Masonry	3	0			DFT 1113-M Blueprint Reading an Sketching III MAS 1104 Bricklaying IV MAS 1114 Masonry	3			

The masonry student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

### PRACTICAL NURSE EDUCATION

The Practical Nurse Education curriculum is designed to make available to qualified persons the opportunity to prepare for participation in care of patients of all ages, in various stages of dependency, and with a variety of health conditions. Throughout the program, the student is expected to grow continuously in acquisition of knowledge and understandings related to nursing, the biological sciences, the social sciences, and in skills related to nursing practices, communications, interpersonal relations, and use of good judgment. Graduates are eligible to take a state licensing examination given by the North Carolina Board of Nursing for employment as a licensed practical nurse (LPN).

The licensed practical nurse is prepared for employment in hospitals, nursing homes, clinics, doctors' and dentists' offices, and public health agencies. In all situations the LPN functions under the supervision of a registered nurse and/or licensed physician.

## PRACTICAL NURSE EDUCATION Suggested Curriculum By Quarters

Course Title	С	L	CL	СН		С	L	CL	СН
FIRST QUARTER					SECOND QUARTER				
BIO 101 Basic Life Sciences *ENG 101	4	2	0	5	NUR 102 Medical-Surgical Nursing I	8	0	15	13
Grammar MAT 114	3	0	0	3	NUR 110 Pharmacology PSY 104	3	0	0	3
Basic Math for Health Professions NUR 101 Fundamentals of	th 3	0	0	3	Human Relations	3	0	0	3
Nursing NUT 101	6	6	0	9					
Basic Nutrition	3 19	8	$\frac{0}{0}$	3 23		14	0	15	19
	С	L	CL	СН		С	Ł	CL	СН
THIRD QUARTER					FOURTH QUARTER				
NUR 103 Medical-Surgical Nursing II	9	0	15	14	NUR 104 Maternal Child He Nursing I	alth 8	0	15	13
PSY 120 Human Growth &					NUR 131		0	0	3
					Nursing Seminar	3	0	U	
*SOC 102-H Principles of Sociolo	3 ogy	0	0	3	Nursing Seminar	3	U	0	
*SOC 102-H			0 0 15		Nursing Seminar	- - 11	0	15	

Course substitutions from appropriate subject areas on a credit-for-credit basis may be made upon approval by the student's department chairperson.

#### SURGICAL TECHNOLOGY

The twelve-month Surgical Technology Program offers students knowledge in areas of anatomy, physiology, microbiology, principles of asepsis, and preparation of the operating room for surgery. The primary objective of the program is to prepare the graduate to perform all the functions of a surgical technologist to provide the best service possible as a member of the surgical team in the care of each patient who comes to the operating room. Graduates of the program are eligible to write the certifying examination given by the Association of Operating Room Technicians. Passing the certifying examination entitles the graduate to use the title "Certified Surgical Technologist."

The surgical staff renders an important service in the overall care of a patient. Good organization of the department and surgical teams is required and each individual must know specific functions and responsibilities in order to correlate them with the duties of others.

The surgical technologist works under the direct supervision of a registered professional nurse and/or licensed physician.

## SURGICAL TECHNOLOGY Suggested Curriculum By Quarters

Course Title	С	L	CL	СН		С	L	CL	СН
FIRST QUARTER					SECOND QUARTER				
BIO 101A Basic Life Sciences SUR 1101	4	2	0	5	BIO 101B Basic Life Sciences SUR 1111	4	2	0	5
Clinical Practice I SUR 1102 Surgical Safety and	0	0	12	4	Clinical Practice II SUR 1115 Pharmacology for	0	0	24	8
Orientation SUR 1104 Introduction to	5	3	0	6	Operating Room SUR 1116 Surgical	2	0	0	2
Microbiology SUR 1114 Principles of Operation	3 ng	0	0	3	Procedures I	9	0	0	9
Room Techniques		4	0	4					
	14	9	12	22		15	2	24	24
	С	L	CL	СН		С	L	CL	СН
THIRD QUARTER					FOURTH QUARTER				
SUR 1121 Clinical					SUR 1122 Clinical				
Practice III SUR 1127 Surgical	0	0	24	8	Practice IV SUR 1128 Surgical	0	0	36	12
Procedures II	9	0	0	9	Procedures III	4	0	0	4
	9	0	24	17		4	0	36	16
TOTAL QUARTER HOU	RS IN	COL	JRSES						79

The surgical technology student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

During latter spring and the entire summer quarter, students will be taking night and weekend operating room call as part of their clinical experience.

### **TEACHER ASSISTANT**

This curriculum is designed to prepare students for work in assisting teachers of young childen either in a day care, preschool, or elementary school situation. Study and application will be employed in areas such as communications skills, child growth and development, curriculum activities, and preparation of educational materials such as bulletin boards, stencils, transparencies, and games.

The graduate of the Teacher Assistant Program will be qualified to enter the fields of day care and education as a paraprofessional performing all duties required of an aide. The role of the teacher aid will vary according to the needs of the facility and the professional staff.

## TEACHER ASSISTANT Suggested Curriculum By Quarters

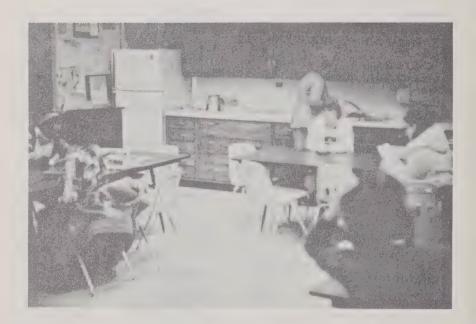
Course Title	С	L	CL	СН		С	L	CL	СН
FIRST QUARTER					SECOND QUARTER				
BUS 102					BUS 103				
Beginning Typewriting EDU 102	2	3	0	3	Intermediate Typewriting EDU 231	2	3	0	3
Child Health		_	^		Creative Activities *ENG 101	5	0	0	5
*MAT 100R Computational	3	0	0	3	Grammar HEA 150	3	0	0	3
Skills	5	0	0	5	Personal and Comm		0	0	3
PSY 115 Child Growth and D	eveloi	omer	nt:		Health PSY 116	3	0	U	3
Prenatal-Early					Child Growth and D		mer	it:	
Childhood SPH 150	3	0	0	3	Middle Childhood Adolescence	I- 3	0	0	3
Voice and Diction	3	0	0	3	PSY 150 General				
					Psychology I	3	0	0	3
	16	3	0	17		19	3	0	20
~	С	L	CL	СН		С	L	CL	СН
THIRD QUARTER					FOURTH QUARTER				
EDU 106					ENG 103				
Practicum in Elemer	,		45	_	Report Writing FDU 203	3	0	0	3
School EDU 111	1	0	15	6	Exceptional Child	5	0	0	5
Language Arts				_	EDU 107 Practicum in Presch	001			
Techniques I EDU 115	5	0	0	5	Experiences	1	0	15	6
Audiovisual and Me	dia								
Instruction ENG 102	3	0	0	3					
Composition	3	0	0	3					
SOC 150 Sociology I	5	0	0	5					
Sociology	17	0	15	22		9	0	15	14

* If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 100R-1, 100R-2, 100R-3, 100R-4, 100G, 100G-A, 101-A, 102-A, MAT 099

The teacher assistant student may select elective credits from the list of recommended electives or from other related courses, and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

RECOMMENDED ELECTIVES: BUS 110, 112, 134, CAT 110, ECO 102, ENG 105, 106, MAT 120, POL 102, PSY 206, SOC 103, SSC 101, 201



#### WELDING

The Welding Curriculum is designed to give students sound understanding of the principles, methods, techniques, and skills essential for successful employment in the welding field and metals industry. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop and many others.

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.

The principal duty of the welder using manual techniques is to control the melting by directing the heat from either an electric arc or gas welding torch and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

## WELDING Suggested Curriculum By Quarters

Course Title	С	L	SH	СН		С	L	SH	СН
FIRST QUARTER					SECOND QUARTER				
DFT 1104 Blueprint Reading: Mechanical *ENG 1101 Reading	3	0	0	3	DFT 1117 Blueprint Reading: Welding ENG 1102 Communication	3	0	0	3
Improvement *MAT 1101 Fundamentals of	2	0	0	2	Skills MAT 1103 Basic Geometry and	3	0	0	3
Mathematics WLD 1141	5	0	0	5	Trigonometry WLD 1142	5	0	0	5
Beginning Welding	5	0	15	10	Intermediate Welding	5	0	15	10
	15	0	15	20		16	0	15	21
	С	L	SH	СН		С	L	SH	СН
THIRD QUARTER					FOURTH QUARTER				
DFT 1118 Pattern Developmen	t				BUS 1105 Industrial				
and Sketching PSY 1101	3	0	0	3	Organizations MEC 1112	3	0	0	3
Human Relations WLD 1112	3	0	0	3	Machine Shop Processes WLD 1122	1	0	3	2
Mechanical Testing a Inspection WLD 1123	and 1	0	3	2	Commercial and Ind Practices	ustrial 3	0	9	6
Inert Gas Welding WLD 1124	1	0	3	2	WLD 1125 Certification Practices	3	0	6	5
Pipe Welding	3 11	0	12 18	7	Fractices	10	0	18	16

If entering students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following

ENG 1000, MAT 0099, 1000

The welding student may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.



### COSMETOLOGY

Cosmetologists perform many functions in providing beauty services for customers. These services may include hairstyling, cutting, trimming, straightening, permanent waving, coloring, tinting, bleaching, shampooing, and wig styling services. They sometimes do make-up analysis, suggest cosmetology aids, and advise customers regarding what products to use and how to use them with the greatest benefits.

The cosmetology curriculum, designed to prepare the student for employment in the field of cosmetology, provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, haircutting, styling, hair pressing, chemical relaxing, thermal waving, curling and wig service. This curriculum is approved by the North Carolina State Board of Cosmetic Art Examiners.

State laws and regulations require the completion of a minimum of 1200 contact hours of instruction in prescribed subject matter prior to applying to the State Board of Cosmetic Art Examiners for examination. For additional information pertaining to rules and regulations governing the Cosmetology program, contact the North Carolina State Board of Cosmetic Art Examiners, Box 1108, Raleigh, North Carolina.

## COSMETOLOGY Suggested Curriculum By Quarters

Course Title	С	L	СН		С	L	СН
FIRST QUARTER				SECOND QUARTER			
COS 1101 Cosmetology I	0	400	12	COS 1102 Cosemetology II	0	400	12
	С	L	СН		С	L	СН
THIRD QUARTER				FOURTH QUARTER			
COS 1103 Cosmetology III	0	400	12	COS 1104 Cosmetology IV	0	300	12
TOTAL OLIAPTER HO	LIRS	IN COURS	ES				48



### **CERTIFICATE PROGRAMS**

### HOSPITAL WARD CLERK

A one quarter course, the Hospital Ward Clerk Course is designed to prepare qualified men and women to perform a variety of clerical duties such as maintaining patients' charts, requesting equipment and services for patients, requesting supplies and equipment for the nursing unit, and completing all forms correctly. Emphasis is placed on communication techniques including communication with the patient via the nurse-patient intercom, communication with the hospital staff, physicians, and visitors, as well as telephone communications. The ward secretary is an important and vital link in the health care team. Clinical experiences provide opportunities for applying classroom learning in the hospital setting.

### HOSPITAL WARD CLERK

Suggested Curriculum By Quarters

Course Title C L CL CH

FIRST QUARTER

MED 1100

Medical Ward Clerk 9 0 21 16



### **NURSES' ASSISTANT**

The continuing shortage of nursing personnel has created the need for a nurses' assistant who is prepared to assist with patient care by those duties which require limited training.

Working quite often under the leadership of the registered nurse, the nurses' assistant has a well-defined role on the nursing team.

Admission requirements to the nurses' assistant course are established cooperatively by Pitt Community College and Pitt County Memorial Hospital. All students admitted to the course are potential employees of the hospital. Standards of achievement during the course are established by Pitt Community. Graduates will receive certificates upon satisfactory completion of the one-quarter program.

Course Title C L CL CH

### FIRST QUARTER

NUR 1100 Nurses' Assistant Theory and Clinical Practice 9 0 21 16



### SURVEYING TECHNICAL SPECIALTY

The Surveying Curriculum is designed for persons interested in learning to assist surveyors or engineers in land, forest, highway, marine, and other types of surveying. The emphasis of the program may be adapted by choice of electives. A certificate is awarded to students completing the program.

The graduates of this program may engage in determining exact location and measurements of points, elevations, lines, areas, contours of the surface of the earth for construction, map making, land valuation, mining or other purposes. They may calculate information needed to conduct surveys from notes, maps, deeds, or other records. They will use surveying instruments and perform calculations to verify the accuracy of survey data.

## SURVEYING TECHNICAL SPECIALTY Suggested Curriculum By Quarters

Course Title	С	L	SH	CH
BASIC COURSES				
CIV 101 Surveying	2	0	6	4
CIV 102 Surveying CIV 103	2	0	6	4
Surveying	2	0	6	4
CIV 204 Surveying DFT 101	2	0	6.	4
Technical Drafting	0	0	6	2
MAT 101 Algebra I MAT 102	5	0	0	5
Trigonometry	5	.0	0	5

### **TOTAL QUARTER HOURS IN COURSES..**

Students who wish to acquire additional surveying skills may take any of the following courses:

ELECTIVE COURSES	С	L	SH	СН
CIV 110 Surveyor Practices CIV 223	1	0	0	1
Codes, Contracts, an Specifications FOR 208	nd 2	0	0	3
Forest Surveying MAT 103	2	0	3	3
Algebra II	5	0	0	5

### **COOPERATIVE EDUCATION**

### COOPERATIVE EDUCATION PROGRAM

The Cooperative Education Program is designed to give students the opportunity to integrate their classroom study with practical experience in their major field. This integration is done by working and attending school in optional plans.

#### **ELIGIBILITY**

All students who are taking six (6) quarter hours or more who have completed one quarter or who are already employed in work-related jobs are eligible to enter the Cooperative Education Program provided they meet the following requirements:

- a. The department chairperson and the Cooperative Education Director must grant permission to enroll in Cooperative Education. Preference is given to curriculum students enrolled for at least 6 credit hours and maintaining a grade point average of 2.00.
- b. Students must plan to graduate from Pitt Community College.

#### WHEN TO APPLY

Students may apply as soon as they have been accepted for enrollment by the school even though they will not receive a work assignment until after they have completed one quarter of school.

#### **APPLICATION PROCEDURE**

Students who are interested in the Cooperative Education Program should follow the procedure outlined below:

- a. The student will obtain an application form from the Cooperative Education Office and make an appointment with the Co-op Office to review the completed application.
- b. The Director or the Coordinator will conduct an interview with the student with regard to his career goals and possible cooperative assignments.
- c. If the student is accepted, the Cooperative Education Office with the assistance of the Department Chairperson or Advisor will be responsible for locating an appropriate training position.

### **ACADEMIC CREDIT**

- a. One (1) credit hour will be given for the satisfactory completion of each quarter's cooperative training assignments of each ten hours per week. The Cooperative Education Director will grade assignments based on reports submitted by the student, the employer, and the Faculty Advisor. Reports of credit will be made to the Registrar's Office by the Cooperative Education Director.
- b. Generally, a student may receive a maximum of four credit hours during any one quarter and a maximum of nine credit hours toward degree or diploma requirements. Those enrolled in the associate in arts degree program can earn up to six credit hours.
- c. Credits earned may be used as add-on, elective, or substitute. This is to be determined by the Advisor, the Department Chairperson, and the student.

#### **VETERANS ELIGIBILITY**

Veterans may participate in the Cooperative Education Program provided they meet the requirements as set for all students; however, because the Veterans Administration provides an apprenticeship program, the hours will not be counted as hours for which the Veterans Administration pays. Hours earned by veterans for Co-op credit received at Pitt Community College will be entered on the veteran's transcript.

#### CO-OP WORK EXPERIENCE PLANS

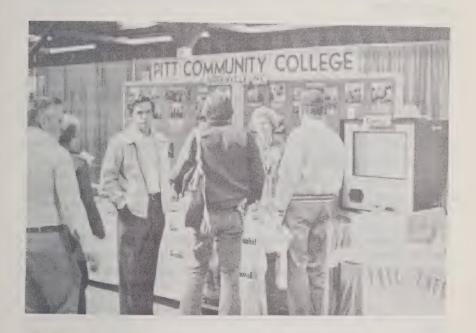
Several types of co-op work experience schedules are available and each is suitable for a different situation.

- Parallel Plan A concurrent pattern of work and study in which the student spends approximately one-half of the day on campus and one-half in the co-op work assignment.
- 2. Alternating Plan A minimum of two quarters of full-time work experience included in the academic program.
- 3. Single Term Plan Only one quarter of full-time co-op is included in the academic program, generally during the summer between the freshman and sophomore years.
- 4. Extended Day Plan Designed for students who are working full-time and attending college at night.

For further information contact the Department of Cooperative Education.



# CONTINUING



# **CONTINUING EDUCATION**

The Division of Continuing Education at Pitt Community College is committed to serve adults from the general community, business, and industry. Various programs are offered for the individual to meet particular needs and interests. Opportunities exist to upgrade occupational skills, to acquire new skills, to complete high school, and to pursue activities for personal enrichment.

Classes are held on campus and in off-campus facilities such as public schools, community buildings, churches, civic centers, industrial plants, and fire stations.

Each course is open to adults 18 years of age or older and not enrolled in a secondary school. However, high school students 16 years or older are permitted to enroll with approval from the appropriate public school official.

#### SCHEDULE OF COURSES

A schedule of Continuing Education classes is published quarterly and distributed throughout Greenville and surrounding areas. Classes are organized upon demonstration of sufficient interest and availability of the required facilities and instructors. Newspaper, radio, and television are utilized to announce course offerings. Classes are usually held from 7:00 P.M. to 10:00 P.M.; however, classes can be scheduled for mornings or afternoons.

#### **COURSE CREDIT**

Generally courses offered in Continuing Education are non-credit; however, credit will be given in the Adult High School Diploma Program. CEU's (Continuing Education Units) are also awarded for certain courses and seminars. (Ten contact hours of class earn a CEU.) Written acknowledgement of course completion or participation may be provided to individuals upon request.

#### **REGISTRATION AND ATTENDANCE**

Registration for classes is normally completed on a first-come first-served basis. A minimum of 14 persons is usually needed to begin classes. If regular attendance falls below six people, the class may be discontinued.

#### FEES

A registration fee of \$5.00 is required for all non-credit courses (except Adult Driver Training for which there is an additional fee) and must be paid at the first class meeting. There is no charge for registration to senior citizens 65 years of age or older. Accident insurance is available to all students. Students in laboratory courses requiring the use of equipment and machinery must either purchase insurance or sign a waiver form.

#### **COURSE DESCRIPTIONS**

Course descriptions are available upon request by calling or visiting the Division of Continuing Education. Individuals who desire counseling or other special assistance may contact either the instructor or the directors in the Continuing Education Division.

#### **BOOKS AND SUPPLIES**

Most courses do not require textbooks. When a text is required, students will be notified at the first class meeting. Students are generally responsible for their class supplies.

# **GENERAL ADULT EDUCATION**

The General Education Program consists of non-credit courses which enable the adult to develop a skill or an art in an area of interest.

#### **ADULT BASIC EDUCATION**

Adult Basic Education is designed to improve the reading and math skills of persons who seek self improvement through organized classes. The goal of the program is to help the student function more effectively in the environment. Classes may be established throughout the Pitt County area and may be co-sponsored with churches, schools, or community organizations. Groups interested in developing a class (at least 10 people), may contact the Adult Basic Education Coordinator at Pitt Community College. There are no charges for the classes or materials.

# **ADULT HIGH SCHOOL EQUIVALENCY**

The Adult High School Equivalency program is designed to prepare the adult to take the state high school equivalency test, the General Educational Development Test (GED). Adults may enroll in morning, afternoon, or evening classes at specified locations in the Greenville and Pitt County area. Program content covers English expression, literature, mathematics, social studies, and natural science. There is a \$5.00 tuition fee, and students may be required to purchase instructional materials.

The GED Test program, through which adults may earn a high school equivalency diploma, is administered in the Learning Center by appointment. The state of North Carolina requires a \$5.00 fee to take the GED. Telephone 756-3130, extension 231, or come by the Learning Center in Room 2 of the Administration Building.

#### **GENERAL INTEREST OFFERINGS**

The following are examples of general interest courses:

Art: Painting, Drawing, and Sketching

Arts and Crafts

Auto Care and Tune-up Baking and Decorations

Calligraphy

Conversational French, German, Spanish

Creative Writing

Crewel Embroidery

Crochet

Investments and Securities

Knitting

Macrame

Needlepoint

Prenatal Education
(Lamaze Method of

prepared childbirth)

Pottery Rug Hooking

Seasonal Decorations

Sewing

Sign Language

Spinning and Natural Dyes

Weaving

#### THE LEARNING CENTER

The Learning Center at Pitt Community College is designed to provide opportunities for individual study to both curriculum students and adults in the community. Study areas include the following: preparation for taking the high school equivalency test, preparation for entrance into a curriculum program, preparation for college entrance, upgrading in specific areas, and study of subjects for personal satisfaction. A registration fee of \$5.00 is required and must be paid on the first day of attendance each quarter.

Pitt Community College is approved by the North Carolina Department of Public Instruction and the American Council on Education as a testing center for the General Educational Development Test Battery (GED). This testing program, through which adults may earn a high school equivalency diploma, is administered in the Learning Center by appointment. The state of North Carolina requires a \$5.00 fee to take the GED. Telephone 756-3130, extension 231, or come by the Learning Center in Room 2 of the Administration Building.

Hours of Operation:

8:00 A.M. - 5:00 P.M. Monday - Thursday 6:00 P.M. - 10:00 P.M. Monday - Thursday

8:00 A.M. - 5:00 P.M. Friday

A coordinator is available at all times to evaluate, advise, and aid the students in their progress.

Anyone 18 years of age or older who is not enrolled in a secondary school may enroll in the Learning Center.

High school students 16 years or older are permitted to enroll with approval from the appropriate public school official.

# OCCUPATIONAL EXTENSION

Occupational courses are offered for employed persons needing to upgrade their skills or for persons seeking employment at the skilled technical and vocational level.

# **GENERAL OCCUPATIONAL COURSES**

The following are examples of general occupational courses:

Arc Welding
Automotive Repair
Aviation Ground School
Basic Blueprint Reading
Basic Electricity
Basic First Aid
Brick Masonry
Estimating for the Building Trades
Fundamentals of Real Estate
Handyman Bricklaying
Home Plumbing Repair

Household Appliance Repair
Ornamental Horticulture
Outboard Motor Repair
Real Estate Appraisal
Secretarial Refresher
Small Engine Repair
Speedwriting
Tobacco Auctioneering
Tobacco Ticket Marketing
TV Service and Repair
Woodworking and
Cabinetmaking

# **SPECIALTY OCCUPATIONAL PROGRAMS**

# FIRE SERVICE TRAINING

Fire Service Training is designed to provide firemen the opportunity to gain technical information and skill in modern fire fighting through a variety of learning experiences. Usually these courses are conducted in the local fire departments for the volunteer firemen, who train as an organized group utilizing equipment and methods they would ordinarily use in preventing and suppressing fire.

Some of the subject areas for volunteer firemen are as follows: arson detection, compressed gas emergencies, fire apparatus practices, hazardous materials, introduction to fire fighting, ladder practices, hose practices, rescue practices, protective breathing equipment, and fire fighting procedures.

Courses such as Home Safety, Fire Prevention and Industrial Fire Brigade Training are available to the public and industry as well as fire service personnel.

#### HOSPITALITY TRAINING

This program is provided to train hotel-motel managers, food service personnel, waiters, waitresses, cooks, and maids or any other individual or group in the hospitality field.

Hospitality education has three objectives: (1) to develop, within individuals, skills that will qualify them for better employment opportunities in the hospitality field: (2) to provide employers with well-trained personnel to operate their business; and (3) to provide better hospitality. Some of the courses are as follows: Front Office Procedures, Human Relations, Communication, Basic Nutrition and Menu Planning, Overview of School Food Service, Use and Care of Equipment, Quantity Cooking, and Quantity Food Preparation.

#### LAW ENFORCEMENT TRAINING

Several short courses and seminars are conducted to upgrade and train law enforcement officers. Some courses are as follows: Introduction to Police Science; Courts and Law; Laws of Arrest, Search, and Seizure; and General Criminal Investigation.

The school also offers a two-year associate degree curriculum in Police Science and Criminology.

#### MANAGEMENT DEVELOPMENT TRAINING

Management Development Training courses are designed for potential and active supervisors who want to prepare for more effective leadership and advancement. Courses are offered both on and off campus. The courses are flexible in terms of content and meeting times. Every effort is made to fit course content to particular individual, industrial, or business needs.

Some of the courses are:

Principles of Supervision Economics and Management Economics in Business and Industry Creative Thinking Supervisory Techniques Employee Evaluation and
Interviewing
Conference Leadership Training
Effective Writing
Motivation Techniques
Effective Communications

#### **VETERANS BENEFITS**

Information regarding veterans benefits may be found in the appropriate section of this publication. For additional information, contact the Veterans Affairs Officer: Telephone 756-3130, extension 260. After 5:00 P.M., visit room 113 in the Humber Building or telephone 756-3130, extension 238.

### PROFESSIONAL IN-SERVICE PROGRAM

TEACHER CERTIFICATE RENEWAL-Local superintendents responsible for providing in-service upgrading and training for teachers coordinate with the Division of Continuing Education to develop special courses designed to meet the needs of the local school unit. The division assists in the development and presentation of approved courses by providing needed personnel, facilities and services in coordination with the local school unit.

OTHER PROFESSIONAL IN-SERVICE-Various institutions and agencies require employee upgrading through the offering of in-service classes. The Division of Continuing Education coordinates with each agency to develop the in-service program most appropriate to their needs.

#### SPECIAL INDUSTRIAL TRAINING

Classes may be in the immediate area in which the industry is located.

In addition, special classes may be developed for training of personnel for a new industry locating in the area or an expanding industry.

Courses are designed to meet specific group needs. New programs and classes are scheduled at the time and place convenient to the interested group or individuals.

For information and assistance in developing occupational extension classes, call the Occupational Extension Director.

# WORKSHOPS, SEMINARS, AND CONFERENCES

Workshops, seminars, and conferences are planned and offered by Pitt Community College on a variety of topics in cooperation with civic groups, non-profit organizations, or by special request from the citizens of Pitt County.

The workshops and seminars may carry CEU credit if arrangements have been made in advance with Pitt Community College, and if participants meet necessary requirements for receiving credit.

# **COURSE PREFIX IDENTIFICATION**

Prefix	Identification	Page
ACT	Accounting	152
AGR	Agriculture	152
AHR	Air Conditioning, Heating, and Refrigeration	157
AIB	Banking	158
ANT	Anthropology	162
ARC	Architecture	
ART	Art	
BIO	Biology	164
BUS	Business	
CAR	Carpentry	
CAT	Commercial Art	
CHM	Chemistry	
CIV	Civil Engineering	
CJC	Criminal Justice Courses	
COE	Cooperative Education	
COS	Cosmetology	
CSC	Correctional Science	
DFT	Drafting	
ECO	Economics	
EDP	Electronic Data Processing	
EDU	Education	
EGY	Energy	
ELC	Electricity	
ELM	Electric Motor	
ELN	Electronics	
ENG	English	
ENV		
FOR	Environment	
FRE	Forestry	
	French	
GEO	Geography	
GER	German	
HEA	Health	
HIS	History	
HSA	Human Services Associate	
ISC	Industrial Science	
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#### **ACCOUNTING**

# **ACT 150** Principles of Accounting

3-2-4

Basic Accounting concepts as applied to a single proprietorship. Practical problems requiring the use of journals and general ledgers, preparation and analysis of work sheets, the balance sheet, and income statements. Introduction to basic concepts of internal control included.

# **ACT 151** Principles of Accounting

3-2-4

Prerequisite: ACT 150
An expanded study of the accounting cycle with emphasis on the recording, summarizing, and interpreting of data for management control. Includes a study of payrolls, federal and state taxes, and basic applications for computerized accounting.

# **ACT 152** Principles of Accounting

3-2-4

Partnership and corporation accounting, including a study of financial statement analysis and use of financial ratios.

#### **AGRICULTURE**

# AGR 103 Feeding and Management

2-0-2

Study of applied principles and concepts of animal nutrition. Problems associated with feeding livestock, nutritional diseases, balancing rations, feed additives, feedstuffs, and anatomy and physiology of the digestive systems of farm animals. Includes management and economic problems associated with the feeding and marketing of livestock.

# AGR 105 Pastures and Forage Crops

3-2-4

Study of the major grasses and legumes of economic importance in North Carolina. Attention given to management, soil types, fertilization, harvesting, and nutrient value.

#### AGR 107 Farm Records and Taxes

3-0-3

Introductory course to accounting methods related to farm business; acquaints students with the terminology and basic principles and techniques used in recording transactions. Practical application of the principles learned made by working with actual farm situations. Study of taxes as related to farm income including tax forms, deductions, depreciation, and tax schedules applicable to farmers.

# AGR 112 Small Engine Repair

2-3-3

Study of two and four cycle, one cylinder gasoline engines and their power trains. Students taught preventive maintenance, troubleshooting and repair of the typical auxiliary engine on the farm.

# AGR 119 Techniques of Welding

2-3-3

Study of principles of oxyacetylene and electrical welding, cutting, and brazing; principles, procedures, safety precautions, and experience in using oxyacetylene and arc welding equipment; projects to develop skill in the use of equipment. Also includes a study of metals, rods, gases, and special electrical welding machinery.

# **AGR 121** Crop Production

3-2-4

Study of the characteristics of field crops relative to varieties, environmental factors, rotations, fertilization, control of pests, and cultural practices pertinent to crop production.

#### AGR 125 Animal Science

5-2-6

Introductory animal science course covering the fundamental principles of livestock production. Study of the animal body and the basic principles of reproduction, genetics, growth, fattening, and digestion; and of the selection, feeding, improvement, processing, and marketing of livestock.

#### **AGR 127** Animal Nutrition

3-2-4

Deals with the principles of nutrition and their application to feeding practices in cattle, horses, sheep, and swine production in North Carolina.

#### AGR 128 Farm and Home Construction

2-3-3

Deals with the fundamentals of farm carpentry, fences, concrete, and masonry. Part of the course gives students an opportunity to learn and practice home construction projects such as farm utility buildings. Also includes a study of farm water needs and waste disposal. Attention is given to planning farm water and plumbing systems and their proper care and maintenance.

# AGR 135 Agricultural Law

3-0-3

Designed to acquaint the agricultural student with certain fundamentals and principles of law, including contracts, agency, and negotiable instruments. Includes the general study of law pertaining to partnership, corporation, sales, suretyship, bailments, and real property.

#### **AGR 136** Agricultural Mathematics

5-0-5

Stresses the fundamental mathematics operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent use of mathematics in the field of business.

#### AGR 143 New Sources of Farm Income

2-0-2

Study of new areas of production not practiced in the student's present farming program. The farm enterprise system is analyzed and new enterprises suggested. Provisions of contract farming in the production of poultry, livestock, and fruits and vegetables for the processing industry are also included.

# AGR 149 Introduction to Plant Science and Horticulture

3-2-4

Introduction to botany as applied to higher plants. The fundamental principles of plant processing, reproduction (sexual and asexual), growth, and development. Application of plant processes to certain commercially grown field and horticultural crops.

#### AGR 150 General Horticulture

3-2-4

Deals with horticultural principles and the application of plant science fundamentals to horticultural practices.

#### **AGR 154** Swine Production

3-2-4

Study of the scientific methods of selecting, breeding, feeding, and managing swine. Special attention is given to housing and marketing.

Introductory study of various phases of food science and processing. Attention will be given to development, size, distribution, and future of the processing industry. Basic principles of food preservation and unit operations covering canning, freezing, dehydration, concentration, and fermentation will be stressed.

#### AGR 170 Plant Science

5-2-6

Introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of seed-bearing plants with application to certain commercially important plants in North Carolina.

#### AGR 185 Soil Science and Fertilizers

5-2-6

Deals with the basic principles of efficient classification, evaluation, and management of soils; care, cultivation and fertilization of the soil; and conservation of soil fertility.

#### AGR 187 Fertilizers and Lime

3-2-4

Review of the source, function, and use of the major and minor plant food elements; commercial fertilizer ingredients; soil acidity and liming materials; and the application of fertilizer and liming materials.

# AGR 188 Cultural and Irrigation Practices

3-2-4

Deals with various tillage and cultural practices such as conventional, "no-till," and minimum tillage; the economical aspects of labor and fuel efficiency; drainage and timely application of supplemental water to obtain maximum output.

# AGR 201 Agricultural Chemicals (Pesticides)

3-2-4

Study of agricultural chemicals and their importance; the ingredients, formulation, and application of farm chemicals; and the effective and safe utilization of chemicals in agricultural pest control. Major emphasis is placed on insecticides, fungicides, nematocides, herbicides and other commonly used pesticides.

# AGR 203 Pesticide and Fertilizer Application

3-2-4

Study of practical exercise in the correct application of pesticides and fertilizers. Economics of custom application and equipment, precautions, and legal aspects of application are presented.

# AGR 204 Agricultural Economics and Farm Records

3-2-4

Introduction to economics, the functions of the economic system, and agriculture's role in the economy. Economic principles as applied to the decision-making process in the analysis of farm records are also included.

# AGR 205 Agricultural Marketing

3-2-4

Analysis of the functions of marketing in the economy; a survey of the problems marketing faces; and a review of the market structure and the relationship of local, terminal, wholesale, retail, and foreign markets. Problems in the operations of marketing firms, including buying and selling, processing, standardization and

grading, risk-taking and storage, financing, efficiency, and cooperation; and discussions of procedures for marketing commodities such as grain, cotton, livestock, and tobacco are included.

# **AGR 207** Poultry Enterprises

3-2-4

Review of the growth of the various poultry enterprises including market eggs, hatching eggs, and broiler production; marketing procedures; determining and controlling costs of production; choosing breeds and determining flock size, feeding systems, conversion ratios, labor efficiency, and other management factors.

# AGR 215 Farm Machinery Repair and Maintenance

3-2-4

Selection, care, and repair of large units of farm equipment and operating principles of self-propelled and tractor-drawn equipment studied in the classroom and in the field. Equipment such as balers, combines, corn pickers, cotton pickers, and peanut harvesters included in the study.

# AGR 218 Agricultural Mechanization

3-2-4

Study of farm machinery management, laborsaving devices, and the economics of selection and operation of farm machinery. Includes study and evaluation of feed grinders and mixers, storage facilities, materials handling systems, and other laborsaving devices.

#### AGR 222 Farm Electrification

3-2-4

Study of the basic principles and systems of farm electrification and their application to agricultural production, with emphasis on equipment for controlling the utilization of electricity.

#### AGR 223 Livestock Production

3-2-4

Study of the basic principles of livestock production, including the breeding, feeding, care, and management of farm animals.

# AGR 225 Agricultural Pollution Control

3-2-4

Study of the relationship between agriculture and environmental pollution. Topics covered include soils, control of animal wastes and feedlot management, pesticide use and misuse, biological control of agricultural pests, fertilizer runoff and control, stream sedimentation, the use of land for disposal of municipal wastewater, and state and federal regulations related to agricultural pollution.

#### AGR 227 Beef Production

3-3-4

Study of beef production including the selection, breeding, feeding, care, and management of a beef herd. The economical aspects of various systems of beef production.

#### AGR 228 Plant and Animal Diseases

3-2-4

Study of the germ theory of disease as applied to plant and animal production. Common plant and animal diseases and their symptoms, prevention, and control measures are included in the study.

# AGR 245 Crop Insects

3-2-4

Study of common crop insects, their economic importance, identification, life cycles, and hosts. Field trips to study insect damage to crops in the area.

Study of use of pesticides including their function, ingredients, beneficial aspects, and environmental hazards, with major emphasis on safe application and handling. Biological and other alternative methods of pest control are studied.

# AGR 254 Plant Propagation

3-2-4

Study of basic concepts and principles of sexual and asexual propagation. Techniques are learned through practical exercises conducted in laboratory sessions. Emphasis is given to those propagation methods widely utilized in the industry.

#### AGR 272 Tobacco Production

3-2-4

Review of the economic importance of tobacco in North Carolina, detailed study of certain aspects of the production and marketing of tobacco, and brief look at the processing and manufacturing phases.

# AGR 273 Corn, Peanut, and Soybean Production

3-2-4

Production, marketing, and improvement of corn, peanuts, and soybeans are covered in this course. The latest research information on seed varieties, fertilization, disease, weed control, cultural practices, equipment, harvesting, and marketing are stressed.

#### AGR 278 Weed Identification and Control

3-2-4

Study of the identification and control of annual and perennial weeds of economic importance in North Carolina.

# AGR 279 Farm Forestry

3-2-4

Deals with the fundamentals of forestry and farm forestry problems, including planting, thinning, protecting, harvesting, and marketing.

# AGR 285 Soil Fertility

3-2-4

Deals with soil fertility principles and the application of these principles to North Carolina soils, soil fertility evaluation, and soil conservation practices.

#### AGR 290 Soil and Water Conservation

3-2-4

Introduction to soil, water, and plant conservation; the available resources to carry out soil and water conservation measures; and the relationship of specialized knowledge in agronomy, biology, economics, engineering, soils, forestry, and recreation.

# AGR 296 Agricultural Programs and Agencies

3-0-3

Preview of public agricultural programs and agencies that provide services for agricultural producers, including their objectives, organization, functions, and services.

# AGR 297 Agricultural Policy and Programs

3-2-4

Concerned with the processes of agricultural policy formation in a democratic society and the role of individual and group actions in the development of public

 programs. Policies and programs are analyzed, including the relationship to demand, supply, income, population, the nature of agricultural production, and social welfare.

# AIR CONDITIONING, HEATING, AND REFRIGERATION

# AHR 101 Air Conditioning and Refrigeration

3-3-4

Introduction to the air conditioning and refrigeration field and to terminology relating to heating and cooling systems. Topics included are the basic laws of refrigeration, heat and heat transfer methods, servicing tools and equipment, and tubing and fittings. Shop practice will be given in operations such as tube bending, flaring, swaging, and soldering.

# AHR 106 Architectural Mechanical Equipment

3-3-4

General study of heating, air conditioning, plumbing, and electrical equipment, materials, and symbols, and building code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings prepared by mechanical engineers and coordination of mechanical and electrical features with structural and architectural designs are included.

# AHR 201 Principles of Heating

3-3-4

Warm air systems, heat emitter, electric heating, forced hot water and steam heating systems including selection and sizing of equipment such as registers, grills, furnaces, boilers, radiators, baseboards, piping, and ducts. Heating layout and specifications for an existing structure or one in blueprint stage will be prepared.

# AHR 1101 Automotive Air Conditioning

3-0-6-5

General introduction to the principles of refrigeration. Includes a study of the assembly of the components and connections necessary in the mechanisms, methods of operation and control, proper handling of refrigerants in charging the system, use of testing equipment in diagnosing trouble, and efficiency tests and general maintenance work.

# AHR 1115 Fundamentals of Heating

2-0-6-4

An introduction to the fundamentals of heating and heat transfer related to various types of heating systems. The use and care of tools, using instruments to measure combustion efficiencies, and installing equipment and ductwork to make up a heating system are covered. Also introduced are comfort surveys, heat loss and gain, equipment selection, and maintenance, solar heating and heating distribution systems.

# AHR 1121 Principles of Refrigeration

3-0-12-7

An introduction to the principles of refrigeration. Terminology, the use and care of tools and equipment, and the identification and the function of the component parts of refrigeration systems are covered. Practical work with hand tools, materials, piping, and ductwork is given to develop basic skills in the installation of refrigeration systems. Standard procedures and safety measures are stressed.

Prerequisite: AHR 1121.

Domestic refrigeration servicing of conventional, and hermetic systems. Cabinet care, controls, and system maintenance in window air conditioning units and domestic refrigerators and freezers are stressed. Commercial refrigeration servicing of display cabinets, walk-in cooler and freezer units, and mobile refrigeration systems are studied. Manufacturer's catalogs are used in sizing and matching system components and a study of controls, refrigerants, heat reclamation maintenance, and servicing methods is made. The American Standard Safety Code for Refrigeration is studied and its principles practiced.

# AHR 1123 Principles of Air Conditioning

3-0-12-7

Includes a study of the selection of various heating, cooling, and ventilation systems and the investigation and control of factors affecting air cleaning in air movement, temperature and humidity. Psychrometric charts are used in determining optimum temperature, and humidity control. Commercial air conditioning equipment is assembled and tested. Practical sizing and balancing of duct work is performed as needed.

# AHR 1124 Air Conditioning, Heating and Refrigeration Servicing

Prerequisite: AHR 1123.

Emphasis is placed on the maintenance and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air conditioned space. Shop work involves locating and correcting equipment failures and controlling, testing, and adjusting heating and cooling equipment to maximize energy conservation.

# AHR 1126 All Year Comfort Systems

3-0-6-5

3-0-6-5

Prerequisites: AHR 1123, AHR 1128.

Equipment used to provide heating and cooling for "all Year" comfort will be studied. Included will be heat pumps, oil fired, gas fired, water circulating, electric-resistance and an introduction to solar heating and cooling systems. Specialized controls required for all year comfort systems, preventive maintenance, and balancing are included in the course.

#### AHR 1128 Automatic Controls

3-0-6-5

Prerequisite: ELC 1102, AHR 1122.

Types of automatic controls and their function in heating and cooling systems. Included in the course will be electric, electronic, mechanical, and pneumatic controls for domestic and commercial heating and cooling along with zone controls, unit heater and ventilator controls, commercial fan system controls, commercial refrigeration controls, and radiant panel controls.

# **BANKING AND FINANCE**

#### AIB 111 Business Administration

4-0-4

Emphasis placed on the managerial responsibility of coordinating carefully the many facets of a business enterprise. Also stresses the background of administration, financial management, production, labor-management relations, marketing, coordination and control, and public relations problems.

Comprehensive treatment of all up-to-date principles giving the student ample opportunity through examples, illustrations, and correlated activities to learn how the principles are applied. End-of-unit summaries have special sections for both principles and managerial implications.

# AIB 121 Accounting II

4-0-4

Prerequisite: AIB 121

Content of this course selected with two major objectives in mind: immediate on-the-job usefulness and contribution to the student's future growth in the banking field. Consists of a detailed study of balance sheet items, covers manufacturing accounting and production costing, and includes an appropriate study of cost and analysis for managerial decisions.

# AIB 123 Financing Business Enterprise

4-0-4

Stress is placed on the difference between lending and investing, and on the fact that investing in a corporation and financing a corporation are different aspects of the same subject. Material is presented from the viewpoint of the corporate treasurer who must safeguard the financial future of the corporation.

# AIB 202 Principles of Bank Operation

4-0-4

Fundamentals of bank functions in a descriptive fashion so that the beginning banker may view the profession in a broad (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective so necessary for career advancement.

# AIB 203 Banking Investments

4-0-4

Because the bank's needs for primary reserves and loanable funds limit the funds available for investment, this course describes the nature of such funds and how their uses are determined. It also analyzes the primary and secondary reserve needs of commercial banks, the sources of reserves, and their random and cyclical fluctuations, showing the influence of these factors on investment policy. This analysis is followed by a study of yield changes as they affect a bank's long-term holdings.

# AIB 204 Bank Management By Objectives

0-2-1

Middle management seminar designed to assist bank officers in learning how to translate bank problems into realistic goals for the individual and the bank, through the management-by-objectives system. Cases and outside readings are used in this seminar. It can be presented as a brief, intense workshop or an eight-session seminar.

# AIB 205 Bank Management

4-0-4

Philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management.

# AIB 206 Bank Letters and Reports

4-0-4

Designed for those bank officers, supervisors, and employees who dictate or review correspondence. Since bank letters are actually public relations documents, all persons should be familiar not only with the mechanical forms of

bank letters but also with the psychological principles that help the letter writer achieve best results. Reviews letter forms, emphasizes fundamental principles underlying modern correspondence, and examines different kinds of bank letters.

#### AIB 207 International Banking

4-0-4

Introduction to a vast field for those working in international departments, as well as for those involved in the domestic activities of their banks. Presents the basic framework and fundamentals of international banking; how money is transferred from one country to another, how trade is financed, what the international agencies are and how they supplement the work of commercial banks, and how money is changed from one currency to another.

# AIB 208 Conference Planning and Leadership

0-2-1

Centered on a specific phase of the problem of human understanding. It is concerned with an important responsibility of management: to communicate and to coordinate ideas in the most effective way possible. It gives consideration to the dynamics of human interaction in groups convened to solve problems and make decisions. The essentials of parliamentary procedure are also stressed, thus presenting an effective technique for achieving consensus and formalizing and recording the decision-making process.

#### AIB 209 Installment Credit

4-0-4

Techniques of installment lending presented concisely. Emphasis is placed on establishing the credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Each phase of a bank's installment credit operation should be carefully scrutinized to be certain that the most efficient methods are employed, for only through an efficient operation can a bank maximize its profits on this particular kind of credit. Other topics discussed are inventory financing, special loan programs, business development and advertising, and the public relations aspect of installment lending.

#### AIB 210 Money and Banking

4-0-4

Stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply knowledge to a particular job. Historical treatment kept to a minimum. Emphasis is also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and structuring of portfolios.

# AIB 212 Planning Management Development

0-2-1

Middle management seminar designed to assist bank officers who are responsible for the planning, recruiting, and development of bank management personnel. Cases and outside readings are used. It can be presented as a brief, intense workshop or as a twelve-session seminar.

#### AIB 213 Trust Functions

4-0-4

Presents a complete picture of the services rendered by institutions engaged in trust business. Providing an introduction to the services and duties involved in trust operations, the course is intended for all bankers, not only those who are engaged in trust business. It endeavors to keep clear the distinction between business and legal aspects of trust functions.

160

Students given an opportunity to study all phases of speech situations. Directed primarily to the student seeking to give an account on the public platform: other speech situations are not neglected. Having studied the basic principles involved in organizing and presenting a speech, students are given suggestions to aid in developing speaking ability in such situations as conferences, panel discussions, radio, and television.

#### AIB 219 Credit Administration

4-0-4

Directed toward the executive level, concerned partly with a statement and a discussion of factors influencing and determining loan policy. Methods of credit investigation and analysis, credit techniques, specific credit problems, and regular as well as unusual types of loans are discussed.

# AIB 231 Savings and Time Deposit Banking

4-0-4

Reflects recognition of the fact that a knowledge of the historical development of savings institutions and an awareness of the basic economic function of the savings process are necessary to an understanding of the current operations and policies of these institutions. It begins with a review of the economics of the savings process in order to clarify important differences between financial savings by individuals or organizations and real savings that appear as capital formation. Different types of financial savings are reviewed in order to describe the system of financial flows of income to capital investment.

# AIB 232 Agricultural Finance

4-0-4

Reflecting the rapid growth of the off-farm agribusiness sectors (the suppliers of farm inputs), this course emphasizes general principles associated with the evaluation of management and the use of capital, rather than the examination of land and labor resources, which are more closely aligned with agricultural production. An understanding of agricultural finance should help the banker in satisfying the credit needs of modern agriculture.

# AIB 233 Analyzing Financial Statements

4-0-4

Characteristics of financial statements and financial statement analysis. The first section serves as a useful review of basic accounting principles for those students who have studied accounting. For those who have not, this section provides the minimum accounting background necessary for profitable study of financial statement analysis.

#### AIB 234 Loss Prevention

0 - 2 - 1

This seminar focuses on check cashing, check swindles, bank holdups, and security procedures.

#### AIB 235 Loan and Discount

3-0-3

This seminar teaches bank employees the essential facts about promissory notes, including calculating interest and discounting commercial paper; guarantees; general collateral agreements; examining and processing documents accompanying notes secured by stocks, bonds, and savings account passbooks, and the concepts of attachment, perfection, priority, default, and foreclosure.

# AIB 236 Home Mortgage Lending

4-0-4

Approaches the subject from the viewpoint of the mortgage loan officer who

seeks to develop a sound mortgage portfolio. A picture of the mortgage market is presented first, then the acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan processing and servicing, and finally the obligations of the mortgage loan officer in overall portfolio management.

# AIB 237 Selling Bank Services

0 - 2 - 1

Teaches tellers and new-accounts personnel how to recognize and meet bank customer needs: checking accounts, savings services, loans to individuals, safe deposit boxes, travelers checks, and cross selling.

# AIB 239 Bank Public Relations and Marketing

4-0-4

Discusses the basis of public relations, both internal and external, and seeks to explain the why, the what, and some of the how of public relations and marketing. Intended as an overview for all bankers in terms of what everyone in banking should know about the essentials of bank public relations and marketing.

#### AIB 259 Law and Banking

4-0-4

Introduction to basic U.S. law, presenting the rules of law which underlie banking. Topics include jurisprudence, the court system and civil procedure, contracts, quasi-contracts, property, torts and crimes, agencies, partnerships, corporations, sales of personal property, commercial paper, bank deposits and collections, documents of title, and secured transactions. Emphasis is on the Uniform Commercial Code.

# AIB 272 Supervision and Personnel Administration

4-0-4

Designed to aid first-line supervisors in making a smooth transition from expert in a particular task to the role of a supervisor who must produce results through the efforts of other people. In this role, the first-line supervisor must reflect management attitudes and carry out management policies while at the same time inspiring his group to achieve friendly cooperation and maximum production.

#### ANTHROPOLOGY

# ANT 150 Introduction to Anthropology

5-0-5

Prerequisite: Specified score on grading placement test or ENG 100R4 General introduction to anthropology, the science of man the culture bearing animal. Topics considered: physical evolution of mankind and biological variations within and between modern human populations, prehistoric and historic developments of culture, cultural dynamics viewed analytically and comparatively.

#### ANT 160 Societies Around the World

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4 Ethnographic survey of world culture areas showing similarities and variations in cultural patterns.

#### **ARCHITECTURE**

# **ARC 106** Architectural Drafting

2-6-4

Designed to provide fundamental knowledge of the principles of drafting. Basic skills and techniques of drafting included are the use of drafting equipment, lettering, pictorial sketching, geometric construction, and orthographic instrument drawing of principal views. Projection problems dealing with principles of descriptive geometry involving points, lines, planes, and solids, and the principles of isometric, oblique, and perspective drawings are included. Applications of descriptive geometry are used in visualization and analytical solutions of the drafting problems involving auxiliary views, intersections, and developments.

# **ARC 107** Architectural Drafting

2-6-4

Prerequisite: ARC 106

Includes the development of techniques in architectural lettering, symbols, dimensioning, freehand and instrument drafting, and the development of a complete set of working drawings for a residence, with construction details and the use of appropriate material symbols and connections. Section, scale details, and full-size details will be prepared from preliminary sketches.

# **ARC 108** Architectural Drafting

0-9-3

Prerequisites: ARC 107, AHR 106, and CIV 105

An indepth approach to the study of architectural drafting. Development of techniques in architectural lettering, dimensioning, freehand sketching and instrument drawing, and drawings of construction details, using appropriate material symbols will be included. A continuation of ARC 107, this course includes an introduction to commercial working drawings. Working drawings, including plans, elevations, sketches, scale details, and wall section details are prepared from preliminary sketches.

# **ARC 114** Codes and Regulations

2-0-2

Covers the building codes including national, state, and local regulations with special emphasis on energy-related aspects and their interpretations.

# ARC 201 Architectural Design I

3-9-6

Basic design principles; development of design as it relates to the details, structure, and aesthetic functions of buildings; design presentations, and architectural models; group and individual problems in design.

# ARC 202 Environmental Design

2-3-3

Prerequisite: ARC 107

Design principles of regional and city planning, research reports, maps, and problems in environmental design.

# ARC 220 Architectural Drafting

2-9-5

Prerequisite: ARC 108

Includes commercial working drawings; materials used in commercial buildings; systems of construction; and drawing of structural plans and details as prepared for building construction, including steel, concrete, and timber structural components. Appropriate details and drawings necessary for construction are studied. Reference materials are used to provide the draftsman with skills and knowledge in locating data and in using handbooks.

# **ARC 221** Architectural Drafting

Prerequisite: ARC 220

Individual or group projects involve the coordination of working drawings for commercial work. Consideration is given to coordination of mechanical and electrical features with structural and architectural components. A two-week problem in model building or architectural presentation work is included.

#### ARC 222 Architectural Drafting

2-9-5

Prerequisite: ARC 221, CIV 101, and DFT 235

Preparation of a complete set of working drawings for the architectural structure, coordinating floor plans, elevations, wall sections, and details. Site and landscaping plans are studied and drawn. Final assembly of the complete document for construction purposes made. Plans include environmental and energy considerations.

#### **ARC 233 Office Practice Seminar**

2-0-2

Study of the professional relationship of the architectural firm to clients, contractors, suppliers, consultants, and other architects. Ethics of the profession as applied to the draftsman's role in the architectural firm are emphasized as well as the legal aspects of architectural practice.

#### ART

# ART 160 Art Appreciation

3-0-3

Exploratory study of the visual experience; intended to enhance the student's understanding and enjoyment of art.

#### ART 170 Color and Design

5-0-5

Study of principles common to all visual work emphasizing color, line, shape, space, volume, texture, and their psychological and physical effects on the viewer.

#### BIOLOGY

#### **BIO 101 Basic Life Sciences**

4-2-0-5

Foundation of facts and principles in the normal structure and related functioning of the following body systems: skeletal, muscular, digestive, circulatory, respiratory, urinary, reproductive, endocrine, integumentary, nervous, and special sense organs. Presents principles and concepts of physiology and immunology. Presentation of the normal body as a basis for understanding variations from the normal.

#### **BIO 101A** Basic Life Sciences

4-2-0-5

Basic background in normal human anatomy and physiology. Body systems covered include skeletal, muscular, nervous, digestive, circulatory, and special senses.

#### **BIO 101B** Basic Life Sciences

4-2-0-5

Prerequisite: BIO 101A

Continuation of BIO 101A with emphasis on other body systems such as respiratory, urinary, reproductive, endocrine, and digestive.

# BIO 107 Anatomy and Physiology I

4-2-0-5

Study of the structure and normal function of the human body, with humans identified as living organisms composed of living cells, tissues, organs, and systems. Includes the basic physiologic aspects of skin, the skeletal, respiratory, and urinary systems. The laboratory portion includes relevant experiments to augment the students' learning of body structure and functions.

# **BIO 108** Anatomy and Physiology II

4-2-0-5

Continuation of the study of the structure and normal function of humans as living organisms. Special emphasis is on the circulatory, lymphatic, digestive, nervous, endocrine, reproductive systems, special senses, and fluid and electrolyte balance. Laboratory experiences include study of models and small animal dissection for insight into comparative structure and function of humans.

#### **BIO 201** Integrated Science I

4-2-0-5

Prerequisite: BIO 101, BIO 206

Introductory study of the basic principles of chemistry and applications to the understanding of body functions including the anatomy and physiology of the cell and integumentary, endocrine, reproductive, and respiratory systems. In addition, pathogenic agents of each system will be studied.

# **BIO 202** Integrated Science II

4-2-0-5

Prerequisite: BIO 201

Continuation of Integrated Science I (BIO 201); considers basic chemistry, anatomy, and physiology of the circulatory, lymphatic, urinary, and digestive systems. Fluids, electrolytes and acid-base balance are also studied.

# **BIO 203** Integrated Science III

4-2-0-5

Prerequisite: BIO 202

Continuation of Integrated Science II (BIO 202); considers basic chemistry, anatomy, and physiology of the special senses, nervous, skeletal, and muscular systems, and the relationship of these to health and disease.

# BIO 206 Microbiology

2-2-0-3

Prerequisite: BIO 101

Study of basic microbiology and its relationship to health and disease of humans, including basic laboratory practice, microbial physiology and environment, and medical and applied microbiology.

# **BIO 208** Pathology

3-0-0-3

Prerequisite: BIO 108

Detailed study of various diseases with emphasis on the ones most commonly seen in the radiology department. Radiographic appearance of the disease and the effect on radiographic exposure required for accurate visualization are dealt with in depth.

# BIO 250 General Biology I

3-2-4

Prerequisite: Specified score on reading placement test or ENG 100R4. Introduction to biological concepts and principles; a study of the chemical and physical properties of the living cell; selected laboratory experiments to supplement lectures.

# BIO 251 General Biology II

3-2-4

Prerequisite: BIO 250

Survey of the animal and plant kingdoms with emphasis on growth and differentiation, genetics, ecological control, structure, development, and reproduction.

# BIO 252 General Biology III

3-2-4

Prerequisite: BIO 251

Continuation of study of animals and plants with special emphasis on responsiveness in plants and animals, adaptation, ecology, current and past evolution.

#### BUSINESS

#### **BUS 100** Business Education Orientation

1-0-1

Orientation to the business community; emphasis on employment opportunities in the secretarial and clerical fields, entry level job requirements, services of local employment agencies and personnel departments, and procedures to follow in obtaining employment. Activities will include guest speakers from the business community and the business education department.

#### **BUS 101** Introduction to Business

3-0-3

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** Beginning Typewriting

2-3-3

Emphasis on study of the keyboard, mechanics of the typewriter necessary for the acquisition of elementary typewriting skills, and development of speed and accuracy.

#### **BUS 103** Intermediate Typewriting

2-3-3

Prerequisite: BUS 102 or equivalent

Development of speed and accuracy with future mastery of correct typewriting techniques as applied to tabulation, manuscript, correspondence, and business forms.

# **BUS 104** Advanced Typewriting

2-3-3

Prerequisite: BUS 103

Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as a typist producing mailable copy.

#### **BUS 105A** Introduction to Shorthand

2-3-3

Beginning course in theory and practice of reading and writing Gregg shorthand.

# **BUS 105B** Introduction to Shorthand

2-3-3

Prerequisite: BUS 105A or equivalent

Sequel to BUS 105A; emphasis on phonetics, penmanship, word families, brief forms, and phrases.

# **BUS 106 Beginning Shorthand**

Prerequisite: ENG 101S

Beginning course in theory and practice of reading and writing Gregg shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases.

# BUS 106A Shorthand Lab

0-5-0

5-0-5

Dictation practice in shorthand lab to accompany shorthand class.

#### **BUS 107** Intermediate Shorthand

5-0-5

Prerequisite: BUS 106 or equivalent

Corequisite: BUS 187

Continued study of theory with greater emphasis on dictation and elementary transcription.

# **BUS 107A** Shorthand Lab

0-5-0

Dictation practice in shorthand lab to accompany shorthand class.

# **BUS 108** Advanced Shorthand

5-0-5

Prerequisite: BUS 107 Corerequisite: BUS 187

Review of shorthand principles, daily speed practice, and development of greater dictation and transcription speed.

#### BUS 108A Shorthand Lab

0-5-0

Dictation practice in shorthand lab to accompany shorthand class.

#### **BUS 110 Office Machines**

2-2-3

Prerequisite: MAT 100R or equivalent

Training in techniques, processes, operations, and applications of ten-key adding machines, full keyboard adding machines, and electronic and rotary calculators.

#### **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. Students will also become familiar with modern filing equipment.

### **BUS 113** Machine Transcription I

5-0-5

Prerequisite: BUS 103 and ENG 101S

Introductory course in the correct techniques of operating the dictating and transcribing units, plus fundamentals of transcription such as spelling, punctuation, grammar, letter placement, and the use of reference materials.

# **BUS 114** Machine Transcription II

5-0-5

Prerequisite: BUS 113

Continuation of BUS 113 with additional emphasis on producing mailable business correspondence.

#### BUS 115M Medical Ethics and Law

3-0-3

Study of the principles of office conduct, ethical responsibility of the office staff with regard to information acquired, and obligations and responsibilities of the medical office worker or transcriber. Laws governing medical practice are also included.

#### **BUS 117 Office Machines**

3-2-4

Prerequisite: BUS 102 and MAT 109

Operation of the machines used in duplicating and calculating processes. An understanding of the functions of each machine and how it simplifies office work is developed. An appreciation for accuracy of machine work, and duplicating and calculating machines' vocabulary developed.

#### BUS 117M Office Machines: Medical

3-2-4

Prerequisites: BUS 103 and MAT 110

Operation of the electronic calculator and introduction to Magnetic Tape Selectric Typewriter as applied to medical office.

#### **BUS 123** Business Finance

3-0-3

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study of short-term, long-term, and consumer financing is included.

# BUS 128 Basic Accounting I

3-0-3

Study of the basic accounting concepts as applied to a personal service enterprise. Students work problems involving the accounting cycle, utilizing journals and ledgers and the preparation of financial statements. The course includes accounting methods of payrolls, merchandise, and notes.

#### BUS 129 Basic Accounting II

3-0-3

Prerequisite: BUS 128

Study of basic accounting concepts as applied to a merchandising firm. Includes a study of installment and consignment sales, accounting for purchases and sales, inventories, long-term assets and owner's equity, and year-end procedures to be followed in merchandising and wholesale businesses.

#### **BUS 134** Personal Grooming

3-0-3

Designed to help students recognize the importance of physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on poise, grooming, and methods of personal improvement.

# BUS 150 Ten-Key Adding Machine

0-2-1

Training in the techniques, processes, operations, and applications of the tenkey adding machine. Offered only for students not taking BUS 110 or BUS 117 for graduation or elective.

# **BUS 151** Full-Key Adding Machine

0-2-1

Training in the techniques, processes, operations, and applications of the full-key adding machine. Offered only for students not taking BUS 110 or BUS 117 for graduation or elective.

# **BUS 152** Electric Printing Calculator

0-2-1

Training in the techniques, processes operations, and applications of the electronic printing calculator. Offered only for students not taking BUS 110 or BUS 117 for graduation or elective.

# **BUS 153** Printing Calculator

0-2-1

Training in the techniques, processes, operations, and applications of the printing calculator. Offered only for students not taking BUS 110 or BUS 117 for graduation or elective.

# **BUS 154** Cash Register

0 - 2 - 1

Training in the techniques, processes, and operations of the cash register to a level of proficiency of ringing up one item every three seconds. Offered only for students not taking BUS 231 for graduation or elective.

#### **BUS 155** Mimeograph Machine

0-2-1

Prerequisite: BUS 102 or equivalent

Training in the preparation of materials for and the operation of the mimeograph machine. Offered only for students not taking BUS 117 for graduation or elective.

#### **BUS 156** Spirit Duplicator

0-2-1

Prerequisite: BUS 102 or equivalent

Training in the preparation of materials for and the operation of the spirit duplicator machine. Offered only for students not taking BUS 117 for graduation or elective.

#### **BUS 157** Typing Term Papers

0-2-1

Prerequisite: BUS 102 or equivalent

Training in typing, in correct format, outlines, manuscripts with footnotes, title sheets, and bibliographies. Offered only for students not taking BUS 103 for graduation or elective.

# **BUS 158** Applications in Billing Systems

0 - 2 - 1

Introduction to the fundamentals of mathematics in business and basic accounting procedures as necessary to the operation of an electronic billing system.

# **BUS 160** Introduction to Magnetic Tape Selectric Typewriter

0 - 2 - 1

Prerequisite: BUS 102

Introduction to the functions and principles of the operation of the IBM MTST, Model VI. Emphasis is placed on the principle of recording material on a magnetic tape. The course covers recording, adjusting, and playing back recorded material.

# BUS 161 Applications of Magnetic Tape Selectric Typewriter

0-2-1

Prerequisite: BUS 160

Emphasis is placed on recording various business forms on tape and playing back recorded copies of letters, manuscripts, and statistical typing.

# BUS 162 Applications of Magnetic Tape Selectric Typewriter

0-2-1

Prerequisite: BUS 161

Recording of form letters. Emphasis on revision function of MTST with practice on revising previously recorded material.

# BUS 163 Applications of Magnetic Tape Selectric Typewriter

Prerequisite: BUS 104 Corequisite: BUS 164

Introduces legal document formating and the application of legal documentation. Emphasizes the recording of legal forms on magnetic tape and the manual insertion of data on the playback copy.

# BUS 164 Magnetic Tape Selectric Typewriter

2-3-3

Prerequisite: BUS 102

Introduction to the functions and principles of the operation of the IBM MTST, Model VI. Emphasis is placed on the principle of recording material on a magnetic tape and playing back recorded copies of letters, manuscripts, and statistical typing, and on the revision function of the MTST with practice on revising previously recorded material.

#### **BUS 165** Introduction to Business

5-0-5

Survey of the business world with particular attention to the structure of various types of business organizations, methods of financing, internal organization, management, functions of business and relationships in society, and current problems.

#### BUS 166 Business Law I

3-0-3

Study of the law as it applies to ordinary business transactions, including the law of contracts, agency and employment, and commercial paper. Exposure to legal problems frequently arising in business and social life.

#### BUS 167 Business Law II

3-0-3

Continuation of BUS 166. Includes the law of personal property and bailments, sales, insurance, and torts.

# BUS 181M Administrative Medical Office Assistant Procedures

3-0-3

Provides adequate training for the assistant to be efficient in the medical office. Emphasis is placed on medical ethics and law; receptionists' duties; telephone techniques; mail processing procedures; records management billing, collecting, and banking procedures; and accident insurance.

#### **BUS 182M** Clinical Assistant Procedures

3-0-3

Continuation of medical office training covering a vast area of clinical techniques, such as microbiology, pharmacology, diagnostic laboratory procedures, first aid and medical emergencies, and administration of medications. Further study in assisting with physical therapy, minor surgery, etc.

# BUS 183E Terminology and Vocabulary: Executive

3-0-3

Prerequisite: BUS 107

Terminology and vocabulary appropriate to business, technical and professional offices.

# **BUS 183L** Legal Typing Practice

3-0-3

Prerequisite: BUS 103

Training in the functions, operations, and duties performed in a legal office. The course includes typing legal documents, reviewing general information about tasks assigned, following established procedures, performing general office routine, and learning the responsibilities of a legal secretary.

#### **BUS 183M** Medical Typing Practice

3-0-3

Prerequisite: BUS 103

Training in the functions, operations, and duties performed in a medical office. Technical material acquaints the prospective medical assistant with commonly used medical vocabulary and procedures.

# BUS 184M Terminology and Vocabulary: Medical I

3-0-3

Introduction to the study of the structure of medical words and terms. Emphasis is placed on spelling and defining commonly used prefixes, suffixes, root words, and their combining forms.

# BUS 185M Terminology and Vocabulary: Medical II

3-0-3

Continuation of the study of medical words and terms with emphasis on words as they pertain to anatomy, physiology, diseases, operations, tumors, drugs, and related descriptive terms.

# BUS 186M Terminology and Vocabulary: Medical III

3-0-3

Continuation of BUS 185M with additional study emphasizing the various systems of the body.

# **BUS 187** Introduction to Transcription

3-0-3

Prerequisite: BUS 106 Corequisite: BUS 107

Integration of the necessary skills for transcribing at the typewriter.

# BUS 187M Introduction to Medical Transcription

3-0-3

Prerequisites: ENG 101S and BUS 103

Introductory study of the language of medicine; focuses upon the building of a medical vocabulary through the use of word components.

# **BUS 188** Medical Transcription I

5-0-5

Machine transcription from cassette recordings produced by the American Medical Record Association of materials routinely transcribed in a medical office. Units include history and physical, radiology, operation, pathology, and autopsy reports and discharge summaries.

# BUS 189 Medical Transcription II

5-0-5

Continuation of BUS 188 with study units containing work in the following areas: psychiatry, pediatrics, obstetrics and gynecology, corrective surgery, and the endocrine, respiratory, genitourinary, gastrointestinal, cardiovascular, and neurological systems.

# **BUS 205** Production Typewriting

2-3-3

Prerequisite: BUS 258

Development of individual production rates. Techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study.

# **BUS 206** Dictation and Transcription

5-0-5

Prerequisite: BUS 108

Development of dictation and transcription skills with emphasis on mailable copy.

#### BUS 206A Shorthand Lab

0-5-0

Dictation practice in shorthand lab to accompany shorthand class.

#### **BUS 207** Dictation and Transcription

5-0-5

Prerequisite: BUS 206

Further development of dictation and transcription skills with emphasis on mailable copy.

#### **BUS 207A** Shorthand Lab

0 - 5 - 0

Dictation practice in shorthand lab to accompany shorthand class.

#### **BUS 213** Machine Transcription III

5-0-5

Prerequisite: BUS 114

Emphasis on refining machine transcription skills and developing proficiency in producing mailable copy.

#### **BUS 214A** Clinical Experience

0-18-6

Prerequisites: BUS 183M, 185M, 188, and 189

Introduction through on-the-job experience to practice of medical transcription, using tapes of actual medical records in a physician's office, clinic, or hospital record room.

#### BUS 214B Medical Transcriber Seminar

2-0-2

Study of personal responsibilities as a medical transcriber, including employeeemployer relations and evaluation of clinical experience. Medical transcription experienced by the members of the class in the various medical specialties will also be reviewed.

# **BUS 215 Office Application**

0-10-1

Prerequisites: BUS 214, BUS 205, and BUS 117

Emphasis on work experience and an opportunity for the practical application of the skills and knowledge previously learned. Student assigned to a commercial firm for general office work as required by the cooperating firm.

#### **BUS 216** Office Procedures

5-0-5

Prerequisites: BUS 113 or BUS 107, BUS 258

Designed to acquaint students with the responsibilities encountered by a general office worker during the work day, including receptionist duties, handling the mail, telephone techniques, handling the multi-office switchboard, travel information, telegrams, office records, purchasing supplies, office organization, and scheduling appointments.

# **BUS 219** Credit Procedures and Problems

Prerequisite: ACT 150

Principles of practices in the extension of credit and the collection of accounts. Federal and state laws pertaining to credit extension and to collection are included.

# **BUS 222** Intermediate Accounting

5-0-5

3 - 0 - 3

Prerequisite: ACT 152

Intensive review of the accounting cycle, including study of financial statements and closing procedures. Includes a more detailed study of current assets including cash, temporary investments, receivables, and inventories.

# **BUS 223** Intermediate Accounting

5-0-5

Prerequisite: BUS 222

Advanced study of inventories, investments, and plant and intangible assets. Both current and long-term liabilities are examined. Procedural as well as theoretical studies are made.

# **BUS 224** Intermediate Accounting

5-0-5

Prerequisite: BUS 223

Study of stockholder's equity accounts. Managerial information provided by earnings and equity per share, statement of changes in financial position, financial statement analysis.

# **BUS 225** Cost Accounting

3-2-4

Prerequisite: ACT 152

Nature and purposes of cost accounting; accounting for direct labor, materials, and factory burden; job cost and standard cost principles and procedures; selling and distribution costs; budgets, and executive use of cost figures.

# **BUS 227** Advanced Accounting

5-0-5

Prerequisite: BUS 224

Study of Professional Code of Ethics and APB Opinions. Application of accounting theory and principles through case studies.

#### BUS 229 Taxes

3-2-4

Prerequisite: ACT 152

Federal and state income tax preparation. Includes preparation of income tax forms for sole proprietorship, recording partnership income on the individual return, calculation of capital gains, accounting for rental property, and calculation of self-employment taxes.

# **BUS 231** Sales and Inventory Procedures

3-0-3

Emphasis on selling procedures, customer relations, marketing and displaying merchandise, use of the cash register, credit and sales, and inventory record-keeping as required for a general sales clerk.

# **BUS 232** Sales Development

3-0-3

Study of the fundamentals of retail, wholesale, and specialty selling as applied to the sales demonstration.

# BUS 233 Personnel Management

3-0-3

Study of the personnel department; policies of recruitment, selection, placement, training, and promotion; and employee health and safety.

# **BUS 235** Business Management

3-0-3

Study of the application of planning, staffing, controlling, directing, and financing to decision making.

# **BUS 239 Marketing**

5-0-5

Survey of the marketing process with a detailed study of functions, policies, and institutions.

#### **BUS 243** Advertising

3-2-4

Study of advertising appeals, product and market research, media selection, and testing the effectiveness of mass communications.

#### **BUS 247** Business Insurance

3-0-3

Presentation of the basic principles of various types of insurance.

#### **BUS 258** Speed Typewriting

2-3-3

Prerequisite: BUS 104

Emphasis on improving typing techniques, including stroke control, accuracy, forced speed building, and retained speed for long periods of typing straight copy.

#### **BUS 259 Office Simulation**

2-3-3

Prerequisites: BUS 216 and BUS 258

Culmination of typing skills development involving general clerical duties such as typing invoices, insurance forms, statements of account, form letters, reports, payrolls, purchase orders, and monthly reports. A simulation is used that gives realistic patterns of interaction with co-workers to enable students to learn firsthand the personal traits and human relations skills needed for successful employment.

# **BUS 268** Auditing Theory

3-0-3

Study of the audit profession; stresses professional responsibilities and ethics. An introduction to the audit process, including an overview, methods of obtaining audit evidence, and audit program planning.

#### **BUS 269** Auditing

3-2-4

Prerequisites: BUS 224 and BUS 268

More advanced study of auditing techniques including statistical sampling, tests of transactions and balances, and evaluation of internal control. The reporting function of auditing is closely examined.

#### **BUS 271 Office Management**

3-0-3

Study of basic management principles as applied to the office as a business service center.

#### **BUS 272** Principles of Supervision

3-0-3

Study of the responsibilities and duties of a supervisor as related to his supervisors, subordinates, and associates.

# BUS 284M Medical Terminology and Vocabulary

3-0-3

Prerequisite: BUS 183M

Emphasis on understanding medical terminology and vocabulary as used in business, technical, and professional offices.

BUS 290A	Special Problems in Business	1-0-1
BUS 290B	Special Problems in Business	1-0-1

BUS 290C Special Problems in Business 1-0-1

BUS 290C Special Problems in Business 1-0-1

Designed for students who want to expand their knowledge and ability in certain areas of business management, accounting, or secretarial skills. The course is structured to meet the objectives of each student and is supervised by an appointed member of the staff.

# **BUS 1103** Small Business Operations

3-0-0-3

Introduction to the business world; includes problems of small business operations, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

# **BUS 1105** Industrial Organizations

3-0-0-3

Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product costs.

#### **CARPENTRY**

# CAR 1101 Carpentry

3-0-15-8

Brief history of carpentry and present trends of the construction industry. Involves operation, care, and safe use of carpenters' handtools and power tools in cutting, shaping, and joining construction materials used by the carpenter. Major topics of study include theoretical and practical applications involving materials and methods of construction, building layout, preparation of site, footings and foundation wall construction, and form construction and erection.

# CAR 1102 Carpentry: Millwork and Cabinetmaking

3-0-15-8

Prerequisites: CAR 1101 and DFT 1110

Cabinetmaking and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment emphasized in learning methods of construction of millwork and cabinetry. Practical applications include measuring, layout, and construction of base and wall cabinets, built-in-desks, door and window frames, stairs, and interior and exterior cornices and trim. Materials and finishes are also studied.

# CAR 1103 Carpentry: Framing

3-0-15-8

Prerequisites: CAR 1101 and DFT 1111

Principles and practices of frame construction beginning with the foundation sills and including floor joists, subfloors, wall studs, ceiling joists, rafters, bridging, bracing, sheathing, and interior wall partitions. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction, and post and beam construction. Application and selection of sheathing and roofing is included. Consideration is given to

coordination of carpentry work with installation of electrical, air conditioning, heating, plumbing, and mechanical equipment.

# CAR 1104 Carpentry: Finishing I

3-0-15-8

Prerequisites: CAR 1103 and DFT 1111

Emphasis on exterior and interior trims and finishes. Included are materials and methods used in finishing carpentry such as exterior cornices, door and window trims, interior flooring, door and window facings, moldings, and cornice construction; installation of hardware; and installation of built-in equipment and cabinets.

# CAR 1105 Carpentry: Finishing II

3-0-15-8

Further application of the skills acquired in CAR 1104.

#### CAR 1106 Carpentry: Finishing III

3-0-15-8

Continuation of CAR 1105.

#### **CAR 1113 Carpentry: Estimating**

3-0-3-4

Prerequisites: DFT 1111 and MAT 1112

Practical course in quantity "take off" from prints of jobs performed by the carpenter; figuring the quantities of materials needed and costs of building various components and structures.

# CAR 1114 Building Codes

3-0-0-3

Prerequisite: CAR 1103 Corequisite: CAR 1104

Study of building codes and the minimum requirements for local, county, and state construction regulations. Attention is given to safety, sanitation, mechanical equipment, and materials, and to a review of the minimum property requirements of the Federal Housing Administration and the North Carolina State Code.

#### COMMERCIAL ART

# **CAT 101** Advertising Principles

3-0-3

Comprehensive survey of the history and development of advertising including a discussion of its economic and social values. Introduction to advertising media and current publications in the field.

# CAT 102 Drawing!

1-4-3

Emphasis on basic principles and fundamentals of drawing. Includes application of these basic techniques in problems in perspective drawing and drawing from nature.

# CAT 103 Drawing II

1-4-3

Prerequisite: CAT 102

Course consisting of a series of problems in which students explore color and advanced wet and dry media.

# CAT 104 Drawing III

1-4-3

Prerequisite: CAT 103

Course consisting of a series of problems concentrating on graphic interpretation of still-life, landscape, and figure.

Prerequisite: CAT 102

Introduction to the mechanics of drawing the human form, using various drawing instruments and surfaces. The special qualities of the evolving human forms, proportions, and emotional expression of form are emphasized.

# CAT 106 Life Study

1-4-3

Prerequisite: CAT 105

Graphic interpretation and response to the live model with attention to topics such as proportioning, the aging process, character, expression, and draping the model. Building of the figure with attention to placement, balance, rhythm, turning, twisting, wedging, distribution of masses, perspective of form, planes of form, abdominal arch, hair forms and variations are also included.

# CAT 107 Drafting for Art

1-3-2

Introduction to the field of drafting. Includes a study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are the use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric instruction, orthographic instruction drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective drawing are introduced.

# CAT 108 Drafting for Art

1-3-2

Prerequisite: CAT 107

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. Introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices approved by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometrical objects.

# CAT 110 Survey of Art History

3-0-3

Brief survey of art and its development in Western Civilization with emphasis on the development of art forms of expression from Egypt through the twentieth century.

# CAT 121 Design I

3-6-6

Introduction to basic design and its elements and concepts. Deals with problems in balance, value, line, texture, and shape. Work wth basic tools and materials to explore some of the design possibilities of the two-dimensional format included.

# CAT 122 Design II

3-6-6

Prerequisite: CAT 121 or portfolio

Continuation of Design I with emphasis on the fundamentals and theories of color and its application and design potential.

# CAT 123 Layout and Design I

2-6-6

Prerequisites: CAT 121, CAT 122, DFT 101, and DFT 102

Introduction to the basic techniques of layout and graphic design including paste-up, mechanicals, typography, and production.

# CAT 201 Life Study

Prerequisite: CAT 106

Advanced course in drawing from a live model with emphasis on the structure of the human figure, its position in space, how light and shadow play on body shapes, character of solid form, and the figure in an environment.

# CAT 210 Production Techniques

1-4-3

Introduction to production techniques. Includes the exploration of mechanical type and its formation and uses. Airbrush techniques and the commercial uses of silkscreen printing are also included. Each student should acquire a working knowledge of each medium through laboratory exercises provided.

#### CAT 212 Advertising Illustration

1-4-3

Introduction to the use of the illustration in advertising. Students will explore the uses of media and illustration styles.

# CAT 213 Advertising Illustration

1-4-3

Prerequisite: CAT 212

Advanced problems in advertising illustration with emphasis on originality and the readiness of each student to explore assigned tasks and problems.

#### CAT 214 Type and Letter Form Design

1-4-3

Includes hand exercises with the pencil, pen point, and lettering brush as well as mechanical procedures and laboratory exercises to acquire knowledge of availability of type and its usage.

# CAT 215 Calligraphy

1-4-3

Art of elegant handwriting executed with special tools of penmanship. Introduction to beautiful, historic alphabets and graphic compositions composed entirely of calligraphy. Awareness of balance, tone, texture, size, proportion, and rhythm; thus perceiving letters as individual designs and word composition as an art form.

# **CAT 218** Photomechanical Techniques

2-6-5

Advanced darkroom techniques concerning both tonal and graphic arts photography. Students explore means of producing finished photo art work for client presentation.

# CAT 224 Layout and Design II

3-6-6

Prerequisite: CAT 123

Introduction to intermediate layout and design techniques for offset printing, including the preparation of camera-ready art work. Laboratory problems include an introduction to the graphic art darkroom procedures necessary for offset printing and an introduction to the offset press operation.

#### CAT 225 Graphic Design I

3-6-6

Study of advanced problems in layout and design techniques and advanced darkroom procedures necessary for offset production. Laboratory exercises include multicolor offset production problems.

# CAT 226 Graphic Design II

3-6-6

Includes use of simulated professional working conditions in utilizing advanced layout and design techniques for printing. Students will explore a variety of problems and present solutions for general class critique and discussion.

## CAT 235 Portfolio Development

1-4-3

Students become familiar with specific areas of interest and prepare personal portfolios for presentation to prospective employers.

## CAT 240 Painting: Oil and Acrylic

0-6-3

Introduction to basic techniques of painting. Included is a study of early developments in underglazing to direct impasto and the use of tools and instruments of painting. Methods of applying paint to surface and dynamic use of color and form are emphasized.

## CAT 241 Painting: Water Color

0-6-3

Introduction to the methods of water-color painting. The fluidity of the medium, dry brush effects, and the use of tools and instruments of painting are included. Emphasis will be placed on the integrity of the medium.

### CAT 242 Drawing: Pastels

1-4-3

Introduction to techniques of pastels, including experimenting with application of chalk to various papers. The use of tools of the craft, methods of applying chalk to the paper surface, and utilizing the paper itself as a moving force in the medium are also included.

## CAT 243 Portrait Painting

1-4-3

Preliminary course in graphic representation of the human face, studying skull and neck structure, muscle development, hair forms, facial forms, and expression.

#### CAT 244 Fashion Illustration

1-4-3

Study of the clothed figure, with attention to the functional relationship of fashion design to the human form and to the study of draped fabric. Graphic interpretations of a live model in gesture, and rendering fabric effects is emphasized.

## CAT 245 Painting: Water Color II

0-6-3

The field of illustration will be explored using water color as medium. Special attention will be given to the organization of forms, the many aspects of color, the application of paint as texture and light, and the special effects of various instruments. Work will be done from magazine cutout collages and from actual on-location field trips.

# CAT 250 Special Problems in Commercial Art and Graphic Design

1-4-3

Designed for students who wish to expand their knowledge and ability in particular areas of interest. Permission to enroll must be obtained from department chairman.

# CAT 251 Special Problems in Commercial Art and Graphic Design

3-6-6

Course designed for the exceptional student who wishes to develop a particular project in a specific area of interest. Permission to enroll must be obtained from department chairman.

#### **CHEMISTRY**

# CHM 101 Chemistry

4-2-5

Review 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; and electro-chemistry, electrolytes, and electrolysis; application of chemistry to industry.

# CHM 102 Inorganic Chemistry I

4-2-5

Introduction to environmental chemistry; covers the relationship of chemistry to humans and the environment. Topics studied include environmental measurement, atomic theory, the nature of chemical bonds, the structure of matter, molecular motion, and chemical reactions. Practical applications are emphasized using class demonstrations and labs.

## CHM 103 Inorganic Chemistry II

4-2-5

Prerequisite: CHM 102

Continuation of CHM 102; includes practical applications of environmental problems. Topics covered include inorganic nomenclature, gas laws and properties, the liquid state, solutions and concentration, chemical equilibrium, acids, bases, introductory organic chemistry, heavy metals. Demonstrations and labs are utilized.

## CHM 106 Organic Chemistry

4-2-5

Study of the general principles and theories of organic chemistry and the preparation, formulas, and properties of the most important organic compounds, with a brief description of synthetic compounds of commercial value; vitamins, antibiotics, hormones, and pesticides are included.

## CHM 110 Chemistry for Nurses

3-0-0-3

Designed primarily for students in health-related fields. Emphasis placed on the practical aspects of inorganic, organic, and biological chemistry. Theoretical topics in chemistry are dealt with as an aid to understanding and studying human bodily processes.

### CIVIL ENGINEERING

## CIV 101 Surveying

2-0-6-4

Prerequisites: MAT 102 and ARC 107

Study of the theory and practice of plane surveying including taping, differential and profile leveling, cross sections, earthwork computations, transit stadia, and transit tape surveys. Layout of footings, floor levels, site work, and mapping included.

## CIV 102 Surveying

2-0-6-4

Triangulation of ordinary precision, use of plane tablet, calculation of areas of land, land surveying, topographic surveys, and mapping are included in this course.

Includes a study of route surveys by ground and aerial methods; simple, compound, reverse, parabolic, and spiral curves; geometric design of highways; and highway surveys and plans, including mass diagrams.

## CIV 105 Architectural Materials and Methods I

3-3-4

Materials used in the construction of architectural structures are studied. Field trips to construction sites and a study of manufacturers' specifications for materials and of properties and standard sizes of structural materials and construction techniques are included.

## CIV 106 Architectural Materials and Methods II

3-3-4

Prerequisite: CIV 105

Study of building materials and construction methods for commercial buildings.

### **CIV 110** Surveyor Practices

1-0-0-1

Study of the legal principles of surveys and resurveys, including boundary control and interpretation of deed descriptions. Legal, judicial, and historical aspects of land surveying also studied.

#### CIV 114 Statics

5-0-5

Prerequisite: MAT 102

Study of forces, resultants, and types of force systems; moments, equilibrium of coplanar forces for analytical and graphic methods; stresses and reactions in simple structures; equilibrium of forces in space, and center of gravity, centroids, moment of inertia, and hydrostatic load analysis.

## CIV 204 Surveying

2-0-6-4

Study of aerial photogrammetry, applications of aerial surveys, building and road construction surveying, lines and grades for foundation layout, building construction bridge layout, sewer and pipe line surveys.

# CIV 216 Strength of Materials

3-2-4

Prerequisites: CIV 114 and MAT 103

Study of fundamental stress and strain relationships; shear and bending moments; stresses and deflections in beams and columns. Design of members also included.

#### CIV 221 Reinforced Concrete Construction

3-2-4

Prerequisite: CIV 216

Analysis and design of reinforced concrete beams, floor systems, columns, use of CRSI Design Handbook, introduction to ultimate strength design, and principles of prestresses and precast concrete are studied. Field inspection trips are included.

# CIV 223 Codes, Contracts and Specifications

2-0-0-2

Study of the basic principles and methods significant in contract relationships; legal considerations in construction work; and the National Building Code and local building codes. Interpreting and outlining specifications also included.

#### CRIMINAL JUSTICE COURSES

#### CJC 101 Introduction to Criminal Justice

5-0-5

Designed to provide an overview of the criminal justice system including its philosophy, objectives, and legal limitations in a democratic society.

## CJC 102 Legal Research I

3-0-3

Methods of legal research, proper citation of authority, acquaintance with legal treaties, texts, reports, and the use of Shepard's Citations.

# CJC 109 Interviewing

3-0-3

Prerequisite: Permission of Instructor or Coordinator

Designed to provide a knowledge of the fundamental techniques employed in interviewing; introduction to interrogation and overview of sources of information available to investigators.

#### CJC 112 Motor Vehicle Laws

3-0-3

Study of the traffic enforcement codes with primary emphasis on North Carolina Law.

#### CJC 113 Corrections Law

3-0-3

Study of the laws which deal with the rights, custody, and control of individuals under the supervision of the judicial system.

### CJC 115 Criminal Law I

3-0-3

Study of criminal laws dealing with offenses against the person. Emphasis placed on North Carolina Law.

#### CJC 116 Criminal Law II

3-0-3

Prerequisite: CJC 115 or permission of Instructor or Coordinator Study of criminal laws dealing with offenses against property. Emphasis placed on North Carolina Law.

# CJC 120 Principles of Organization

3-0-3

Introduction to the principles of organization and administration with emphasis upon theories and techniques utilized in public agencies.

## **CJC 121** Personnel Supervision

3-0-3

Prerequisite: CJC 120 or permission of Instructor or Coordinator Study of the principles and theories employed in modern personnel supervision.

## CJC 125 Criminal Procedure

2-0-2

Designed to provide the student with a knowledge of legal aspects of criminal procedures from the initial investigation through the final appeal.

# CJC 151, 152, 153, 154, 155, 156 Readings in Criminal Justice

1-0-1

Designed for students who wish to specialize or expand their knowledge in certain areas of criminal justice. Under the supervision of police science faculty members, the student studies materials relative to concepts in criminal justice and writes critical analyses. Time for students' independent study allotted; and individual conferences with the supervising instructor.

# CJC 204 Evidence Photography

3-3-4

Study of photographic principles and their application to evidence photography. Students develop skills in photographic techniques and the use of various types of equipment through lab practice.

#### CJC 205 Evidence

3-0-3

Instruction covers the legal aspects of the various kinds and degrees of evidence and the rules governing the admissibility of evidence in court.

# CJC 210 Criminal Investigation

4-2-5

Prerequisites: CJC 204 and CJC 211

Course designed to instruct the student in the fundamental concepts of investigation.

### CJC 211 Criminalistics

4-2-5

Prerequisite: CHM 101

General survey of the methods and techniques employed in modern scientific investigations with emphasis on evidence which is compared by physical means.

#### CJC 235 Forensic Science

3-2-4

Prerequisite: CHM 101

Survey of the physical sciences and their application to the field of investigation with emphasis or evidence which is compared chemically.

#### **COOPERATIVE EDUCATION**

# COE 100 Student, Career, and Society

3-0-3

Introduction and orientation to experiential education and to broader participation in society. Attention is given to responsibilities and opportunities associated with career improvement and to preparation for employment in the business, industrial, and professional community. Application of theory to the actual work situation is emphasized. Designed to help students in vocational, technical, and college transfer programs make the transition from the campus to the world of work.

# COE 101 - A, B, C, D* Cooperative Education Field Experience

0 - 10-40 - 1-4

COE 102 - A, B, C, D

COE 103 - A, B, C, D

COE 104 - A, B, C, D

COE 105 - A, B, C, D

COE 106 - A, B, C, D

Through Cooperative Education, students work in part-time or full-time positions related to their programs of study or career interests and for employers selected and/or approved by the institution. Students are supervised by a faculty member or cooperative education supervisor from the institution. Normal credit hours for the field work of a cooperative program are determined by dividing the average number of hours worked per week by ten and rounding to the nearest whole number. Generally, a student may receive a maximum of four credit hours during any one quarter and a maximum of nine credit hours toward degree or diploma requirements. Those enrolled in the associate in arts degree program can earn up to 6 credit hours.

^{*}A(1), B(2), C(3), D(4) indicates credit hours possible.

#### COSMETOLOGY

# COS 1101 Cosmetology I

0-400-12

Includes a study of professional ethics, grooming and personality development, sterilization, sanitation, first aid, and bacteriology. The practical work is devoted to fingerwaving, pin curling, roller curling, manicuring, marcelling, hair cutting, and hair relaxing.

## COS 1102 Cosmetology II

0-400-12

Study of the theory and practical application of permanent waving (cold and heat wave), tinting and bleaching, anatomy, facials, and scalp treatments.

### COS 1103 Cosmetology III

0-400-12

Study of the theory and practical application of hair styling and wig care; disorders of skin, nails, and hair; electricity; chemistry; and operational management.

### COS 1104 Cosmetology IV

0-300-12

Study of the theory and practical application of advanced hair styling, operational management, and salesmanship.

#### **CORRECTIONAL SCIENCE**

# CSC 201 Marriage and the Family

3-0-3

Study of courtship, engagement, marriage, parenthood, and family living in contemporary American society. Emphasis is placed on social, economic, sexual, and legal aspects of family living and the adjustment of individuals to their respective roles in the family.

#### CSC 202 Introduction to Recreational Services

3-3-4

Introduces historical and philosophical foundations of leisure and recreation; concepts concerning recreation, the meaning of leisure and recreation, the socio-economic movements which have affected the growth and development of recreation, the economic importance of recreation, the social institutions providing recreation services, and the types of areas and facilities used in recreation. Laboratory requirements are three hours a week doing practical work in an appropriate setting.

## CSC 203 Survey of Corrections

3-0-3

Introduction and overview of fundamental processes, trends, and practices of juvenile and adult probation, institutional treatment, parole, and contemporary community-based correctional programs, both public and private. Review of the history and philosophy of corrections, with emphasis on the constitutional rights of offenders included.

# CSC 207 Confinement Facilities Administration

3-0-3

Supervision and administration of confinement facilities, involving techniques of inmate supervision, security, medical care of prisoners, food preparation, sanitation, and various legal aspects controlling detention facilities, correctional institutions, and jails.

# CSC 213 Dynamics of Substance Abuse

3-0-3

Introduction to the problem of substance abuse (alcohol, drugs, narcotics) in society. Designed to equip criminal justice, social service, and other human service workers with increased knowledge concerning history and classification of drugs of abuse; social impact, physical and psychological results of their abuse; and the various facilities and treatment modalities being used.

# CSC 224 Rehabilitation Techniques

3-0-3

Explores the different avenues of rehabilitation; new and innovative techniques of rehabilitation emphasized as they relate to successful methods.

# CSC 226 Administration and Interpretation of Tests

3-0-3

Study of the rationale for group and individual testing. Includes the administration as well as the uses of tests of intelligence, interest, and achievement in educational and career planning. Practicum experience closely correlated with classroom activities so that students may apply knowledge and skills to actual on-the-job learning situations.

## CSC 229 Career Information

3-2-4

Study of the career and education information available to aid students in career decision-making. Includes a study of the world of work, sources of occupational information; and sociological and psychological factors which influence career planning. Practicum experience correlated with classroom activities so that students apply knowledge and skills to actual on-the-job learning situations.

## **CSC 234** Community-Based Corrections

3-0-3

Exploration of philosophy and programs of juvenile and adult probation supervision, aftercare parole, halfway homes, work and educational release-furlough, as well as executive clemency and interstate compact practices. Dilemma of surveillance-custody/control factors vs. supervision-treatment examined. Introduction to classification of offenders, followed by analysis of possible treatments. Citizen-agency relationships investigated, along with potentials of utilizing citizen volunteer programs.

#### DRAFTING

## **DFT 101** Technical Drafting

1 or 0 - 3 or 6 - 2 or 3

Introduction to the field of drafting. Includes a study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are the use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric instruction, orthographic instruction, drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective drawing are introduced.

# **DFT 102** Technical Drafting

1 or 0 - 3 or 6 - 2 or 3

Prerequisite: DFT 101

Application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions. Introduction of the graphical analysis of space problems stressed. Problems of practical design elements involving points, lines, planes, and a combination of these elements are studied. Dimensioning practices approved by the American Standards Association are included.

Introduction to intersections and developments of various types of geometrical objects.

# DFT 104 Blueprint Reading - Mechanical

3-0-3

Interpretation and reading of blueprints. Information on the basic principles of the blueprint including lines, dimensioning procedures, and notes.

# DFT 105 Blueprint Reading and Technical Sketching

3-0-3

General course in interpreting and reading blueprints. Information includes the basic principles of the blueprint, lines, views, dimensioning procedures, and notes. Emphasis placed on reading of blueprints common to the building systems. Sketching as a means of passing on ideas and information introduced.

## DFT 106 Blueprint Reading and Technical Sketching

2-0-2

General course in interpreting and reading blueprints. Information includes the basic principles of the blueprint, lines, views, dimensioning procedures, and notes. Emphasis placed on reading of blueprints common to the building systems. Sketching as a means of passing on ideas and information introduced.

### **DFT 230 Structural Drafting**

2-6-4

Prerequisites: ARC 220 and CIV 105

Concentrated study and drawing of structural plans with emphasis on details and shop drawings of the structural components of buildings including steel, reinforced concrete, and timber structures. Appropriate symbols, conventions, dimensioning practices, and notes used by the draftsman included. Emphasis also on drafting appropriate drawings for fabrication and erection of the structural components.

# DFT 235 Codes, Specifications, and Contract Documents

3-3-4

Prerequisite: ARC 220.

Study of building codes and their effect on specifications and drawings. Purpose and writing of specifications and their legal and practical application to working drawings are studied. Contract documents analyzed and studied to determine client-architect-contractor responsibilities, duties, and mutual protection.

# DFT 236 Construction Estimating and Field Inspection

3-3-4

Prerequisite: DFT 235

Includes interpretation of working drawings for a project; preparation of material and labor quantity surveys from plans and specifications; and approximate and detailed estimates of costs. Students study material take off, labor take off, subcontractors' estimates, overhead costs, and bid and contract procedures. Detailed inspection of the construction by comparing the finished work to the specifications is also included.

# DFT 1104 Blueprint Reading: Mechanical

3-0-0-3

Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures, and notes.

# DFT 1105 Blueprint Reading: Mechanical

3-0-0-3

Prerequisites: DFT 1104 or DFT 1201

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, and sketching as a means of passing on ideas.

# DFT 1106 Blueprint Reading: Mechanical

3-0-0-3

Prerequisite: DFT 1105

Advanced blueprint reading and sketching as related to detail and assembly drawings used in machine shops. Interpretation of drawings of complex parts and mechanisms for features of fabrication, construction, and assembly.

# DFT 1110 Blueprint Reading: Building Trades

3-0-0-3

Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three-dimensional views and pictorial sketches.

# DFT 1111 Blueprint Reading and Sketching I

3-0-0-3

Prerequisite: DFT 1110

Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches, and cavity wall construction. Development of proficiency in making three-dimensional views and pictorial sketches.

# DFT 1112 Blueprint Reading and Sketching II

3-0-0-3

Prerequisite: DFT 1111;

Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings studied with emphasis on the plot plan, floor plan, basement and/or foundation plan, walls, and various detailed drawings of masonry work.

# DFT 1113 Blueprint Reading and Sketching III

3-0-0-3

Prerequisite: DFT 1110

Interpretation of schematics, diagrams, and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes included.

# DFT 1113-M Blueprint Reading and Sketching: Masonry

3-0-0-3

Prerequisite: DFT 1112

A study of different types of structural designs and details for commercial construction. A study of different construction trades and how each trade relates to the masonry trade.

# DFT 1114 Blueprint Reading: Electrical

0-0-6-2

Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three-dimensional views and pic-

torial sketches. Interpretation of schematics, diagrams, and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes included.

## DFT 1116 Blueprint Reading: Air Conditioning

1-3-0-2

Prerequisite: DFT 1104.

A specialized course in drafting for the air conditioning, heating, and refrigeration student. 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, heating system plans including duct and equipment layout plans, and shop sketches. The student will make tracings of floor plans and layout air conditioning systems.

### DFT 1117 Blueprint Reading: Welding

3-0-0-3

Prerequisite: DFT 1104

Study of trade drawings in which welding procedures are indicated. Interpretation, use, and application of welding symbols, abbreviations, and specifications.

## **DFT 1118 Pattern Development and Sketching**

3-0-0-3

Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis placed on developing pipe and angle layouts by the use of patterns and templates.

# **DFT 1120 Drafting: Electronic Servicing**

3-0-3-4

Introduction to the field of drafting; includes a study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are the use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. Principles of isometric, oblique, and perspective drawing introduced.

#### DFT 1121 Drafting

3-0-12-7

Introduction to drafting and the study of drafting practices: selection, use, and care of instruments; single-stroke lettering; applied geometry; and freehand sketching consisting of orthograhic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views emphasized. Dimensioning and note practices studied with reference to the American Standards Association practices. Methods of reproducing drawings included.

# DFT 1122 Drafting

3-0-6-5

Prerequisite: DFT 1121

Study of simple and successive revolutions and their applications to practical problems. Sections and conventions studied and detail and assembly sections. Intersections and developments studied by relating the drawing to the sheet metal trades. Models of the assigned drawings made from construction paper, cardboard, or similar materials as proof of the solution to the problems drawn. Methods of drawing and projecting axonometric, oblique, and perspective

drawing studied with emphasis on the practical applications of pictorial drawings. Various methods of shading introduced and dimensioning and sectioning of oblique and axonometric pictorials included.

# **DFT 1125** Descriptive Geometry

2-0-3-3

Prerequisite: DFT 1121

Graphical analysis of space problems including practical design elements which involve points, lines, planes, connectors, and combinations of these, and problems involving solid geometry theorems. Where applicable, each graphical solution accompanied by the analytical solution.

# **DFT 1131** Mechanical Drafting

3-0-12-7

Prerequisite: DFT 1121

Introduction to mechanical drafting problems concerning precision and limit dimensioning; and methods of fastening materials such as keys, rivets, springs, and welding. Symbols studied and drawings made involving these items. Principles of design introduced with study of basic mechanisms of motion transfer. Gears, cams, and calculating dimensions studied. Drawings made involving these mechanisms.

## **DFT 1132** Mechanical Drafting

3-0-12-7

Study of the principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings, and simplified drafting practices. Forging and casting drawings made from layouts. Specifications, part lists, and bills of materials emphasized. Students develop a complete set of working drawings of a tool, jig, fixture, or simple machine and learn principles of design and handbook and manual usage.

## DFT 1201 Drafting: Mechanical I

1-3-0-2

Introduction to drafting room procedures; sketching as a means of passing on ideas, information, and processes; and the use of drafting instruments in the practice of lettering, dimensioning, orthographic projections, and working drawings.

# DFT 1202 Drafting: Mechanical II

1-3-0-2

Prerequisite: DFT 1201

Additional instruction and practice in orthographic projections, working drawings, lettering, and dimensioning. Also included is an introduction to sectioning, pictorial drawings, and the use of drawing instruments for the graphical solution of geometrical problems. Emphasis placed on interpretation of shop blueprints to better prepare students for DFT 1105.

#### **ECONOMICS**

## **ECO 102** Economics

3-0-3

Fundamental principles of microeconomics including the institutions and practices by which people gain a livelihood. Emphasis placed on basic conditions for the market system and how the market process functions in the real world. Supply and demand and price and cost emphasized in addition to current economic problems.

#### ECO 104 Economics

Continuation of a study of the principles of economics, with emphasis on macro issues such as national output and income, international trade and finance, and current economic problems.

#### **ECO 108** Consumer Economics

3-0-3

Designed to help students use their resources of time, energy, and money. Students given opportunities to build useful skills in buying, managing finances, increasing resources, and understanding the economy better.

#### ECO 150 Economics I

3-0-3

Fundamental principles of microeconomics including the institutions and practices by which people gain a livelihood. Emphasis placed on basic conditions for the market system and how the market process functions in the real world. Supply and demand, price and cost, and current economic problems stressed.

#### ECO 151 Economics II

3-0-3

Continuation of a study of the principles of economics, with emphasis on macro issues such as national output and income, international trade and finance, and current economic problems.

#### ECO 152 Economics III

3-0-3

Continuation of the study of basic economic principles. Emphasis placed on current macro and microeconomic problems and application of economic principles to short-range forecasting.

## **ECO 201** Cost-Benefit Analysis

3-0-3

Study of methods for project evaluation including decision criteria, identifying and quantifying cost and benefits, and procedures for performing a cost benefit analysis.

#### **ELECTRONIC DATA PROCESSING**

#### EDP 105 Keypunch

3-2-4

Prerequisite: BUS 102

Fundamentals in operating the keypunch machine with emphasis on attaining skills that meet minimum industrial standards for keypunch operators. Includes practice in taking raw data and transferring it to punched card form.

#### **EDP 114** Introduction to Computer Concepts

3-0-3

Introductory course in computers for students pursuing degree in data processing or desiring a general non-technical knowledge of terminology and concepts. No previous knowledge or experience in data processing required.

#### EDP 115 Fortran

2-4-4

Fundamental course in FORTRAN programming. The FORTRAN language structure, statements, and programming methods and techniques are studied. Students develop program logic and write FORTRAN programs for solving sample problems.

## EDP 116 Assembly Language 1

2-4-4

Study of symbolic computer languages with emphasis on a particular example of

such a language. Students develop program logic and write programs using Assembly Language to solve appropriate assigned problems.

# EDP 117 Assembly Language II

2-4-4

Continuation of Assembly Language to provide students more depth and experience using a symbolic programming language.

# EDP 118 Cobol

2-4-4

Designed to provide basic training in structured COBOL programming. The COBOL Language programming methods and techniques are studied. Students develop program logic and write structured COBOL programs for solving sample problems.

# EDP 119 Cobol II

2-4-4

Continuation of training in COBOL programming techniques and methods. Designed to provide students with the opportunity to apply skills learned in COBOL I to typical business applications with emphasis on arrays, tables, control breaks, and disc file organization.

# **EDP 150** Introduction to Computers

5-0-5

Presents the basic concepts of data processing fundamentals, including programming business economics problems for a computer.

## **EDP 201** Microcomputer Concepts

2-2-3

Introduction to the programming and operation of microcomputers. Topics include computer concepts, applications and use, operations and software and the elements of basic programming. Emphasis on microcomputer applications for energy conservation.

## EDP 202 Microcomputer Hardware

2-2-3

Designed to develop a basic understanding of the microcomputer components and control systems. Emphasis on the use and service of the microcomputer and its application to energy utilization and conservation.

# EDP 211 Applications I

2-4-4

Designed to provide students with sufficient knowledge in computer methodology to permit the use of computers in business. Emphasis centers on the development of a typical business computer, including complete documentation, using a team programming approach.

# EDP 212 Applications II

2-4-4

Emphasizes the preparation and utilization of operations data used in a typical business, case problems involving systems established for collecting the data, and generating information for organizational units. Audit trails enabling the tracing for transactions back to the original source or forward to the first report analyzed. Simulated data used to demonstrate programming techniques required in processing management information. Structure of data files receives major emphasis. Students design, program, and test an entire business application with minimum assistance.

# EDP 214 Computer Systems I

2-2-3

Study of computer systems involving such concepts of architecture and programming as channels, interrupts, multiprogramming, job scheduling, file devices, and file organization.

Study of a report generator language appropriate for use with a small computing system. Students develop program logic and write programs to solve appropriately related sample business problems.

EDP 224 RPG II 2-4-4

Prerquisite: EDP 223

Continuation of EDP 223 with special emphasis on applications and programming procedures of the smaller business.

### EDP 230 Internship I

0-10-5

Cooperative endeavor between Pitt Community College and industry to give students on-the-job training experience. Students work in computer operations for a given company, on location for a minimum of 10 hours per week.

### EDP 231 Internship II

0-10-5

Continuation of the on-the-job training begun in EDP 230.

# EDP 232 Communications Control Programming

2-2-3

Designed to teach the participant how to write telecommunications application programs to run under control of the communications control program (CCP). Also, in order to fully utilize the display format facility of the CCP, students learn the concepts and operation of the information display system.

#### **EDUCATION**

# EDU 102 Child Health and Safety

3-0-3

Study of environmental influences on the physical and mental health of young children. Emphasis on first aid practices and available community services for children.

# EDU 106 Practicum in the Elementary School

1-15-6

Program of supervised practice as an assistant in the education of children ages five to eight.

# EDU 107, Practicum in Preschool Experiences

1-15-6

Program of supervised practice in the care and education of preschool children.

# **EDU 111 Language Arts Techniques I**

5-0-5

Study of language acquisition of young children and its relationship to developing reading skills. Attention given to the various approaches to teaching reading with particular emphasis on the phonic method.

# EDU 115 Audiovisual and Media Instruction

3-0-3

Introduction to the multi-media approach to teaching young children. Students have the opportunity to explore all phases of the library, including cataloging,

reference materials, and periodicals. Experiences provided in the use of audiovisual employment and duplicating machines. Experience with a laminating process, making transparencies, placing orders for films, and other visual aids provided while developing science and social studies units of work.

# EDU 202 Discipline Strategies in the Classroom

3-0-3

Survey of various approaches to discipline. Attention given to the more popular models with practical guides for selecting a positive and personal approach.

## **EDU 203** Exceptional Child

5-0-5

Introductory course for those who may work with exceptional children. Examination of the characteristics and problems relating to educating atypical children.

### **EDU 204** Parent Education

3-0-3

Study of ways parents can be involved in child development, of the purposes and values of home visitation, and the techniques for reporting child progress to parents. The role of the educational associate in aiding parents in the guidance of the child's development is emphasized.

## EDU 212 Language Arts Techniques II

5-0-5

Designed to introduce and extend fundamental knowledge of the reading process, including an understanding of essential skills and early detection and remediation of possible reading problems.

## EDU 225A, B, C Seminar-Practicum

1-15-6

The practicum and seminar experience involves students with the learning process in a variety of educational settings. These experiences enable the students to gain exposure to many facets of education, as well as to do specialized study in given areas. Through learning by doing, students correlate knowledge and skills to actual teaching situations.

# EDU 227 Educating the Disadvantaged Student

3-0-3

Study of minority groups, their characteristics and problems. Emphasis placed on teaching and communicating with the disadvantaged minority student. Special attention given to remedial programs designed for the culturally different and educationally deprived.

#### **EDU 230** Preschool Education

5-0-5

Study of principles and practices of early childhood education including the types of experiences and facilities which promote optimal development of each child. Guidelines for identifying, planning, organizing, and implementing appropriate programs and facilities are derived through group discussion and individual projects. Field experience provides opportunities to observe children and programs in different preschool facilities.

#### **EDU 231 Creative Activities**

5-0-5

Individual and group exploration of activities and materials for promoting optimal development of children. Designed to develop an appreciation of the need for play and the activities appropriate at various stages of development.

## EDU 232 Preschool Administration and Supervision

Designed to assist students in establishing policies and procedures for the operation of a center for the daily group care of young children.

#### **EDU 250** Introduction to Education

4-2-5

Study of education as an institution in society. Emphasis is on the educational system in the U.S. including historical, philosophical, sociological, and psychological foundations of American education. Additional topics included are local, state, and Federal organization of education, current issues and innovations in the schools, and teaching as a profession. During scheduled laboratory hours, students complete a minimum period of 16 hours as participants in public school classrooms. Not a practice teaching course.

### EDU 1026, 1027, 1028, 1029, 1030, 1031, 1032 General Studies

10-0-10

Developmental courses designed to provide a program of highly individualized instruction in reading, and writing including vocabulary and spelling, basic arithmetic, personal hygiene, and human relations. Individual goals are established for students encouraged to move through the courses at a level and rate consistent with their background and abilities. Scheduling and organizing of the course content is highly flexible to enable the instructor to respond to the specific needs of each individual.

### EDU 1026A, 1027A, 1028A, 1029A, 1030A, 1031A, 1032A General Studies Labs

0-8-0

Study labs designed to supplement classroom instruction; additional individualized instruction in specific problem areas.

#### ENERGY

# EGY 101 Energy Technology

2-2-3

Provides an introduction to energy technology with emphasis on the energy crisis, the nature of energy, energy use patterns and forecast, sources of energy, and the need for energy conservation as one rational approach to the energy crisis.

# EGY 110 Energy Audits and Procedures

2-4-4

Introductory course in the basics of energy audits and procedures. Emphasis on the practical application of the concepts, the collection of data, and meaningful reporting of the information.

# **EGY 111 Energy Conservation Techniques**

2-2-3

Continuation of EGY 110 with emphasis on the techniques for correcting those energy loss areas found during the audit. Weatherization procedures and application of appropriate materials covered.

# EGY 112 Special Projects: Energy

1-6-3

Special projects assigned to provide students with practical experience in the areas covered by EGY 110, EGY 111. (Co-op option 330 hours in lieu of EGY 112).

# EGY 201 Fundamentals of Solar Energy

2-2-3

Fundamentals of solar radiation, transmission, and absorption. Flat plate and focusing collectors, thermal storage, and utilization of solar energy for heating and cooling covered.

# **EGY 202** Solar Energy Application

2-3-3

Continuation of Energy 201 with emphasis on the application of the fundamentals to working solar systems. Information essential for sizing, installing, and servicing solar devices covered.

# EGY 203 Energy Management and Planning

3-2-4

Basic concepts of an energy management and conservation program. Emphasis on the component parts of the system with specific end-use restrictions and "quick fix" measures as means of conserving energy.

# EGY 205 Heat Transfer and Energy Conversions

3-2-4

Introduction to basic thermodynamics, the nature of energy and heat transfer. Also includes a study of the theoretical and practical aspects of thermal conduction, convection, and radiation.

#### **ELECTRICITY**

# **ELC 101** Fundamentals of Electricity I

4-4-6

Corerequisite: MAT 101

Study of the elementary principles of electricity including basic electric units, Ohm's Law, Kirchoff's Law, network theorems, magnetics, basic electrical measuring instruments, inductance, capacitance, sine wave analysis, and non-resonant resistive, inductive, and capacitive networks.

# **ELC 102** Fundamentals of Electricity II

5-4-7

Prerequisite: ELC 101

Study of series and parallel resonant-circuit analysis, resonant and non-resonant transformer analysis, basic diode power analysis, and an introduction to electromechanical devices.

# **ELC 111** Basic Electricity

3-2-4

Prerequisites: MAT 101 and PHY 105

Study of the basic principles of electricity including characteristics, safe uses, and applications of the electrical components used in water and air pollution sampling equipment.

# **ELC 112** Alternating and Direct Current

2-6-4

Study of the electrical structure of matter; the electron theory; and the relationship between voltage, current, and resistance in series, parallel, and seriesparallel circuits. Ohm's Law and Kirchoff's Law and the relationships and applications of electricity to modern industrial machinery are included.

# ELC 113 Alternating Current and Direct Current Machines and Controls

Prerequisite: ELC 112

Study of the fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction given in the use of electrical test instruments in circuit analysis. Includes a study of the basic concepts of AC and DC machines, simple system controls, and an introduction to the types of controls used in small appliances, including thermostats and timers or sequencing switches.

# ELC 119 Industrial Electrical Controls and Systems

2-6-4

Prerequisite: ELC 113

Fundamental concepts and applications of electrical, pneumatic, and hydraulic control systems. Controls, protecting devices, and industrial applications emphasized.

## **ELC 121 Electrical Troubleshooting**

2-3-3

Prerequisites: ELC 112 and ELC 113

Utilization of all service tools, instruments, and equipment necessary to analyze all aspects of service and repair, using the procedures employed in service and repair in industry. Students expected to demonstrate ability and initiative in the troubleshooting problems presented.

## **ELC 210** Rotating Devices

2-2-3

Prerequisites: ELC 102 and PHY 102

Introduction to electrical machinery. Includes an analysis of AC and DC motor and generator principles, synchros and servomechanisms, and alternators and dynamotors. Basic theory, operation, and maintenance of these devices and systems emphasized.

# **ELC 1101** Applied Electricity

2-0-0-2

Study of the use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning and refrigeration installations and electrical principles and procedures for troubleshooting electrical devices used in air conditioning, heating, and refrigeration equipment. Transformers, motors and starting devices, switches, electrical heating devices, and wiring are also studied.

# **ELC 1102** Applied Electricity

3-3-0-4

Prerequisite: PHY 1111

Study of the use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning and refrigeration installations; electrical principles and procedures for troubleshooting electrical devices used in air conditioning, heating, and refrigeration equipment, and transformers, and motors and starting devices, switches, electrical heating devices, and wiring.

# **ELC 1112** Direct and Alternating Current

5-0-12-9

Study of the electrical structure of matter and electron theory; the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. Includes an analysis of direct current circuits by Ohm's Law and Kirchoff's Law and a study of the sources of direct current voltage potentials; fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance; and an analysis of alternating current circuits.

## **ELC 1112A** Direct Current Theory and Practice

5-0-15-10

Study of the structure of matter and the electron theory; the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. Includes an analysis of direct current circuits by Ohm's Law and Kirchoff's Law and sources of direct current potentials.

# ELC 1112B Alternating Current Theory and Practice

5-0-15-10

Study of the fundamental concepts of alternating current, including the generation of sine waves and other non-sinusoidal waveforms, reactance, impedance, power, resonance, and alternating current circuit analysis.

# ELC 1113 Alternating Current and Direct Current Machines and Controls

5-0-12-9

Prerequisite: ELC 1112

Study of the fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction is given in the use of electrical test instruments in circuit analysis. Includes a study of the basic concepts of AC and DC machines and simple system controls and an introduction to the types of controls used in small appliances, including thermostats and timers or sequencing switches.

## **ELC 1114** Electrical Safety

3-0-0-3

Emphasis on the use of electrical test equipment to insure job safety and to prevent shock. Appropriate first-aid techniques for treating shock victims also included.

# ELC 1115 Special Problems in Electricity

2-0-0-2

Special projects designed to supplement instruction in other courses in electricity.

# **ELC 1124** Residential Wiring

5-0-9-8

Prerequisite: DFT 1113

Study of the fundamentals of residential wiring, including blueprint reading, planning, layout, and installation of wiring in residential applications such as services, switchboards, lighting, fusing, wire sizes, branch circuits, and conduits. Also includes application of National Electric Code Regulations in actual building mockups.

# **ELC 1125** Commercial and Industrial Wiring

5-0-12-9

Prerequisites: ELN 1118 and ELC 1124 A, 1124 B

Layout, planning and installation of wiring systems in commercial and industrial complexes, with emphasis on blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals of commercial and industrial wiring through practical experience in wiring, conduit preparation, and installation of simple systems.

# ELC 1126 Electrical Safety - OSHA

2-0-0-2

Study of the safety rules and regulations set forth by the Occupational Safety and Health Act of 1969.

#### **ELECTRIC MOTOR**

# ELM 1101 Basic Electric Motor Theory and Terminology

4-0-6-6

Study of the electrical structure of matter; the electron theory; magnetism; and the relationship between voltage current and resistance in series, parallel and series-parallel circuits. Ohm's Law, Kirchoff's, and related terminology. Instruction is given in above subjects as they apply to AC and DC electrical machines and control.

### ELM 1102 Fundamentals of Electric Motors

4-0-6-6

Introduction to the physical aspects of electric motors, generators, and transformers, including frames, enclosures, rotors, shafts, bearings, magnetic cores, and starting switches. Instruction is given to nameplate interpretation, lubrication, and electrical measurements. Horsepower included.

#### **ELM 1110** Shade Pole Induction Motors

2-0-9-5

Prerequisites: ELM 1101 and ELM 1102

Exhaustive study of the shaded pole motor establishing a foundation for the study of all induction motors. Includes both mechanical and electrical construction, characteristics, application, windings, connections, protection, and control. Instruction is given in coil winding and the use and care of test equipment.

## **ELM 1111 Split Phase Induction Motors**

2-0-6-4

Prerequisites: ELM 1101 and ELM 1102

Study of split phase induction motors with emphasis on replacing the pole shades with an auxiliary or starting winding; a study of the rotating magnetic field resulting from phase splitting; and the resulting characteristics. Instruction is given in spiral coil winding, placement, and connecting. Internal and external starting switch introduced.

# **ELM 1112 Capacitor Start Motors**

2-0-3-3

Prerequisites: ELM 1101 and ELM 1102

Study of capacitor start motors with emphasis on the modification of the starting winding for capacitor start and capacitor start and run. A study of the torque characteristics resulting from capacitor starting and energy saving resulting from capacitor run. Instruction is given in the proper application of these motors according to their characteristics.

#### ELM 1113 Universal Motors

2-0-3-3

Prerequisites: ELM 1101 and ELM 1102

Study of the application of the armature in AC motors to produce special speed and torque characteristics and compact size. Instruction is given in armature winding and methods of speed control.

# **ELM 1114** Three Phase Induction Motors

4-0-6-6

Prerequisites: ELM 1101 and ELM 1102

Study of the fundamental concepts in three phase alternating current circuits, voltages, power measurements. Instruction is given in three phase windings and the resulting rotating magnetic field, wye and delta connections, rewinding for voltage change, rewinding for R.P.M. change, and winding tests. Includes a

study of the squirrel cage rotor and the characteristics of the various types of three phase induction motors. Includes an analysis of the energy conserving aspects of the three phase motor versus the one phase motor and the overall economy of the three phase motor.

#### ELM 1115 Wound Rotor Induction Motors

3-0-3-4

Prerequisites: ELM 1101 and ELM 1102

Study of the replacement of the squirrel cage rotor with a wound rotor for R.P.M. control and better starting characteristics. Instruction is given in the proper use and application of starting and R.P.M. Control Equipment. Includes a study of the rotor windings and connections and proper testing procedures.

#### ELM 1116 Electric Motor Controls and Maintenance

2-0-4-3

Study of the fundamental concepts pertaining to the application, control, and maintenance of electric motors. Instruction is given in windings and connections as they apply to voltage and R.P.M. changes in all types of motors. Use and care of tools, equipment, and test instruments is emphasized in the shop as students practice rewinding and repair of motors. Satisfactory completion of this introductory course enables students to progress rapidly toward becoming journeymen electric motor repairmen.

#### ELM 1120 Alternators

0-0-3-1

Prerequisites: ELM 1101 and ELM 1102

Study of the generation of alternating current. Instruction given in alternators, stators, and field windings. Included are control systems such as frequency and voltage controls and protective devices, prime movers, and field excitation.

# ELM 1121 Direct Current Motors and Generators

3-0-3-4

Prerequisites: ELM 1101 and ELM 1102

Study of the generation of alternating current. Instruction given in alternators, stators, and field windings. Included are control systems such as frequency and windings and connections with emphasis on speed and torque control. Included is instruction on all armature and field windings and connections.

#### **ELM 1122 Transformers**

4-0-6-6

Prerequisites: ELM 1101 and ELM 1102

Study of the fundamental concepts of AC voltage transformation for power transmission, control systems, and safety. Instruction given in the physical structure and windings of the various types. Included is instruction on stripping for rewind, taking data, and insulating. Transformer connections extensively covered.

# **ELM 1123** Motor and Generator Controls

4-0-6-6

Prerequisites: ELM 1101 and ELM 1102

Extensive study of the various control systems used in the operation of electrical machines. Included are manual, automatic, and electronic control, and thermal, magnetic, and timing devices. Instruction given in the safety aspect of control systems. Emphasis on the National Electric Code.

# **ELM 1130** Auxiliary Shop Procedures

0-0-6-2

To instruct the students in shop methods, practices, the correct use of land tools, and the safe use of power tools. Special instruction given to soldering and welding electrical connections. Student exposed to machine shop equipment

such as lathes, drills and presses, and instructed in their use in certain electric motor and generator repairs. Emphasis on safety.

#### **ELM 1131** Motor Maintenance Procedures

1-0-3-2

Instructs students in methods and procedures for extending the useful life of electric motors and generators. Included are instructions on replacement and proper lubrication of bearings, replacing and fitting carbon brushes, cleaning and varnishing windings and proper ventilation. Protective devices re-emphasized here for the purpose of limiting winding temperatures. Students are also instructed in safe and effective methods of cleaning electrical machinery.

## **ELECTRONICS**

### **ELN 100** Introduction to Electronics

3-2-4

Introduction to electronics principles and laboratory techniques. The care and proper use of laboratory equipment is emphasized. Techniques of recording and use of laboratory data are taught.

# ELN 101 Electronic Instruments and Measurements

1-4-3

Prerequisite: ELC 102

Study of basic electronic instruments and theories of operation, functions, tolerances, and calibration of both service and laboratory instruments. Laboratory experiences provide opportunities for application of each instrument studied.

#### **ELN 105** Control Devices

5-4-7

Prerequisite: ELC 102

Study of the electrical characteristics of vacuum tubes and transistors with basic parameters and applications of each type of device to the three-terminal, two-port system emphasized.

# ELN 110 Fundamentals of Electricity and Electronics

2-4-4

Basics of A.C. and D.C. circuits including analysis, the use of electrical components and measuring devices. Introduction to electronic devices also included.

# **ELN 111** Electronic Components and Systems

2-2-3

Introduces the basics of various electromechanical equipment, electronic devices and systems. Provides a working knowledge of selected electromechanical devices, various electronic components, circuits, and control devices.

# ELN 205 Application of Vacuum Tubes and Transistors

5-6-8

Prerequisite: ELN 105

Study of the practical applications of vacuum tubes and transistors to basic audio amplifiers, radio frequency amplifiers, detectors, power supplies, and oscillators.

# **ELN 210** Semiconductor Circuit Analysis

5-4-7

Prerequisite: ELN 205

Study of the analysis and design of transistor circuits. Network theorems and equivalent circuits are used extensively in evaluating total circuit performance. Device peculiarities and limitations pertinent to reliable operations are considered. H.Y.Z. and T. parameters and signal flow graphs are employed.

### **ELN 211P** Communication Circuits

4-4-6

Prerequisite: ELN 205

Emphasizes the principles involved in the use of the components and devices studied; provides for practice in testing the components and using them in simple relationships in circuits with other units.

## ELN 214 Fundamentals of Digital Electronics I

3-3-4

Prerequisites: ELN 105 and MAT 103

Study of broadband amplifiers, magnetic amplifiers, multivibrators, wave shaping techniques, chopper amplifiers, clipper and clamper circuits.

# ELN 215 Fundamentals of Digital

3-3-4

Study of the basic principles of pulse circuitry and nonsinusoidal generators and the application of these principles in the field of electronics. Also includes an introduction to basic logic circuitry as applied in digital computers.

#### **ELN 218** Industrial Electronics

3-4-5

Study of industrial electronic systems such as magnetic amplifier controls, welding controls, motor controls, and electronic monitoring equipment.

# **ELN 220** Electronic Systems

5-4-7

Corequisite: ELN 215

Block diagram course; includes investigations of numerous electronic systems, using modules or blocks of circuits already studied which have been arranged to produce complex electronic systems; the systems are explained and reduced to functions and then to block diagrams. AM, FM and Single Sideband transmitters and receivers, multiplexing, TV transmitters and receivers; pulse modulated systems; computers, telemetry; navigational systems; and sonar and radar considered.

#### **ELN 230** Medical Electronics

3-3-4

Study of transductors and electronic circuits used in biomedical systems such as electrocardiographs, heart-rate monitors, blood pressure monitors, and other medical equipment.

# **ELN 231** Introduction to Microcomputers

3-3-4

Corequisite: ELN 215 or equivalent preparation in digital electronics Introduces the student to the fundamentals, hardware and software of microprocessors and microcomputers as they are used to synthesize digital circuits for instrumentation and control.

## ELN 235 Industrial Instrumentation

3-3-4

Prerequisites: ELN 205 and PHY 104

Introduction to the use of industrial electromechanical and electronic circuits

and equipment. Includes methods, techniques, and skills required for installation, service, and operations of industrial control systems. An analysis of sensing devices for detecting changes in pressure, temperature, humidity, sound, light, and electricity; associated circuitry; and indicating and recording devices are included.

# **ELN 236** Instrumentation and Controls

2-4-4

Study of the concepts and applications of various devices to control and monitor energy conversion systems. Special emphasis on applications for energy conservation.

### **ELN 245** Electronic Design Project

0-4-2

Prerequisite: ELN 205

Students are required to design and construct projects approved by the instructor. Includes selection of project and design, construction, and testing of the completed project. Projects may include AM or FM transmitters or receivers, amplifiers, test equipment, control devices, simple counters, lasers, masers.

### **ELN 1101** Trouble-shooting Concepts

5-0-0-5

Study of the techniques used in the analysis of defective systems by block diagrams. Includes an introduction to test equipment used in trouble-shooting.

### ELN 1102 Systems of Trouble-shooting

2-0-3-3

Study of trouble-shooting radio and television receivers and other complete systems of block diagram analysis using audible and visual indications as the sensory devices.

#### ELN 1103 Introduction to Control Devices

5-0-15-10

Introduction to vacuum tubes and semiconductors used to control direct and alternating current. Characteristics of diodes, triodes, tetrodes, pentodes, and transistors in power suppliers, voltage amplifiers, power amplifiers, and oscillators, and the advantages, disadvantages, and uses of each.

#### **ELN 1104** Application of Control Devices

5-0-15-10

Study of vacuum tubes and semiconductor devices with characteristic curves and manufacturers' data used to determine how and why a circuit configuration behaves in a predetermined manner. The applications and uses of the different configurations and simple design characteristics of each are included.

# ELN 1105 Industrial Electronics and Instrumentation

5-0-15-10

Study of electronic components and circuits used in industrial applications. Included is a study of sensory devices and detectors, the associated circuitry and indicating devices, relays, switching and monitoring circuits, and other devices applicable to the field of industrial electronics.

# ELN 1106 Maintenance and Analysis of Electronic Systems

5-0-15-10

Study in the analysis and maintenance of electronic systems. Included are component troubles and their effects on circuit behavior as related to electronic systems used in private entertainment and to equipment used in business and industrial applications.

Study of the history, operating principles, and methods of communication. Telephones, radio, television, telemetry, and other types of communications used in private and industrial applications are included.

## **ELN 1108** Digital Concepts

5-0-0-5

Introductory study of digital computer fundamentals including binary numbers, logic circuits, arithmetic circuits, bistable circuits, registers, memories, computer operation, microprogramming, and programming.

## **ELN 1109** Television Broadcasting

5-0-0-5

Study of the operation of a broadcast station. Included in the study are job classifications and the responsibilities of each position. Emphasis on student performance of these jobs and on the problems which evolve within certain departments of a broadcast station.

## **ELN 1111** Electronic Trouble-shooting

3-0-0-3

Study of electronic trouble-shooting methods and procedures for radio, high fidelity stereo, tape recorders, television, cameras and video tape recorders, CB and mobile radio, electronic organs, digital circuits. Included is the use of electronic instruments, test equipment, tools, and auxiliary items.

#### **ELN 1118** Industrial Electronics

3-0-6-5

Prerequisite: ELC 1113

Study of basic theory, operating characteristics, and application of vacuum tubes such as diodes, triodes, tetrodes, pentodes, and gaseous control tubes. Includes an introduction to amplifiers using triodes, power supplies using diodes, and other basic applications.

## **ELN 1119** Industrial Electronics

3-0-6-5

Prerequisite: ELN 1118

Study of basic industrial electronic systems such as motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyratron tubes, and other basic types of systems commonly found in most industries.

#### **ELN 1125** Radio Receiver Servicing

5-0-0-5

Study of the principles of radio reception and practices of servicing. Included are block diagram and schematics of radio receivers, servicing techniques of AM and FM receivers by resistive measurements, signal injection and signal tracing, voltage analysis, and methods of locating faulty stages and components.

# ELN 1127 Television Receiver Circuits and Servicing

10-0-18-6

Study of the principles of television reception and practices of servicing. Included are block diagrams and schematics of monochrome and color television receivers, servicing techniques by resistive measurements, voltage and image analysis, and methods of locating and repairing defective components.

## ELN 1130 Small Appliance Repair

5-0-0-5

Study of the basic operating principles and repair techniques of small hometype appliances. Electric irons, toasters, percolators, vacuum cleaners, electric mixers, blenders, and other home appliances are studied, with emphasis on the servicing and repair of these appliances.

203

#### ENGLISH

# ENG 010 Reading

0-5-1

Students work on reading skills according to their needs.

## **ENG 011** Speech Communications

0-5-1

Students work on oral English with emphasis on conversation, discussion, telephone use, and interviewing.

#### **ENG 012** Written Communication

0-5-1

Students improve their written English through keeping a journal, writing letters, paragraphs, and essays.

#### ENG 013 Media Evaluation

0-5-1

Students study a variety of media including books, periodicals, radio, television, and film, and evaluate them in terms of their values and the intended message of each communication.

### ENG 014 Directed Individual Reading

0 - 5 - 1

Students apply their reading skills by reading and reporting informally.

### ENG 015 Fundamentals of English Usage

0-5-1

Designed to improve students' written English usage; focuses on common problems in writing edited American English.

### ENG 100R-1 Reading Development

10-0-10

Review of reading fundamentals as needed by the student; individualized.

### **ENG 100R-2** Reading Development

3-0-3

Prerequisite: ENG 100R-1 or equivalent

Individualized course designed to improve the student's reading achievement through a variety of materials.

### **ENG 100R-3** Reading Development

3-0-3

Prerequisite: ENG 100R-2 or equivalent

Individualized course designed to increase reading efficiency, with emphasis on the reading necessary in the individual's curriculum.

#### **ENG 100R-4** Reading Development

3-0-3

Prerequisite: ENG 100R-3 or equivalent

Individualized course designed to promote the student's reading vocabulary and comprehension.

#### ENG 100G Basic Grammar

3-0-3

Prerequisite: ENG 100R-1 or equivalent

Designed to offer basic instruction in grammar. Subject is approached in a practical manner to lay a foundation for improvement in writing skills.

# ENG 100G-A Basic Grammar Lab

0-2-1

Designed to improve the student's skills in specifically defined areas of basic grammar. For students who score appropriate score on English Placement Test, make I or F in Basic Grammar previous quarter, or upon request.

### ENG 101 Grammar

3-0-3

Prerequisite: ENG 100R-1 or equivalent

Designed to aid the student in clarity of expression. Functional approach with emphasis on grammar, diction, sentence structure, and punctuation. Intended to stimulate students to apply the basic principles of English grammar in daily situations.

## ENG 101A Grammar Lab

0 - 2 - 1

Prerequisite: C or lower on 100G or upon student request

Individualized course designed to improve the student's skills in specific areas of grammar.

#### **ENG 101S** Secretarial Grammar

5-0-5

Prerequisite: Satisfactory evidence that admission requirements have been met (Placement tests or ENG 100R-3 and/or ENG 101)

Required of all beginning secretarial students as a prerequisite to the shorthand program. Special emphasis is placed on grammar, punctuation, and spelling. Student should earn a grade of 85 or above on this course before entering the shorthand program.

## **ENG 102** Composition

3-0-3

Prerequisite: ENG 101

Corequisite: ENG 100R-3 or equivalent

Designed to aid the student in the improvement of self expression in business and technical composition. Emphasis is on the sentence, paragraph, and whole composition.

# **ENG 102A** Composition Lab

0 - 2 - 1

Prerequisite: C or lower on ENG 101 or by student request

Designed to improve the student's writing skills; individualized course.

# **ENG 103** Report Writing

3-0-3

Prerequisites: ENG 102 and at least two quarters of curriculum work Fundamentals of English are utilized as a background for the organization and techniques of report writing. Exercises using writing techniques and graphic devices are completed by the students in developing reports.

## **ENG 105** Effective Reading

3-0-3

Prerequisite: Permission of Instructor or completion of curriculum reading requirements

Individualized course for students wishing to improve their reading efficiency. Areas of concentration will be selected, based on each student's needs, from rate, vocabulary, comprehension, and reading-study skills in specific subject areas.

# **ENG 106** Spelling Techniques

3-0-3

Designed to improve spelling ability. Participants study the relationship of spoken English to spelling, spelling patterns, and commonly misspelled words. They also study vocabulary in their areas of concentration such as medicine, law, or architecture.

## ENG 150 Composition I

3-0-3

Prerequisite: Specified scores on English and reading placement tests or ENG

101 and ENG 100R4

Essential skills of standard written English and the application of those skills in expository and analytical writing. Essays of varying length on subjects drawn from readings in essays and short fiction.

## ENG 151 Composition II

3-0-3

Prerequisite: ENG 150 Corequisite: LIB 150

Techniques of library research and the writing of research papers. Subjects for writing assignments are drawn from readings in short fiction and novels.

## ENG 152 Composition III

3-0-3

Prerequisite: ENG 150

Readings in poetry and drama; papers are written on subjects drawn from readings.

#### **ENG 204** Oral Communications

3-0-3

Introduction to interpersonal communication to enable the student to communicate with others effectively. Focuses on the nature of the communication process, including self-perception, group interaction, and language as a symbolic process. Students make several speeches near the end of the course.

#### **ENG 206** Business Communications

3-0-3

Prerequisites: ENG 102 and BUS 102

Self-paced course designed to develop skills in writing business communications. Business reports, letters, and memoranda are included.

#### ENG 217 Children's Literature

3-0-3

Designed to familiarize students with the well-known authors and illustrators of children's literature and to introduce them to the best quality books for young people. Emphasis is on the use of these materials with the children in order to obtain maximum pleasure and learning.

#### ENG 250 British Literature I

3-0-3

Prerequisites: ENG 151 and ENG 152

Study of British literature from Beowulf to the Romantic Period.

### ENG 251 British Literature II

3-0-3

Prerequisites: ENG 151, 152

Continuation of ENG 250; study of British literature from the Romantic Period to the present.

### **ENG 260** American Literature

3-0-3

Prerequisites: ENG 151 and ENG 152

Major works of American Literature from the colonial period through World War I.

## **ENG 261** American Literature II

3-0-3

Prerequisites: ENG 151, 152

Continuation of ENG 260; major works of American literature from World War I to the present.

## **ENG 270** Introduction to Theatre

3-2-4

Introduction to theatre, including techniques of production. Stage scenery, design, set construction, stage techniques, makeup, lighting, costuming, prop construction, and theatre jargon are included.

### ENG 270A Introduction to Theatre Lab

0-5-0

Corequisite: ENG 270

Practical stage craft and scenery design through application of techniques learned in ENG 270.

# **ENG 271** Basic Acting Techniques

3-2-4

Prerequisite: ENG 270

Basic course in acting techniques as applied to technical theatre and stage craft production. The beginning student learns stage terminology and receives training in techniques, processes, operation, and application of play production.

## ENG 271A Basic Acting Techniques Lab

0-5-0

Corequisite: ENG 271

Basic acting techniques through practical application.

### **ENG 272** Problems in Production

3-2-4

Prerequisite: ENG 270

Advanced course of study in stage scenery and design with the major emphasis on special and advanced technical theatrical problems of production. Special effects, advanced lighting techniques, set construction difficulties, sound effects, and theatrical management are emphasized. Publicity and public relations are also included.

## **ENG 272A** Problems in Production Lab

0-5-0

Corequisite: ENG 272

Advanced stage design through practical application.

# **ENG 273** Acting and Directing Techniques

3-2-4

Prerequisite: ENG 271

Advanced course in acting and directing techniques. Major emphasis on play selection, community involvement, publicity, other communicative media (television, radio, motion picture). In addition, students become fully acquainted with all aspects of the financial management of the theatre.

# ENG 273A Acting and Directing Techniques Lab

0 - 5 - 0

Corequisite: ENG 273

Advanced acting and directing techniques through practical application.

## **ENG 274** Advanced Directing Techniques

3-2-4

Prerequisite: ENG 273

Study of drama from the director's point of view. Students assist in directing scenes and acts of short plays and in scene synopsis.

# ENG 274A Advanced Directing Techniques Lab

0-5-0

Corequisite: ENG 274

Advanced directing techniques through practical application.

#### 3-2-4

## **ENG 275** Playwriting Techniques

Prerequisite: ENG 254

Study of the play as a form of creative expression; includes analysis of the play for plot, action, and character development. Each student writes and directs a one act play.

# ENG 275A Playwriting Techniques Lab

0-5-0

Corequisite: ENG 255

Advanced playwriting techniques through practical application.

## **ENG 290** Grammar and Linguistics

5-0-5

Prerequisite: ENG 152

Grammatical system of contemporary American English; a combined contrastive traditional-linguistic approach. Designed especially for elementary education majors.

## ENG 1000 Reading Improvement

10-0-10

Review of reading fundamentals as needed by the student; individualized.

## **ENG 1101 Reading Improvement**

2-0-2

Prerequisite: ENG 1000 or equivalent

Designed to improve the student's reading skills through use of various materials; individualized.

#### **ENG 1102** Communication Skills

3-0-3

Prerequisite: ENG 1101 or equivalent

Designed to promote effective communication through appropriate language usage in work situations. Learning experiences include completing jobs applications, interviews, letter-writing, and customer communications.

#### **ENG 1108** Efficient Reading

2-0-2

Prerequisite: Permission of Instructor or completion of curriculum reading requirements.

Individualized course for students wishing to improve their reading efficiency. Areas of concentration will be selected, based on each student's needs, from rate, vocabulary, comprehension, and reading-study skills in specific areas.

## **ENG 1109** Microfiche Reading Techniques

2-4-0-4

Designed to teach students the efficient use of the different types of microreaders and microfiche. Lab situations enable students to gain speed and accuracy.

#### **ENVIRONMENT**

#### **ENV 101** Environmental Orientation

4-2-5

Includes an introduction to ecology of natural systems followed by a more detailed study of people's interrelationship with the environment and the necessity of control of their effect on the environment. Topics covered include disease and disease transmission, sanitation (food and milk), insect and rodent control, occupational health and safety, agricultural ecology, food additives, pesticides, water pollution, solid waste, air pollution, noise pollution, radiation

pollution, energy, and conservation. Employment with government and private agencies concerned with the environment is also covered.

## ENV 102 Microbiology

3-3-4

Prerequisites: ENV 101 and ENV 104

Identification and classification of microorganisms (bacteria, fungi, algae, protozoa, viruses) and a study of their relationship to food and to air and waterborne infections of man. Bacterial analysis of water, milk, and air samples.

## **ENV 103** Water Resources Management

4-2-5

Prerequisites: ENV 101, ENV 102, ENV 104 and CHM 102

Presents the water needs of the nation, the various sources of water supply, the elements of water supply treatment; includes aeration, coagulation, flocculation, sedimentation, filtration, disinfection, fluoridation, chemical treatment, and control of taste and odor, bacterial and mineral contaminants, desalinization, and operational problems of a water treatment plant including rules, regulations, maintenance and record keeping.

## ENV 104 Environmental Biology

3-3-4

Study of the conditions of life in the aquatic environment as they relate to biological approaches to water pollution problems. Techniques for determining physical, chemical, and biological aquatic environmental conditions. Collection and classification of aquatic microorganisms. Safe boat handling procedures related to sample collection.

# ENV 105 Water Resources Management and Analysis

4-4-6

Prerequisites: ENV 101, ENV 102, ENV 104, and CHM 102

Presents topics concerned with the collection, treatment, laboratory analysis, and distribution of drinking water. Includes water needs of present and future, protection and use of water supply sources and elements of water treatment, including aeration, chemical addition, coagulation, flocculation, settling, filtration, disinfection, and fluoridation. Also discussion of fresh water storage, distribution systems, and laboratory techniques including determinations for hardness, turbidity, carbon dioxide, color, taste and odor, chlorides, fluorides, heavy metals, and surfactants.

# **ENV 112** Air Resources Management

3-2-4

Prerequisite: ENV 101

Introductory course to the field of air pollution technology. Air resources management is the effort to abate existing pollution and to prevent future pollution. Such a program must define the problem and determine the quality of air that is most desirable. Types of air contaminants, their sources of emission, and their ill effects are identified. Source emission inventories, sampling and analysis, control techniques, meterological effects, and facets of an air pollution program are introduced.

### **ENV 195** Environmental Practicum

0-40-13

Cooperative program supported by local industries and city, county, state, and Federal agencies engaged in environmental fields to provide summer practical experience in a related area.

ENV 200A	Environmental Projects	0	0-3-1
	Environmental Projects	C	0-6-2
<b>ENV 200C</b>	Environmental Projects		0-9-3

Designed for students who wish to specialize or expand their knowledge in certain areas of environmental studies. Hours and course requirements to be arranged with Air and Water Resources Technology Department faculty.

# ENV 204 Water Sampling and Analysis

2-4-4

Prerequisites: ENV 101, ENV 102, ENV 103, ENV 104, CHM 102, and CHM 103 Theory and laboratory techniques pertaining to water purification including pH, alkalinity, hardness, turbidity, carbon dioxide, color, odor, taste, fluoride, chloride, iron, manganese, and surfactants. Bacterial analysis covered in ENV 104; coagulation, chlorine, residual-demand requirement covered in ENV 103.

# ENV 205 Waste Water Sampling and Analysis

2-4-4

Prerequisites: ENV 101, ENV 102, ENV 104, ENV 217, CHM 102, and CHM 103 Theory and laboratory techniques pertaining to waste water treatment; includes sampling and analysis of DO, BOD, COD, phosphate, solids, nitrogen compounds, sulfate, chloride, fluoride, volatile acids, chlorine residual, and chlorine requirement.

# ENV 206 Industrial Waste Water and Field Sampling and Analysis

3-3-4

Field trips to collect samples of industrial waste water followed by laboratory analysis for heavy metals (iron, aluminum, sodium, potassium, lead, mercury) by atomic absorption spectroscopy, analysis for phenols, grease, relative stability, industrial milk and food tests; desalination plant studies; stream and lake surveys.

#### **ENV 212** Air Pollution Sources and Control

3-3-4

Prerequisites: ENV 101 and ENV 112

Introduction to the major industrial processes and energy producing reactions which are potential sources of air pollution, including chemical processing, petroleum and metals production, pulp and paper, food and feeds, and automobiles. Various types of control equipment are studied. Allows students to achieve an understanding of specific problems relating to the control of air pollution within each industry.

#### **ENV 217** Waste Water Treatment

4-3-5

Prerequisites: ENV 101, ENV 102, ENV 103, ENV 104, and CHM 102

Presents the liquid waste problem and methods of treatment of liquid waste: sewage composition, sewage types, decomposition, dilution, land disposal, pretreatment, flow measurements, primary treatment, aeration, biological purification, digestion, filtrations, disinfection, agricultural and industrial waste management, plant records, laws and regulations.

#### ENV 218 Environmental Instrumentation L

3-3-4

Prerequisites: ENV 112, ENV 217

Covers the theory and practical application of the use of an atomic absorption spectrophotometer and the specific ion analyzer in detection and analysis of water and air pollutants.

### **ENV 219** Environmental Instrumentation II

3-3-4

Prerequisites: ENV 112, ENV 217, ENV 226, CHM 102, and CHM 103

Practical application of the use of a gas chromatograph in detection and analysis of hydrocarbons in air pollution and pesticides in water pollution. Theory and familiarization with continuous monitoring equipment for capture and analysis of air pollutants covered. Use of this equipment taught when equipment available.

<b>ENV 220A</b>	Environmental Projects	0-3-1
<b>ENV 220B</b>	Environmental Projects	0-6-2
<b>ENV 220C</b>	Environmental Projects	0-9-3

Designed for students who wish to specialize or expand their knowledge in certain areas of environmental studies. Hours and course requirements to be arranged with Air and Water Resources Technology Department faculty.

# ENV 226 Atmospheric Air Sampling and Analysis

2-6-5

Prerequisites: ENV 101 and ENV 112

Principles and methodology of atmospheric air sampling and analysis, practical application of gas laws to air movers and air measuring instruments, selection of sampling sites, calibration, operation and maintenance of air sampling equipment, and laboratory analysis of major air pollutants such as SO₂, NO₂, O₃, aldehydes, acrolein. Familiarization with continuous monitoring equipment.

<b>ENV 230A</b>	Environmental Projects	0-3-1
<b>ENV 230B</b>	Environmental Projects	0-6-2
ENV 230C	Environmental Projects	0-9-3

Designed for students who wish to specialize or expand their knowledge in certain areas of environmental studies. Hours and course requirements to be arranged with Air and Water Technology department faculty.

# ENV 236 Air Pollution Source Sampling and Analysis

Prerequisites: ENV 101, ENV 112, ENV 212

2-6-5

Study of principles and methodology of air pollution sampling and analysis at the source as differing from sampling of the ambient atmosphere. Topics covered include gas laws and their practical application to measurement of gas velocities and flow rates; site selection and preparation; calibration, maintenance, and operation of stack sampling equipment; collection, measurement, and analysis

of most common particulate and gaseous air pollutants.

ENV 240A	Environmental Projects	0-3-1
ENV 240B	Environmental Projects	0-6-2
FNV 240C	Environmental Projects	0-9-3

Designed for students who wish to specialize or expand their knowledge in certain areas of environmental studies. Hours and course requirements to be arranged with Air and Water Technology Department faculty.

## **FOREIGN LANGUAGE**

#### **FRENCH**

		0.00
150	Elementary French I	3-0-3
100	Lienteritary French	3-0-3
151	Flementary French II	3-0-3

152 250 251	Elementary French III Intermediate French I Intermediate French II	3-0-3 3-0-3 3-0-3
SPAN	NISH	
150	Elementary Spanish I	3-0-3
151	Elementary Spanish II	3-0-3
152	Elementary Spanish III	3-0-3
250	Intermediate Spanish I	3-0-3
251	Intermediate Spanish II	3-0-3
GERA	MAN	
150	Elementary German I	3-0-3
151	Elementary German II	3-0-3
152	Elementary German III	3-0-3
250	Intermediate German I	3-0-3
251	Intermediate German II	3-0-3

#### **FORESTRY**

## FOR 208 Forest Surveying

2-0-3-3

Relocation of old corners and lines and the legal aspects of land surveys. Forest road layout.

#### **GEOGRAPHY**

# GEO 150 Introduction to Geography

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4 Major physical and cultural elements of the environment and their influence on human activity.

#### **HEALTH**

# HEA 105 Family, School and Community Health

3-0-3

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.

# HEA 110 First Aid and Medical Terminology

2-2-3

Provides students with the basic skills necessary to provide first aid in common emergencies. Instruction also includes an introduction to anatomy and basic medical terminology used in legal matters.

# **HEA 150** Personal and Community Health

3-0-3

Investigation of mental, social, and physical health problems related to man's internal and external environment in technological and leisure oriented societies. The objective is efficient and effective performance in daily living through maintenance of optimal personal and community health.

#### **HISTORY**

# HIS 150 American History I

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4
History of the United States from its beginning to the end of Reconstruction.

## HIS 151 American History II

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4 History of the United States from Reconstruction to the present.

### HIS 160 World History to 1500

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4 Development of civilization from prehistory to the Reformation.

## HIS 161 History of Europe Since 1500

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4 European civilization from the Renaissance to the present.

#### **HUMAN SERVICES**

#### **HSA 100** Basic Health Science

3-0-3

Introduction to the normal structure and functioning of the human body, briefly covering all systems. The normal body is studied as the basis for understanding variations from normal and the need to maintain homeostasis. Included within each system is pertinent information concerning hygiene, nutritional requirements, basic first aid, and medical terminology.

#### **HSA 111** Introduction to Human Services

3-3-4

Introduction to the history of human services and related theories and systems. Agencies, institutions, and programs which help meet human services needs are studied in broad context of social and political systems. Guest lecturers, representative of human services occupations, and field trips to agencies and institutions delivering human services offer a familiarization with the components of the delivery system.

#### HSA 112 Group Processes I

1-3-2

Introduction to interpersonal concepts and problems of communication in interpersonal transactions. Designed to allow students to become more aware of themselves and their feelings about themselves and other people with whom they come in contact. To facilitate this self-awareness and personal growth, students work in small groups, learning through analyses of their own experiences including feelings, reactions, perception, and behavior.

#### HSA 112P Practicum I

1-6-3

Prerequisite: Permission of Instructor

Students spend six hours per week in clinical laboratory experiences under the supervision of a qualified instructor. Emphasis on the application of concepts and principles from related course content.

# HSA 113 Group Processes II

1-3-2

Prerequisite: Group Processes I or permission of Instructor Continued study of interpersonal relationship in small group interactions. Students work in small groups during the quarter, learning through analyses of their own experiences, including feelings, reactions, perceptions, and behavior, using the framework of Transactional Analysis.

#### HSA 113P Practicum II

1-6-3

Prerequisite: Permission of Instructor

Continuation of Practicum I

## **HSA 114** Interviewing and Counseling

3-2-4

Study of purpose, structure, focus, and techniques employed in effective interviewing. Laboratory experiences providing opportunities for observation, practice, recording, and summarizing personal histories under faculty supervision. Importance of interview as client's initial encounter with system is stressed; interviewing to meet need of client rather than of system.

# HSA 115 Field Internship

1-30-14

Work in a human services agency, institution, or program under the supervision of agency staff and college personnel. Students have an opportunity to apply and practice what has been learned in the program while learning from the professionals in the field.

### **HSA 220** Activities in Human Services

2-2-3

Overview of the types of activities (occupational, recreational, play, music, drama, non-verbal) utilized as therapeutic techniques with particular emphasis on the purpose of each: ways of creating and holding interest in the activity; and the role of the Human Service Associate in assisting patients to participate.

#### **INDUSTRIAL SCIENCE**

## ISC 102 Industrial Safety

3-0-3

Deals with the many elements of an industry-wide safety program. Provides an in-depth treatment of job safety analysis, plant inspection, plant arrangement, housekeeping, and the maintenance and handling of materials. Special emphasis given to compliance with the new Occupational Safety and Health Act, and to paperwork procedures and processes.

# ISC 110, 120, 130, 140, 150 Readings in Industrial Management

1-0-1

Designed for students who wish to specialize or expand their knowledge in industrial management under the supervision of the Industrial Management faculty. Structured to enable study of materials related to concepts in industrial management.

# ISC 201 Industrial Organization and Management

3-0-3

Organizational structure for industrial management including operational and financial activities. Accounting, budgeting, credit and industrial risks, forecasting and markets, selection and layout of physical facilities, selection, training, and supervision of personnel as found in typical industrial organizations.

# ISC 202 Quality Control

3-0-3

Prerequisite: MAT 101

Provides an overview of quality control activity and its scope throughout the en-

tire business system of a company. Among the topics discussed are the elements of quality control work, the organization required to get the work accomplished, methods of measuring the effectiveness of the function, and the integration of the various quality-related activities of the organization into a quality system.

## ISC 203 Motion Economy

3-0-3

Provides a systematic, practical, and logical treatment of motion and time study as utilized in today's business and industrial enterprise. Covers direct and indirect work and office activities and looks at the broad range of work measurement techniques. Recently developed concepts and techniques evaluated.

### ISC 204 Value Analysis

3-0-3

Common sense approach to cost reduction. Provides students with an opportunity to review in depth the concept and techniques of value analysis and engineering. Emphasis is placed upon identifying and removing unnecessary production costs.

#### ISC 205 Maintenance Management

3-0-3

Administration, decision making, setup and inspection of various programs such as preventive maintenance, repair parts, inventory control, and organization and functions of maintenance. Various aspects of management, engineering, resources analysis, and maintenance facilities covered.

## ISC 209 Plant Layout

4-0-4

Provides a practical study of factory planning with emphasis on the most efficient arrangement of work areas to achieve lower manufacturing costs. Sample layouts for small and medium sized industries covered. Also, the effective use of personnel, money, machinery, and materials.

#### ISC 213 Production Planning

4-0-4

Introduces the production function of the business or industry in its daily manufacturing process. Functions reviewed are forecasting, product planning and control, scheduling, dispatching, and routing. Case histories are discussed in the classroom and courses of corrective action are developed. Actual layouts are utilized for planning and control.

# ISC 214 Industrial Applications I

0 - 12 - 4

Prerequisite: At least 40 hours of curriculum work

Designed to provide internship experience for second year business and management students under industrial conditions. Allows students to develop on-the-job innovative projects related to the areas of health and safety, employee morale, production planning, cost reduction, or quality control. Scientific approach to problem solving utilized.

# ISC 215 Industrial Applications II

0 - 12 - 4

Designed to provide internship experience for second year business and management students under industrial conditions. Allows students to develop on-the-job innovative projects related to the areas of health and safety, employee morale, production planning, cost reduction, or quality control. Scientific approach to problem solving utilized.

# ISC 216 Industrial Applications III

0 - 12 - 4

Designed to provide internship exprience for second year business and management students under industrial conditions. Allows students to develop

on-the-job innovative projects related to the area of health and safety, employee morale, production planning, cost reduction, or quality control. Scientific approach to problem solving utilized.

## ISC 231 Manufacturing Processes

5-0-5

Provides a basic understanding of industrial materials, machines, and processes utilized in today's manufacturing and assembling plants. Reviews the rapid development of new materials, mechanization and automation, and the complex process of manufacturing.

### ISC 232 Labor Relations

4-0-4

Covers the history of the labor movement in the United States with its structural and legal framework; examines the negotiation, administration, and major contents of the labor contract itself. Special studies of arbitration cases which illustrate the theories in realistic terms provided.

## ISC 1101 Industrial Safety

3-0-0-3

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.

#### **JOURNALISM**

#### JOU 150 Introduction to Journalism

3-0-3

Basic familiarization with principles of the newspaper in categories such as basic newswriting, principles of production, layout and design, staff organization, sports writing, feature writing, editorial writing, and the purposes and function of a newspaper.

#### JOU 150A Introduction to Journalism Lab

0-2-0

Application of skills acquired in Introduction to Journalism.

# JOU 151 Essentials of Newswriting

3-0-3

Analysis of the newswriting procedure, including fact gathering, style, purpose, principles, editing, and maintenance of objectivity.

# JOU 151A Essentials of Newswriting Lab

0-2-0

Application of skills and knowledge pertaining to newswriting.

# JOU 152 Newspaper and Layout and Production

3-0-3

Analysis of the basic principles of layout and design. Students attain a functional knowledge of the process involved in offset and letterpress lithography.

# JOU 152A Newspaper Layout and Production Lab

0-2-0

Application of skills and knowledge pertaining to newspaper layout and production.

# JOU 250 Feature Writing

3-0-3

Analysis of feature writing with concentration on columns, human interest features, news features, and creative journalism.

# JOU 250A Feature Writing Lab

0-2-0

Application of skills and knowledge pertaining to feature writing.

## JOU 251 Editorial Writing and Policy

3-0-3

Analysis of editorial style and content with concentration on structure. Point of view, policies, and editorial liability.

## JOU 251A Editorial Writing and Policy Lab

0-2-0

Analysis of editorial style and content with concentration on structure. Point of view, policies, and editorial liability.

#### **JOU 252** Special Topics Seminar

3-0-3

Analysis of special areas of journalism including opportunities in journalism, photography, journalistic art, advertising, creative journalism, and non-newspaper journalistic media.

## JOU 252A Special Topics Lab

0-2-0

Application of skills and knowledge pertaining to special topics.

#### **LEGAL EDUCATION**

#### LEC 203 Legal Research II

3-0-3

Continuation of CJC 102 Legal Research I.

#### LEC 204 Advanced Business Law

3-0-3

Prerequisite: BUS 167.

Analysis of basic concepts of business corporations, partnerships and joint ventures, and sole proprietorships with emphasis on drafting articles of incorporation, by-laws, minutes, resolutions, stock certificates, and partnership and joint venture agreements. Also deals with problems in business finance and acquisitions and in related areas of commercial law, stock transfer and purchase agreements, and employment contracts. Consideration of general tax and the role of the lawyer and paralegal.

#### LEC 207 Law Office Management

3-0-3

Includes the study of the organization of a law office, office forms and legal forms, filing equipment and systems, accounting systems for a lawyer's time, fees, and billing, silent relations, and office procedure. Also familiarize students with the operation of office machines and equipment.

# LEC 210 Real Property and Title Abstracting I

2-2-3

Examination 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 included. Various typical problems and errors which may render a title unmarketable included.

# LEC 211 Real Property and Title Abstracting II

2-2-3

Continuation of LFC 210.

Includes the study of the preparation of simple contracts for sale of real estate; ordering the title search; examining title searches and preparing simple titles, ordering title insurance, preparation of settlement sheet and holding closing, informing purchasers of needed documents and funds, disbursement of fund and recording documents, preparation of certificate of title for lawyer's signature. Also covers the draftings of mortgages and deeds of trust, the closing procedures of these land financing transactions, and foreclosure upon default.

#### LEC 220 Family Law

3-0-3

Study of the rights and obligations of the marriage contract; divorce; annulment; separation by court order and by consent; defenses to divorce, child custody; adoption, name change, and bastardy proceedings; alimony, child support, Aid to Dependent Children, and welfare; North Carolina juvenile law.

LEC 224 Torts 3-0-3

Study of the principles behind personal injury settlements and litigation with an emphasis on North Carolina law.

LEC 229 Taxes 3-0-3

Application of Federal and state taxes to various businesses and business conditions. Study of the following taxes: income, payroll, intangible, capital gains, sales and use, excise, and inheritance.

#### **LEC 232** Estate Administration

3-0-3

Students instructed in the drawing of a will, 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, preparation of interim and final accounting and preparing of refunding bonds and releases.

#### **LEC 240** Litigation Preparation

3-0-3

Teaches the paralegal how a lawyer prepares briefs prior to entering court proceedings. Students learn how to review a file; prepare subpoenas ready for the lawyer's signature; prepare exhibits for court; file pleadings, index interrogatories, depositions, admissions, pleadings. Prepares students to interview witnesses and record statements in writing and on tape.

#### LEC 250 Paralegal Internship

1-9-4

Prerequisite: The internship is an add-on elective. Students completing the majority of their work may elect to take this course with the permission of the instructor or coordinator.

Students spend nine hours per week in an approved law office under the supervision of an attorney. Emphasis placed on exposing students to a variety of experiences encountered in the legal profession.

#### LIBRARY SCIENCE

# LIB 150 Library Research Skills

2-0-2

Library and its resources, usually taken concurrently with ENG 151.

#### **MASONRY**

# MAS 1101 Bricklaying I

3-0-21-10

History of the bricklaying industry. Clay and shell brick, mortar, laying foundations, laying bricks in a line, bonding, and tools and their uses. Laboratory work provides training in the basic manipulative skills.

## MAS 1102 Bricklaying II

3-0-21-10

Prerequisite: MAS 1101

Designed to give students practice in selecting the proper mortars, layout, and construction of various building elements such as foundations, walls, chimneys, arches, and cavity walls. Proper use of bonds, expansion strips, wall ties and caulking methods stressed.

## MAS 1103 Bricklaying III

2-0-21-9

Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta, and modular masonry construction theory and techniques.

## MAS 1104 Bricklaying IV

2-0-21-9

Continued application of techniques acquired in MAS 1103 with emphasis on further refining the skills of a mason.

## MAS 1113 Masonry Estimating I

1-0-3-2

Prerequisite: MAS 1103

Figuring the quantities of materials needed and costs of building various components and structures. Practical course in quantity "take off" from prints of the more common type of jobs for bricklayers and masons.

## MAS 1114 Masonry Estimating II

1-0-3-2

Continuation of MAS 1113 with some emphasis being given to quantity "take off" from prints of the more complicated kind.

#### **MATHEMATICS**

# MAT 099 Developmental Mathematics

5-0-5

Course designed for students whose background in the area of mathematics is limited. Does not carry credit toward an associate degree.

# MAT 100R Computational Skills

5-0-5

Prerequisite: MAT 099

Whole numbers, fractions, decimals, and percents.

# MAT 100 Review of Fundamental Mathematics

5-0-5

Prerequisite: MAT 100R

Fractions, decimals, percents, ratios, proportions, and an introduction to algebra.

## MAT 101 Algebra I

5-0-5

Prerequisite: MAT 100

Basic algebraic operations, linear equations, factoring, algebraic fractions, graphing, systems of linear equations, exponents, and radicals.

## MAT 102 Trigonometry

5-0-5

Prerequisite: MAT 101

Trigonometric functions, solutions of right triangles, trigonometric functions of any angle, vectors, solutions of oblique triangles, graphs of functions, graphs of the trigonometric functions, and additional topics in trigonometry.

# MAT 103 Algebra II

5-0-5

Prerequisite: MAT 101

Exponentials, roots, quadratic equations, and inequalities of one variable, first degree relations and functions, second degree relations and functions, systems of equations, and logarithmic functions.

#### MAT 104 Calculus I

5-0-5

Prerequisite: MAT 102 and MAT 103

Equations of higher degree, the derivative with application, and integration with application.

#### **MAT 110 Business Mathematics**

5-0-5

Prerequisite: MAT 100R

Stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marketing, interest, discounts, commission, taxes, and pertinent uses of mathematics in the field of business.

## **MAT 111 Computer Mathematics**

5-0-5

Course studies those mathematical concepts that will help EDP personnel to better understand the function of a computer and operations with a computer. Topics include number systems and arithmetic operations, sets, logic, Boolean algebra, statistics, scientific notation, and matrix algebra.

### MAT 114 Basic Math for Health Professions

3-0-3

Includes a review of some basic concepts of arithmetic. The basic operations (addition, subtraction, multiplication, and division) are studied with respect to fractions and decimals. Includes a study of percents, systems of measurement and methods of calculating dosages.

#### MAT 120 Metric Mathematics

3-0-3

Involves familiarization with metric units and usage, conversions to and from the British Engineering System of units, and basic algebraic solutions for the unknown as applied to problems involving units.

# MAT 150 College Algebra

5-0-5

Prerequisite: MAT 103 and either specified score on reading placement test or ENG 100R4.

Course covers sets; linear, quadratic, polynomial, and exponential functions; inequalities; permutations; and combinations.

# MAT 180 Statistical Analysis I

5-0-5

Prerequisite: MAT 150.

Sampling and probability distributions, measures of central tendency and dispersion, hypothesis testing, Chi-square, and regression.

#### MAT 201 Calculus II

5-0-5

Prerequisite: MAT 104.

Continuation of MAT 104. More advanced concepts of differentiation and integration. Introduction to solutions of differential equations and to Fourier series.

#### MAT 204 Technical Calculations

3-0-3

Prerequisite: MAT 201.

Presentation and practice in performing calculations pertinent to the field of technology. Use of calculators and tables for computations included.

#### MAT 210 Concepts of Modern Math

5-0-5

Prerequisite: MAT 100R.

Introduction to elementary school mathematics. Sets, number systems, prime numbers, the four basic operations of arithmetic, equations, and an introduction to geometry.

## MAT 250 Basic Concepts of Mathematics I

5-0-5

Prerequisite: MAT 100R and either specified score on reading placement test or ENG 100R4

The system of real numbers, its subsystems, and their properties from an algebraic and geometric point of view. Designed for elementary education majors.

## MAT 251 Basic Concepts of Mathematics II

3-0-3

Prerequisite: MAT 250

Continuation of MAT 250. Upon completion of the course, students should be familiar with the methods and language of geometry, be able to reason inductively from a series of examples, and be aware of some relationships of geometry to the world. Designed for elementary education majors.

## MAT 0099 Developmental Mathematics

5-0-0-5

Designed for students whose backgrounds in the area of mathematics are limited. Does not carry credit toward a diploma.

## MAT 1000 Computational Skills

5-0-0-5

Whole numbers, fractions, decimals, and percents.

#### MAT 1101 Fundamentals of Mathematics

5-0-0-5

Prerequisite: MAT 1000

Fractions, decimals, percents, ratios, proportions, exponents, square roots, and evaluation of formulas.

# MAT 1102 Algebra

5-0-0-5

Prerequisite: MAT 1101

Basic algebraic operations, linear equations, exponents, graphing, systems of equations, and radicals.

## MAT 1103 Basic Geometry and Trigonometry

Prerequisite: MAT 1101

Basic definitions and properties of plane and solid geometric figures, areas of plane figures, volumes of solids, trigonometric functions of any angle, and solution of right triangles.

## MAT 1110 Mathematics for Parts Counterman

5-0-18-11

Stresses the fundamental operations and their application to counterman problems. Topics covered include percents, discounts, taxes, markups, markdowns, calculators, cash registers, handling money, pricing, and extending.

## MAT 1112 Building Trade Mathematics

3-0-0-3

Prerequisite: MAT 1101

Practical problems dealing with volumes, weights, ratios, mensuration, and basic estimating practices for building materials.

# MAT 1112-M Building Trades Mathematics: Masonry

3-0-0-3

Practical problems dealing with whole numbers, fractions, decimals, percents, and square roots as it relates to masonry materials.

# MAT 1113 Building Trades Mathematics: Masonry

3-0-0-3

Prerequisite: MAT 1112-M

Practical problems dealing with linear, square and volume measuration as related to masonry.

#### **MAT 1123** Machinist Mathematics

3-0-0-3

Prerequisites: MAT 1102 and MAT 1103

Introduces gear ratio, lead screw, and indexing problems with emphasis on application to the machine shop. Practical applications and problems furnish the trainee with experience in geometric propositions and trigonometric relations to shop problems. Concludes with an introduction to compound angle problems.

#### **MECHANICS**

#### MEC 101 Machine Processes

3-3-4

Introductory course designed to acquaint students with basic hand tools, safety procedures, and machine processes of modern industry. Includes a study of measuring instruments, characteristics of metals, and cutting tools. Students become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, boring, and reaming.

#### MEC 102 Machine Processes

3-3-4

Prerequisite: MEC 101

Advanced operations on lathe, drilling, boring, and reaming machines. Milling machine theory and practice. Study of the types of milling machines, cutters, jib and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed.

## MEC 112 Machine Shop Processes

1-3-2

Acquaints students with the procedures of layout work and the correct use of

hand and machine tools. Experiences in the fundamentals of drill press and lathe operations, hand grinding of drill bits and lathe tools, and setup work applied to the trade.

## MEC 114 Shop Practice

1-6-3

Prerequisite: MEC 113

Designed to acquaint students with basic fundamentals of installation, maintenance, and repair of machine tools. Machine maintenance and accuracy emphasized. Slip and press fits produced to include bearing assembly. Miscellaneous hydraulic, pneumatic, and lubrication devices studied. Machine location, leveling and fastening discussed. Integration of machining and fabrication developed by related shop projects. Implementation and operation of preventive maintenance systems studied.

## MEC 210 Physical Metallurgy

3-3-4

Introductory course in metallurgy; basic study of the properties of metals and alloys. Analysis of the structure of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Solid (crystalline) structures, methods of designating crystal plane, liquid and vapor phases, phase diagrams, and alloy systems.

## MEC 222 Rigging and Material Handling

2-3-3

Transporting, conveying, transferring, self-loading and bulk-handling equipment introduced. Use of wire rope, slings, chains, scaffolds, and ladders investigated. Proper storage of materials covered.

#### MEC 225 Practicum

0-6-2

Prerequisite: Student registered in a technical program in the college

Supervised work experience alternating with the educational program on a schedule satisfactory to employers, the college, and students. Enables students to perform a planned variety of activities required of specialty. Work periods carefully planned and closely supervised by the employer and the college to provide experiences and responsibilities commensurate with the capabilities of students. An official agreement among the educational college, the student, and the employer identifies the sequence of activities to be performed by the student and defines the supervisory responsibilities for the educational element of work.

# MEC 235 Hydraulics and Pneumatics

3-3-4

Basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing, filtration, accumulators, and reservoirs.

## MEC 298 Maintenance Problems I

2-3-3

Broadens the experience of students in the areas of mechanics. Problems involving various types of equipment given to demonstrate the check list method of maintenance and preventive maintenance. The use of precision measuring tools and checking for accuracy, squareness, and correct center line distances stressed for prestart inspection. Study in everyday manufacturing problems and solutions. Includes a major part of emphasis on live projects. Projects include selection, by the student of the proper feeds, speeds, linkage, and controls of power transmissions, as well as bearings and gears, installation, and repair.

Special emphasis on interpretation of catalog information and reference material.

### MEC 299 Maintenance Problems II

2-3-3

Continuation and in-depth study of MEC 298, Maintenance Problems I.

## MEC 1101 Machine Shop Theory and Practice

3-0-12-7

Introduction to the machinist trade and the potential it holds for craftsmen. Deals primarily with the identification, care, and use of basic hand tools and precision measuring instruments. Elementary layout procedures of lathe, drill press, grinding (off-hand), and milling machines introduced both in theory and practice.

### MEC 1102 Machine Shop Theory and Practice

3-0-12-7

Prerequisite: MEC 1101

Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, and milling machine shaper. Students introduced to the basic operations on the cylindrical grinder; projects selected encompassing all the operations, tools, and procedures thus far used and those to be stressed throughout the course.

## MEC 1103 Machine Shop Theory and Practice

3-0-12-7

Prerequisite: MEC 1102

Advanced work on the engine lathe, turning, boring and threading machines; grinders; milling machines; and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting, and measuring or spur, helical, and worm gears and wheels. Trainees use precision tools and measuring instruments such as vernier height gauges, protractors, and comparators. Basic exercises given on the turret lathe and on the tool and cutter grinder.

## MEC 1104 Machine Shop Theory and Practice

3-0-12-7

Prerequisite: MEC 1103

Development of class projects using previously learned procedures in planning, blueprint readings, machine operations, final assembly, and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, and advanced milling machine operations. Special procedures and operations, processes and equipment, observing safety procedures faithfully, and establishing good work habits and attitudes acceptable to the industry.

# MEC 1105 Machine Shop Theory and Practice

3-0-15-8

Prerequisite: MEC 1104

Stresses the development of skills and understanding of machine precision parts. Advanced machine processes are taught using the standard machine tools as well as specialized or production equipment, as applicable. Methods and procedures of checking and inspecting precision parts. Good housekeeping and safe working habits stressed at all times.

# MEC 1106 Machine Shop Theory and Practice

3-0-12-7

Prerequisite: MEC 1105

Emphasis placed on production methods and on machines, including setup and operation for mass production. Instruction given on the turret lathe, milling machines, cylindrical grinders, and other production machines. Considerable at-

tention also given to specialized equipment, such as N/C machinery, electrical discharge machines, gear hob or shaper, or others as available.

## MEC 1107 Jigs and Fixtures

3-0-6-4

Develops understanding of principles and uses of jigs and fixtures. Instructions in designing and drawing simple jigs and fixtures, as well as practice in their manufacture for use on course projects. Development of confidence and pride in producing high quality parts with the use of jigs and fixtures.

## MEC 1112 Machine Shop Processes

1-0-3-2

Acquaints students with the procedures of layout work and the correct use of hand and machine tools. Experience in the fundamentals of drill press and lathe operations, hand grinding of drill bits and lathe tools, and setup work applied to the trade.

## MEC 1113 Shop Processes

2-0-3-3

Study of practices used in metal working shops, introduction to materials utilization and to the processes of shaping, forming and fabricating metals. Demonstration of the metal working lathes, grinders, drills, milling machines and finishing machines, shapers, planers, saws, broaches, and gear cutting machines. Study of the capabilities of these machines.

## MEC 1114 Shop Processes

0-0-3-1

Prerequisite: MEC 1113

Comparison of the unit-production and mass-production systems. Casting, forging and allied processes and welding and sheet metal working processes are demonstrated and discussed. Mass-production methods are studied in relationship to precision dimensional control.

## MEC 1115 Metallurgy: Ferrous Metals

2-3-0-3

Investigates the properties of ferrous metals and tests to determine their uses. Instruction includes some chemical metallurgy to provide background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels, and cast iron are the topics for study.

# MEC 1116 Metallurgy: Non-Ferrous Metals

2-3-0-3

Prerequisite: MEC 1115

Continuation of the study of physical metallurgy. Study of the non-ferrous metals: bearing metals (brass, bronze, lead), light metals (aluminum and magnesium), and copper and its alloys. Power metallurgy, titanium, zirconium, indium, and vandium included.

#### MEC 1120 Duct Construction and Installation

3-0-6-5

Study of the fabrication, installation, and maintenance of ducts using various materials and fittings to achieve correct air flow. Course covers safety, fabrication, tools and equipment, cutting and shaping, fasteners and fabrication practices, fans, insulation, ventilating hoods, layout methods, and development of duct systems. The student will study the installation of various duct systems and perform on-the-site modifications.

## MEC 1147 Systems of Measurement and Measuring Tools

Study of measurement and the various systems. How to use and read the various rules, scales, calipers, micrometers, and other precision meauring tools used in mechanical work. Included is the reading of the basic electrical meters used in testing.

#### MEC 1221 Machine Maintenance

2-0-3-0

Fundamentals of repairing machine tools and related equipment or accessories. Emphasis on manufacture of replacement parts, alignment or adjustment of pulleys, gears, gibs, and clutches; and modification or restoration of older equipment.

## MEC 1425 Statics and Strength of Materials

3-2-0-4

Prerequisites: MAT 1101, MAT 1102, MAT 1104, and PHY 1102

Elementary study of systems of forces acting on bodies, machines, and structures at rest. Study of stresses and deformation which occur within machines and structural elements subjected to various types of loads. Topics covered include moments, equilibrium, stress, strain, shear, and moment of inertia.

#### **MEDICAL**

# MED 1100 Hospital Ward Clerk Theory and Practice

9-0-21-16

Designed to prepare qualified students to perform a variety of clerical duties such as maintaining the patient's charts, requesting equipment and services for the patient, requesting supplies and equipment for the nursing unit, and completing all forms correctly. Emphasis placed on communication techniques including communication with the patient via the nurse-patient intercom, communication with the hospital staff, physicians, and visitors, as well as telephone communications. Clinical experiences provide opportunities for applying classroom learning in the hospital setting.

#### **MENTAL HEALTH**

## MHA 116 Group Processes III

1-3-2

Final formal group experience. Attention given to the development of the students' abilities to communicate with others as well as to facilitate communication between others.

#### MHA 131, 132, 133 Readings in Mental Health

0 - 2 - 1

Designed for students who wish to specialize or expand their knowledge in certain areas of mental health. Under the supervision of mental health faculty members, students study materials relative to concepts in mental health and write critical analyses. Time for independent study allotted, and individual conferences with the supervising instructor arranged.

#### MHA 201 Mental Health Care

4-3-5

Prerequisite: HSA 100

Orientation to the policies, procedures, and practices commonly accepted in mental health institutions; an introduction to basic patient care principles and techniques in meeting the needs of patients during observation, ambulation, and

mildly mentally ill stages. Lab experiences present practice in basic patient care under the direction of a faculty member.

## MHA 208 Change Agentry Lab

0 - 3 - 1

A four-day human relations training lab in a retreat setting off campus. Lab staffed by qualified trainers, and students offered practice in the interpersonal and group skills they have learned in courses in Group Processes.

#### MHA 209 Treatment Modalities

2-4-4

Analysis and application of the major approaches to psychotherapy and counseling involving theory, characteristics, and techniques.

#### MHA 210P Practicum III

0-6-2

Students placed six hours per week in an agency to obtain job experience related to course work; supervised by qualified agency personnel.

### MHA 211P Practicum IV

1-6-3

Students assigned six hours per week in a faculty-supervised clinical situation for application of knowledge and skills from related course work.

#### MHA 212 Behavior Management

1-3-2

Prerequisite: PSY 220, permission of the Instructor

Advanced experiences in observing, recording, and designing projects to promote behavior change; supervised by faculty member in practicum settings.

#### MHA 215 Mental Health Seminar

2-2-3

In-depth review of current issues and trends within the field of mental health. Students expected to demonstrate the knowledge and experience gained in previous study and training in group conferences and oral reports.

#### MHA 215P Practicum V

1-6-3

A continuation of Practicum IV.

## MHA 216 Advanced Helping Skills: Training and Practice

2-2-3

Prerequisite: Group Processes courses, permission of Instructor

An intense experience for professional helpers in learning and mastering specific and effective interpersonal skills required by the helper-helpee model. The skills of attending, responding, personalizing, initiating and communicating are included. After this base is built, the trainees practice the skills of problem definition, goal setting, value clarification, alternative selection, and evaluation. Trainees will receive immediate and ongoing feedback from role-playing exercises via videotapes, peers' observation, and trainer's comments. Size of class limited to 20 to insure maximum learning.

#### MHA 225 Crisis Intervention

2-2-3

Designed to introduce students to basic theories and principles of crisis intervention from a historical as well as practical orientation. Provides students with necessary skills in crisis intervention since practical application is correlated with theory. Allows students to prepare themselves emotionally and psychologically to handle emergency crisis situations.

Designed for students who wish to specialize or expand their knowledge in certain areas of mental health. Under the supervision of mental health faculty members, students investigate and study materials and data from primary and secondary sources relative to concepts in mental health and prepare reports in the style appropriate to the discipline.

#### MUSIC

## MUS 150 Music Appreciation

3-0-3

Introduces music: its elements, forms, and stylistic features. The music of major composers is studied, with emphasis on development of aural awareness.

#### NURSING

#### NUR 101 Fundamentals of Nursing

6-6-0-9

Introduces nursing, the concept of wellness, patients, and their environment. Focuses on principles and techniques in the performance of skills by the nurse in meeting the needs common to all patients; stresses body mechanics, medical and surgical asepsis, and other supplementary nursing functions. Nursing care plans, recording, and observational skills are introduced. The local hospital and nursing laboratory are used for practice and development of skills.

## NUR 102 Medical Surgical Nursing

8-0-15-13

Prerequisites: NUR 101, BIO 101, NUT 101, and MAT 114

Introduces students to the area of medical surgical nursing. Symptoms of illness, classification of diseases, pre and post operative care, long term illness, and rehabilitation are included. Nursing the patient with circulatory and respiratory disorders, nursing the cancer patient, and nursing the dying patient are covered. Clinical time is spent in the medical-surgical departments of the hospital with additional learning experience provided in the emergency room, operating room, and recovery room.

## NUR 103 Medical Surgical Nursing II

9-0-15-14

Prerequisites: NUR 102, NUR 110

Continuation of study of disorders of body systems; covers causes, diagnosis, treatment, and nursing care of these disorders. Communicable disease of the adult and disaster and emergency nursing are included. Clinical assignment will be on medical-surgical units of local hospitals, with additional learning experiences provided in the emergency room, operating room, and recovery room.

# NUR 104 Maternal Child Health Nursing

8-0-15-13

Prerequisites: NUR 102, NUR 110

The maternity component focuses on modern aspects of maternity care and understanding of fundamental physiology of human reproduction. Thorough presentation of prenatal, labor and delivery, and postnatal care. Emphasis is on normal pregnancy and delivery. Complications affecting the normal process are presented. The pediatric component introduces the etiology, treatment, and nursing care of common and acute disorders and illnesses that affect the infant, child, and adolescent.

## **NUR 110 Pharmacology**

3-0-0-3

Prerequisites: NUR 101 and MAT 114

Corequisite: NUR 102

Presents students with facts concerning sources, effects, legalities, and usage of therapeutic agents. Conversion between systems, prescriptions of medications, drug classifications, and nursing implications are covered. Prepares the student to administer medications and compute dosages.

## NUR 131 Nursing Seminar

3-0-0-3

Corequisite: NUR 103 or NUR 104

Comprehensive presentations of the practical nurse's ethical and legal responsibilities, professional organizations, and the history of nursing. Job opportunities are explored in depth. Continuing education after graduation is stressed; preparation for licensing examination is included.

#### **NUR 201** Advanced Maternity Nursing

3-0-8-6

Prerequisite: Graduation from the Practical Nurse Education Program Family-centered experience designed to prepare students to incorporate into nursing practice the psychological concepts and family relationships that affect the quality of nursing care. Encompasses the normal and important abnormal aspects of the maternity cycle with special emphasis placed on the abnormal pregnancy and intensive care of the premature infant. Clinical experiences are planned to meet clinical objectives and to guide each student toward developing abilities in identifying nursing problems, implementing care, and evaluating results. Experiences are provided in the general hospital, doctors' offices, and in

#### **NUR 202** Psychiatric Nursing

selected community agencies.

6-0-15-11

Prerequisites: Graduation from the Practical Nurse Education Program, PSY 150

Corequisite: BIO 203

Conceptual and developmental approach to the nurse's role in the care of patients, both mentally and physically healthy and ill. Emphasis placed on cognizance and utilization of self as a therapeutic tool and development of verbal and nonverbal communication skills. Also emphasizes knowledge and identification of personality and behavior deviation experienced by the mentally ill patient, including etiology, treatment, prevention, and rehabilitation of mental illness. Learning experiences are derived in a state mental hospital and other community mental health related facilities.

## NUR 203 Clinical Nursing I

2-0-8-5

Prerequisite: Graduation from the Practical Nurse Education Program

Corequisite: BIO 201

Focuses on planned nursing care as a basis for nursing practice. Emphasis placed on planning care that is individualized and concerned with the total needs of the patient. Emphasis also placed on increasing the nursing student's ability to plan, coordinate, and implement nursing care. Continuing emphasis placed on the conceptual study of the biological, social, emotional, and rehabilitative components of illness as they relate to the ages and stages of development of the adult and child. Clinical learning experiences designed to meet clinical objectives. Experiences are provided in the general hospital.

# NUR 204 Clinical Nursing II

6-0-16-11

Prerequisite: NUR 203

Conceptual study of the biological and the emotional components frequently oc-

curring in illnesses of adults and children. Implementation of the management of patient care within the role of the Associate Degree Nurse is stressed. Opportunity is provided for using previous knowledge as well as that acquired concurrently in planning and implementing nursing care. Nutrition, pharmacology, history, and legal aspects of nursing are integrated in course content and clinical experiences. Planned clinical learning experiences are selected on the basis of meeting clinical objectives in accordance with the students' needs. Experiences are provided in the general hospital, doctors' offices, and in selected community health agencies.

## NUR 205 Clinical Nursing III

5-0-18-11

Prerequisite: NUR 204, BIO 203

Continuation of conceptual study of the biological and the emotional components frequently occurring in illnesses of adults and children. Concentrates on increasing the nursing student's ability to use cognitive, affective and psychomotor skills in meeting the needs of the adults and children exposed to the stress of more complex medical-surgical problems. Special emphasis is placed upon the concepts of rehabilitative and adaptive processes. Students given the opportunity to plan, direct, and evaluate total patient care of individuals and groups. Continuing emphasis is also placed on providing an opportunity for application and reinforcement of previously acquired knowledge as well as that acquired concurrently in planning and implementing nursing care. Clinical learning experiences are selected on the basis of meeting clinical objectives and in accordance with the students' needs. Experiences are provided in the general hospital, doctors' office, and in selected community agencies.

### NUR 231 Nursing Seminar

3-0-0-3

Corequisite: NUR 205

Introduces some of the problems encountered by the nurses as they make the change from student to staff nurse. Reviews legal and ethical responsibilities and points out current trends in the nursing profession. Students expected to present problems for discussions and do special research on problems encountered and approaches to problem solving. Stresses avenues for continued learning after graduation.

#### NUR 235 Special Problems in Nursing

0-4-0-2

Adapted to meet the special problems of individual students. Program of guided activities in the library, learning center, or nursing laboratory to improve or enhance students' nursing skills and knowledge.

## NUR 236 Review of Nursing

3-0-0-3

Systematic approach to the review of fundamental nursing theory designed to facilitate the preparation of graduate nurses for the written licensing examination. Seminar presentations are designed to emphasize safe practice in all areas of nursing. Students are encouraged to participate in group discussions, to share knowledge, information, and clinical experiences, thereby broadening their base of knowledge.

## NUR 1100 Nurses' Assistant Theory and Clinical Practice

9-0-21-16

Designed to prepare qualified men and women to give effective bedside nursing care to selected patients. Students are taught the role of the nurses' assistant, concepts of health and illness, functional relationships within the nursing care facility, fundamentals of effective interpersonal relationships, basic nursing

procedures related to the daily needs of patients, and selected special procedures. Clinical experiences in hospitals and nursing homes provide students with the opportunity to apply the techniques learned in the classroom.

#### NUTRITION

#### NUT 101 Basic Nutrition

3-0-0-3

Prerequisite or Corequisite: BIO 101 or by permission of department chairperson Science of normal nutrition. Includes the study of nutrients, how they are used by the body, sources and types of food necessary for the balanced diet in developmental and ethnic variations, and physiological processes of digestion, absorption, and metabolism. Introduction to special diets.

### NUT 102 Food for Children

2-2-3

Study of nutritional needs and food habits of young children through application of research findings. Practical experience in food service management for feeding children is included as group and individual projects.

#### ORIENTATION

#### ORI 100 Freshman Seminar

2-0-2

Includes an orientation of the policies and philosophy of Pitt Community College and stresses study techniques, decision-making, educational and career planning, and student services. Designed to provide students with sufficient information to successfully complete a program of study.

## ORI 101 Interpersonal Relations Seminar

1-0-1

Designed to promote personal growth and develop a positive self-concept. Emphasizes verbal and non-verbal interaction in interpersonal communications. Social, cultural, and moral norms are discussed as experienced.

# ORI 150 Orientation and Study Skills

1-0-1

Provides information about the community college and its resources, assists in decision making, and in developing sound study habits. Objective is to provide students with sufficient information to succeed in college.

#### PHYSICAL EDUCATION

## PED 150 Foundations in Physical Education

2-0-2

Investigation of efficiency of human performance through study of variables related to total fitness, physical fitness, diet, weight control, degenerative diseases, physiological effects of exercise, and motor skills development. Oriented toward physical activity as a way of life with emphasis upon the role that physical activity should play in leisure oriented societies; includes participation in physical activities.

PED 160 Adapted Activities	0-2-1
(Permission of Instructor required)	
PED 161 Archery	0-2-1

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PED 164	Bowling	0-2-1
PED 165	Conditioning	0-2-1
PED 166	Modern Dance-Elementary	0-2-1
PED 167	Modern Dance-Intermediate	0-2-1
PED 167	Social Dance	0-2-1
		0-2-1
PED 169	Square Dance	0-2-1
PED 170	Field Hockey	0-2-1
PED 171	Golf	0-2-1
PED 172	Ice Skating	0-2-1
PED 173	Jui-Jitsu and Karate	0-2-1
PED 174	Lacrosse	0-2-1
PED 175	Recreational Activities	0-2-1
PED 176	Soccer-Elementary	
PED 177	Softball-Elementary	0-2-1
PED 178	Swimming-Elementary	0-2-1
PED 179	Swimming-Intermediate	0-2-1
PED 180	Tennis-Elementary	0-2-1
PED 181	Tennis-Advanced	0-2-1
PED 182	Track and Field	0-2-1
PED 183	Volleyball	0-2-1
PED 184	Wrestling	0-2-1
PED 190	Varsity Basketball I	0-2-1
PED 191	Varsity Basketball II	0-2-1
PED 192	Varsity Tennis I	0-2-1
PED 193	Varsity Tennis II	0-2-1
PED 194	Varisty Golf I	0-2-1
PED 195	Varsity Golf II	0-2-1

#### **PHILOSOPHY**

#### PHI 150 Introduction to Philosophy

5-0-5

Introduction to the study of philosophy through the examination of major philosophical problems.

#### **PHOTOGRAPHY**

## PHO 116 Photography

2-4-4

Introduction to the field of photography, photographic equipment, and materials. 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.

# PHO 217 Photography

2-4-4

Prerequisite: PHO 116

Advanced photographic techniques and materials. Participation in studio and laboratory procedures illustrating the various applications and creative possibilities of photography in advertising.

## PHO 218 Special Problems in Photography

2-4-4

Students pursue approved special interest problems under the guidance and supervision of the instructor.

# PHO 219 Special Problems in Photography

2-4-4

Students pursue approved special interest problems under the guidance and supervision of the instructor.

## PHO 220 Special Problems in Photography

2-4-4

Students pursue approved special interest problems under the guidance and supervision of the instructor.

#### **PHYSICS**

#### **PHY 101 Technical Physics**

4-2-5

Corequisite: MAT 102

Fundamental course covering several basic principles of physics. Typical topics include systems of measurement, Newton's laws of motion, energy, equilibrium conditions, and statics.

### PHY 102 Technical Physics

4-2-5

Prerequisites: MAT 102 and PHY 101

Continuation of PHY 101. Typical topics include heat and thermodynamics of heat engines, wave motion, and sound.

#### PHY 103 Technical Physics

4-2-5

Prerequisites: MAT 102 and PHY 101

Continuation of PHY 102 with specific attention given to topics related to architecture. Acoustics, light and illumination, and electricity are typical topics covered.

## PHY 104 Technical Physics

4-2-5

Prerequisites: MAT 102 and PHY 101

Continuation of PHY 102 with specific attention given to topics related to electronics. Rotary motion, simple harmonic motion, sound, and circuits are typical topics covered. Electricity and magnetism covered in detail.

## PHY 105 Environmental Physics I

3-2-4

Prerequisite: MAT 101

Incorporates several topics relating to the study of physical phenomena. Special topics include: Greek alphabet, metric system, plane and solid geometry, conversion between various units, graphical portrayal and interpretation of data, use of calculator and algebraic techniques. Physical concepts studied are work, energy, power, behavior of gases, and basic thermodynamics, as they relate to environmental conditions and principles of conservation.

# PHY 106 Environmental Physics II

3-2-4

Prerequisite: PHY 105

Continuation of PHY 105. Emphasis on fluid mechanics, electricity, and electronics. Fluid mechanics discussed in detail as related to environmental problems. Includes general electrical principles and various applications of electrical and electronic devices.

# PHY 107 Radiologic Physics

3-3-0-4

Prerequisite: MAT 101

Basic fundamentals: covers such areas as structure of matter, electric current,

electrostatics, units of measurement, electro-dynamics, magnetism and electromagnetism, electric generators and motors, production and control of high voltage and rectification, x-ray circuits, x-ray tubes and rectifiers, and an introduction to therapy and nuclear medicine.

## PHY 108 Radiologic Physics

3-0-0-3

Prerequisite: PHY 107

Complete application and review of radiologic physics. Focus on the multiple energy transformations required for radiation production, what radiation is, how radiation transports energy, mechanics of interaction with matter, and how radiation is measured.

## PHY 260 Physics and the Environment I

3-0-3

Prerequisite: ENG 100R-4 or equivalent

A conceptual physics course that relates some of the basic principles of physics to their uses and consequences in our world and lives. Major topics include motion, properties of matter, heat and sound. This is a nonmathematical science course designed primarily for nonscience majors.

## PHY 261 Physics and the Environment II

3-0-3

Prerequisite: PHY 260

A continuation of PHY 260 dealing with electricity and magnetism, light, atomic physics and nuclear physics. This is also a nonmathematical science course.

## PHY 1101 Applied Science

3-2-0-4

Corequisite: MAT 1101

Introduction to physical principles. Core topics include systems of measurement, properties of matter, solids and their characteristics, work, energy, power, and simple machines. Additional specialized topics for the various curricula are basic properties of liquid gases, heating and refrigeration, and electricity.

## PHY 1101-A Applied Science

2-0-0-2

Corequisite: MAT 1101

Introduction to systems of measurement and the properties of matter.

#### PHY 1101-B Applied Science

1-2-0-2

Prerequisite: PHY 1101-A

Work, energy, power, simple machines, and specialized topics are the areas covered. PHY 1101-A and PHY 1101-B together are equivalent to PHY 1101.

## PHY 1102 Applied Science

3-2-0-4

Prerequisites: PHY 1101 and MAT 1101

Continuation of PHY 1101. Typical topics include properties of matter, temperature and expansion, gas laws, change of state, and topics in electricity, including magnetism, electrical instruments, transformers, generators, motors, AC and DC circuits.

# PHY 1103 Principles of Electricity

3-2-0-4

Corequisite: MAT 1101

Study of the electron theory, Ohm's Law, series and parallel circuits, AC and DC circuits, magnetism, and batteries, applied to the automobile ignition system.

An introduction to physical principles and their application in industry. Topics in this course will support the particular curriculum in which the course is offered and will be selected from the following: measurement, force, motion, work, energy, power, solids, liquids, gases, heat, thermometry, electrical principles, properties of matter, sound, and light.

#### POWER MECHANICS

### PME 1010 Air Conditioning

2-0-3-3

Basic principles of air conditioning and the special application of these principles to farm equipment. Maintenance, troubleshooting, and repair stressed.

#### PME 1030 Electrical Systems In Farm Equipment

3-0-3-4

Basic study of the electrical system found in farm equipment. Special emphasis given to batteries, starters, generators, alternators, ignition and lighting systems. Identification of trouble, servicing, and repair as applicable to electrical systems stressed.

#### PME 1040 Farm Harvesting Equipment

3-0-6-5

Theory and operation of farm harvesting equipment. Students apply knowledge learned during laboratory training periods when they disassemble various components, repair them, and adjust to specifications.

## PME 1050 New Tractor and Equipment Setup

1-0-3-2

Initial preparation of new tractors and equipment for customer delivery; unloading, assembling and delivery of the tractor or equipment.

## PME 1100 Engine Shop Practice

0-0-3-1

Prerequisite: PME 1101

Designed for students who need additional shop time in order to achieve the objectives of PME 1101.

# PME 1101 Internal Combustion Engine (Gasoline and Diesel)

5-0-12-9

Development of a thorough knowledge 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 gasoline and diesel engines. Testing of engine performance, servicing and maintenance of pistons, valves cams and camshafts, fuel and exhaust systems, and cooling systems; proper lubrication; and methods of testing, diagnosing, and repairing.

## PME 1102 Electrical Systems

5-0-12-9

Theory and operation of ignition, cranking, charging, lights, and accessories systems. The laboratory used to demonstrate various test equipment and electrical checks; students spend much lab time learning to use various pieces of auto electrical test equipment.

# PME 1104 Fuel Systems (Gasoline and Diesel)

5-0-9-8

Designed to give students a solid background in the theory and operation of carburetors, fuel pumps, and the newer emission control devices; a working knowledge of the auto and diesel fuel systems. In laboratory training periods

students disassemble various carburetors, perform tests, and adjust to specifications. All test equipment demonstrated to and used by students.

## PME 1105A Fundamentals of Diesel Engines

5-0-6-7

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, lubrication, and methods of testing, diagnosing, and repairing diesel engines.

#### PME 1105B Fundamentals of Diesel Engines

1-0-6-3

Prerequisite: PME 1105A

Continuation of practical application of principles introduced in PME 1105A.

## PME 1111 Foreign Car Engine Familiarization

0-0-3-1

Study of foreign car engines at the beginners' level; engine operation in depth, names and function of engine parts required.

#### PME 1112 Foreign Car Fuel Systems

2-0-0-2

Thorough study of the fuel systems of foreign cars, carburetor, fuel pump, and fuel accessories.

### PME 1113 Foreign Car Power Trains

0-0-3-1

Detailed analysis of the components of the automotive power train. Emphasis on the identification of troubles and correct servicing and repair procedures.

#### PME 1123 Brakes, Chassis, and Suspension

3-0-9-6

Complete study of various braking systems employed on automobiles and light trucks; emphasis on operation, proper adjustment, and repair. Servicing of power brakes emphasized. Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension systems.

#### PME 1124 Power Trains

3-0-9-6

Comprehensive study of the principles of functions of the automotive power train. Includes study of the clutch, conventional transmission, drive shaft, and the rear axle assembly. Identification of trouble, servicing problems, and repair of the power train system covered.

# PME 1125 Auto Servicing

3-0-9-6

Prerequisites: PME 1102, PME 1123, and AHR 1101

Emphasis on the shop procedures necessary in troubleshooting the various component systems of the automobile. Troubleshooting of automotive systems provides a full range of experience in testing, adjusting, repairing, and replacing components. Close simulation to an actual automotive shop situation will be maintained.

# PME 1126 Small Engine Repair

1-0-3-2

Four cycle air cooled engines, ignition, fueling, cooling and lubrication systems. Maintenance and repair emphasized both in theory and practice.

## PME 1135 Basic Fuel Systems: Gasoline and Diesel

3-0-3-4

Thorough study of the fundamentals of gasoline and diesel fuel systems. Lecture on carburetors and diesel injection systems and principles and functions of components. Laboratory practice in application of service, repair, and diagnosis procedures. Assembly removal and replacement.

#### PME 1136 Fundamental Hydraulics

2-0-6-4

Fundamental hydraulics and its use to transmit power. Study of components and their function; pumps, lines, cylinders, valves, gauges, and controls. Systems servicing, test points, testing, and adjusting. Proper care, use, installation, and storage of test equipment. Minor repairs, assembly removal, and replacement.

#### PME 1137 Basic Power Transmission

4-0-6-6

Basic fundamentals, function, and operation of major components used to transmit power on heavy equipment. Clutches, transmissions, planetary gearing, torque converters, final drives, differentials, and brakes. Servicing, testing, minor adjustment, assembly removal, and replacement.

#### PME 1184 Practicum

0-0-39-13

Shop experiences under the supervision of a qualified shop foreman. Emphasis on the application of automotive servicing concepts and principles related to course content.

## PME 1202 Electricity/Electronics

3-0-9-6

Thorough study of theory and operation of individual automotive electrical units. Analysis and repair of all automotive electrical components. To supplement the engine electrical course for first year students and help them develop a knowledge of transistor circuits and their application to conventional electrical components and circuitry.

#### PME 1204 Emission Controls

5-0-6-7

In-depth coverage of the operation of the P.C.V. System, exhaust emission control systems, evaporative emission control systems, and scheduled maintenance operations. All test equipment involved in diagnosing emission control problems is used by students.

### PME 1214 Advanced Air Conditioning Repair

3-0-3-4

Prerequisite: AHR 1101 or work experience In-depth study of the principles of refrigeration, including extensive practice in disassembly and assembly of the component parts, diagnosis of malfunctioning, proper methods of repair, and handling of refrigerants in charging the various systems.

## PME 1222 Electrical Systems of Foreign Cars

0-0-3-1

Study of the total electrical systems of foreign cars. Laboratory used to demonstrate various test equipment and to make electrical checks.

#### PME 1223 General Automotive Maintenance

1-0-6-3

General principles and procedures of auto maintenance discussed; practical applications performed in the shop.

## PME 1224 Automatic Transmissions

Prerequisite: PME 1124

Automatic transmissions; instruction includes classroom study, demonstrations, and student participation in disassembly, reassembly, and testing of selected transmissions. Special emphasis is placed on principles, functions, construction, operation, servicing, and trouble-shooting procedures and repair of various types of automatic transmissions.

#### PME 1225 Automotive Engine Trouble-shooting

5-0-12-9

General principles of engine trouble-shooting, including the electrical and fuel systems. Study of engine design and construction along with four-stroke cycle and two-stroke cycle principles of engine operation.

# PME 1226 Advanced Auto Service and Foreign Cars

3-0-9-6

Emphasis on trouble-shooting and repairing the various component systems of the automobile, providing an extra range (beyond that of PME 1125) of testing, adjusting, repairing, and replacing experience.

#### PME 1227 Power Accessories

3-0-6-4

Designed to acquaint students with the operation, service, and repair of power operated seats, windows, tops, windshield wipers, and radio antennas. Course should insure the development of students' abilities to understand and trace out the circuits of the electrical accessories and enhance skills in diagnosing trouble and repairing damaged circuits. Application of knowledge in drawing and reading schematic diagrams of electrical circuits.

# PME 1230 Auto Service Excellence Test Review

5-0-0-5

Complete review of all the eight tests given to auto mechanics for certification by the National Institute for Automotive Service Excellence. Particular attention given to test taking techniques.

#### **POLITICAL SCIENCE**

#### POL 102 National Government

3-0-3

English and colonial background, the Articles of Confederation and the framing of the Federal Constitution. The nature of the Federal union, state rights, Federal power, political parties. The general organization and functioning of the national government.

#### POL 103 State and Local Government

3-0-3

A study of state and local government, state-Federal interrelationships, and the functions and prerogatives of the branches. Problems of administration, legal procedures, law enforcement, police power, taxation, and revenues and appropriations. Special attention given to North Carolina.

#### POL 150 Introduction to U.S. Government

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4 American national government with emphasis on its origins, development, structure, and functioning.

#### POLICE SCIENCE

## PSC 102 Criminology

3-0-3

Survey of the historical and contemporary theories associated with the underlying causes of criminal behavior.

## PSC 103 Penology

3-0-3

Study of the historical development of the U.S. prison system and survey of contemporary methods employed by the North Carolina Youth Development Commission, Parole Board, Probation Commission and the Corrections Department.

#### PSC 110 Juvenile Delinquency

5-0-5

Study of the factors contributing to juvenile delinquency and evaluation of the methods employed in delinquency control. Special attention given to the role of juvenile agencies and to the legal procedures utilized in dealing with offenders.

#### PSC 201 Patrol Procedures

4-2-5

Overview of techniques and procedures employed in routine patrol and traffic control.

#### **PSC 202** Police Community Relations

2-0-2

Study of the need for good community relations and the methodology employed in achieving these objectives by criminal justice agencies.

#### **PSC 213** Identification Techniques

3-2-4

Survey of contemporary identification techniques with primary emphasis on fingerprinting. Students develop skills in taking and classifying rolled impressions and in developing latent lifts through lab practice.

#### PSC 240 Firearms and Defensive Tactics

2-2-3

Prerequisite: Admission to program and permission of instructor or coordinator Designed to develop respect for the needs, use, and legal liabilities associated with all firearms. Range practice provided with emphasis on the service revolver. Instruction also given in use of non-lethal weapons and in defensive tactics as used in handling arrested persons.

#### **PSYCHOLOGY**

# **PSY 101** Introduction to Psychology

5-0-5

Overview of the general characteristics of human behavior, including motivation, learning, perception, emotions, and intelligence, with emphasis on the application of scientific methods to psychological investigation and on the biological basis of behavior and experience. Special emphasis placed on behavior disorders and mental retardation in an attempt to help students apply the content of this course to job responsibilities.

## **PSY 102** General Psychology

3-0-3

Study of the various fields of psychology, the development process, motivation, emotion, frustration and adjustment, mental health, attention and perception, and problems of group living. Attention given to applications of these topics to problems of study, self understanding, and adjustment to the demands of society.

# PSY 102-H General Psychology (Health Related Professions)

Study of the various fields of psychology designed for students preparing for careers in health care. Considers development, learning, perception, motivation, emotion, personality, and adjustment. Special emphasis placed on emotional and mental disorders, including principles of recognizing and identifying personality and behavior deviations.

## PSY 103 Adolescent Psychology

3-0-3

Prerequisite: PSY 102

Study of the nature and source of the problems of adolescents in western culture. The physical, emotional, social, intellectual, and personality development of adolescents.

#### **PSY 104** Human Relations

3-0-3

Designed to encourage skill development in personal and interpersonal relationships. Emphasis on the development of skills in self-analysis, listening, and communication to help the health care worker meet the needs of the patient on a personalized, empathetic basis.

## **PSY 112** Personality Development

3-0-3

Designed to heip the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis placed on grooming and methods of personality improvement.

## PSY 115 Child Growth and Development: Prenatal-Early Childhood

3-0-3

Study of the developmental sequence of the prenatal, infant, and early childhood periods. Emphasis given to the factors influencing development and the importance of experiences in establishing patterns of behavior, attitudes, and interpersonal skills.

# PSY 116 Child Growth and Development: Middle Childhood-Adolescence

3-0-3

Detailed study of the developmental sequences during middle childhood and adolescence; including the environmental and social factors which influence developmental rates, the formulation of behavior, and establishment of value systems and interests.

# PSY 120 Human Growth and Development

3-0-3

Prerequisites: PSY 101 or PSY 150 or permission of department chairperson Offers knowledge about basic principles of physical, cognitive, and psychosocial development of the individual from conception to death — the human life span.

# PSY 150 General Psychology I

3-0-3

Prerequisite: Specified score on reading placement test or ENG 100R4
Survey of fundamental principles of human behavior. Includes personality, learning, development, motivation, and intelligence.

# PSY 151 General Psychology II

3-0-3

Second half of survey of psychology. Includes physiological psychology, sensation, perception, and basic drives.

# PSY 206 Applied Psychology

3-0-3

Study of the psychological principles that help in understanding interpersonal relations in daily life. Attention given to personal and group dynamics so that students may apply the principles of mental hygiene to adjustment problems as students, workers, and members of the general community. Applications of psychological principles studied in relation to handling crisis situations dealing with stress, changing habits, and functioning in family life.

# PSY 207 Applied Police Psychology

3-0-3

Prerequisite: PSY 102

Study which builds upon the principles of psychology taught in PSY 102. Designed to assist law enforcement officers in a better understanding of relationships on the job, at home, and in the community as members of the law enforcement team.

#### **PSY 211 Behavior Disorders**

5-0-5

Prerequisite: PSY 101 or PSY 150

Study of general patterns of abnormal behavior with emphasis on biological and environmental causal factors and human coping mechanisms.

#### PSY 217 Introduction to Psychology

3-0-3

This course, followed by Psychology 218, is planned to give students a basic knowledge of the general field of psychology. The development of human personality, emotions, intelligence, sensory perception, and behavior are discussed.

### PSY 218 Introduction to Psychology II

3-0-3

Continuation of PSY 217; studies the human learning process, behavior under stress, and communication between individuals. Study then moves to the psychological implications of inter-personal relationships, especially between health workers and patients. The emotional reactions to disease, physical impairment, or handicaps by persons with varying basic personality characteristics are explored at some length. The personal adjustment of the health team worker to the disabled or severely injured patient is also considered.

## **PSY 219 Personality Theories**

3-0-3

Prerequisite: PSY 150

Analysis of summaries of some of the major contemporary theories of personality; involves the development of personality and application of concepts on a more or less self-determining system of beliefs, values, and behavior tendencies.

# **PSY 220** Psychology of Learning

5-0-5

Study of the teaching-learning process with introduction of major theories and scientific findings relative to how children learn.

# PSY 221 Learning and Behavior

3-4-5

Prerequisite: PSY 150

Introduction to the basic learning principles and concepts required to explain the acquisition and maintenance of behavior. Emphasis placed on positive and negative reinforcement, punishment, extinction, shaping, fading, chaining, recording, and charting behavior. Self-modification conducted by each student.

## **PSY 222 Exceptionality**

General concepts of intellectual, sensorial, motor, speech, and social variability among individuals.

## **PSY 223** The Addictive Personality

5-0-5

Prerequisite: PSY 150

Survey of environmental and physical factors that differentiate the addict. Emphasis given to the theories of cause and treatment.

#### **PSY 225** Test and Measurement

3-0-3

Prerequisite: PSY 150

Study of the principles of psychological testing, general intelligence tests, differential testing of abilities, and measurement of personality traits.

### PSY 228 Abnormal Psychology

3-0-3

Provides instruction in mental hygiene, in the underlying causes of drug addiction and alcoholism, and in recognizing and dealing with abnormal individuals.

## **PSY 229 Abnormal Psychology**

5-0-5

Prerequisite: PSY 150

Study of the symptoms, contributing factors, treatment, and outcomes of mentally ill and mentally defective as well as maladjusted, antisocial persons. Classifications and nomenclature of psychoneurosis, psychosis, and other illnesses are discussed.

## PSY 230 Psychology and Physiology of Aging

3-0-3

Survey course intended to develop awareness of the inevitability of aging as part of the normal life cycle. Surveys the physical, psychological, and social changes occurring in the late middle age and old age with emphasis on the care and treatment of the aged in our society.

#### **PSY 1101 Human Relations**

3-0-3

Study of basic principles of human behavior. Problems of the individual studied in relation to society, group membership, and relationships within the work situation.

## RADIOLOGIC TECHNOLOGY

## RDT 101 Radiologic Technology I

4-2-0-5

Orientation to the field of radiologic technology including darkroom chemistry and film processing, the basic principles of radiologic exposure, elementary patient care procedures, introduction to medical terminology, introduction to radiographic positioning as applied to those systems covered under BIO 107.

# RDT 102 Radiologic Technology II

4-3-0-5

Prerequisites: RDT 101 and BIO 107

Radiographic principles and basic radiographic positioning necessary to perform diagnostic studies of the systems studied under BIO 108. Further patient care procedures and medical terminology included.

# RDT 103 Radiologic Technology III

4-2-0-5

Prerequisites: RDT 102 and BIO 108

Techniques for basic views of the system taught under BIO 108, such as soft

tissue radiography and fluoroscopy; preparation of patient and contrast media for these studies.

#### **RDT 111 Clinical Education**

2-0-6-4

Education in a clinical setting including processing of radiographs, practice in ethical and attitudinal situations during patient contact. Covers patient care, basic positioning for studies of upper and lower extremities, shoulder and pelvic girdles, introduction to thoracic and abdominal viscera, preparation of the patient for studies, and performance of examinations of the urinary system. Students also apply some of the simpler principles of radiographic exposure. Regular sessions of film critique.

#### **RDT 112** Clinical Education

1-0-15-6

Prerequisite: RDT 111

Education in a clinical setting; students continue to improve basic skills in darkroom technique and patient positioning for routine studies taught under BIO 107 and RDT 101. Practice of techniques for roentgenographic studies of the systems studied under BIO 108. Regular sessions of film critiques.

### **RDT 113** Clinical Education

1-0-24-9

Prerequisite: RDT 112

Education in a clinical setting with emphasis on the preparation and use of contrast media, preparation of the patient for such studies, and the performance of examination of the digestive tract, biliary tract, and urinary tract using contrast media. Students gain experience in fluoroscopic procedure and also make radiographs of the abdominal and thoracic viscera without the use of contrast media. Soft tissue radiography (exclusive of mammography) and location of foreign bodies touched upon. Regular film critique sessions.

#### RDT 114 Clinical Education

1-0-33-12

Prerequisites: RDT 103 and RDT 113

Student spends entire quarter gaining clinical education and developing skill in the techniques of those procedures covered during the first three quarters. Regular film critique sessions.

## RDT 201 Topographic Anatomy

2-0-0-2

Prerequisites: BIO 107 and BIO 108

Review of anatomy from the standpoint of topographic anatomy and the relationship of organs to each other. Stress is upon the location of each organ using surface landmarks and relation of the organ to other organs within the same anatomic regions.

## RDT 204 Radiologic Technology IV

4-3-0-5

Prerequisite: RDT 103

Continuation of the radiologic technology series; radiation protection, equipment maintenance and trouble-shooting. More advanced work in the radiography of the skeleton and in the art of pediatric radiology included. Special views and techniques for diagnostic radiology of the skeleton emphasized.

# RDT 205 Radiologic Technology V

4-3-0-5

Prerequisite: RDT 204

Special radiographic procedures. Areas to be covered include photo fluorography; bronchography, sialography, pelvimetry, and vascular procedures.

Emphasis directed toward all requirements necessary for performing these procedures, including equipment and methodology utilized.

# RDT 206 Radiologic Technology VI

4-0-0-4

Study of radiobiology with emphasis on the effects of ionizing radiation in the human body. The use of radiation and radioactive materials in nuclear medicine and radiation therapy considered along with protective measures.

# RDT 208 Radiologic Technology VII

6-0-0-6

Prerequisites: RDT 203 and RDT 206

Devoted to a complete review of all subject matter covered during program. Emphasis on discussion of knowledge obtained during rotation through minor affiliates.

### **RDT 215** Clinical Education

1-0-39-14

Prerequisite: RDT 114

Education in clinical area; radiography of the skeleton, the thoracic and abdominal viscera, and examination of the abdominal viscera using contrast media and fluoroscopy. Emphasis placed on ability to do pediatric radiography and views for radiography of the skeleton.

#### **RDT 216 Clinical Education**

1-0-24-9

Prerequisite: RDT 215

Emphasis placed on ability to assist and perform procedures studied in RDT 205. Students required to show proficiency in all of these areas.

## **RDT 217** Clinical Education

1-0-36-13

Prerequisite: RDT 216

Students rotate for a two-week period through each minor affiliate, the Nuclear Medicine Department at the major affiliate, and the special procedures area at the major affiliate to gain knowledge in specialized procedures, nuclear medicine, radiation therapy, and advance imaging modalities.

#### **RDT 218 Clinical Education**

1-0-33-12

Prerequisite: RDT 217

Students complete rotation through minor affiliates and specialized areas in major affiliates.

#### RDT 219 Review of Radiologic Technology

3-0-0-3

Systematic approach to the review of fundamental radiologic technology theory designed to facilitate the preparation of the graduate radiologic technologist for the written examination. Students encouraged to participate in group discussions, and thus share knowledge, information, and clinical experiences, thereby broadening their base of knowledge.

#### RELIGION

## **REL 150** Introduction to Religion

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4

Survey of the major religions of the world: Judaism, Zoroastrian religion, Christianity, Islam, Hinduism, Buddhism, Sikkhism, Jainism, Confucianism, Taoism, and Shinto.

## **REL 160** Introduction to Old Testament Literature

5-0-5

Study of the Old Testament, with consideration of relevant cultures, history, and major personalities.

#### **REL 161** Introduction to New Testament

5-0-5

Study of the New Testament, focusing on the major teachings of Jesus, the major teachings of the apostle Paul, and the later writings. Special attention paid to the various books' similarities and dissimilarities, to the historical, cultural and religious background, and to the compilation of the New Testament.

#### **REAL ESTATE**

#### RLS 101 Fundamentals of Real Estate

2-4-4

Survey course designed to provide both the beginner and the practitioner with a basic knowledge of real estate. Includes the basic aspects of real estate ownership, contracts, financing, closing, licensing, mathematics, brokerage, land use, property management, and law of agency. Successful completion and meeting attendance requirements of this course qualifies students to take the North Carolina Real Estate Broker's Examination.

#### SCIENCE

## SCI 250 Biological Science for Elementary Majors

3-2-4

Prerequisite: Specified score on reading placement test or ENG 100R4

General study of the most fundamental concepts of biology as applicable to elementary education.

## SCI 251 Physical Science for Elementary Majors I

3-2-4

Prerequisite: Specified score on reading placement test or ENG 100R4

Study of the fundamental principles and concepts of chemistry and earth science as applicable to elementary education.

## SCI 252 Physical Science for Elementary Majors II

3-2-4

Prerequisite: Specified score on reading placement test or ENG 100R4 Study in astronomy, different kinds of energy, and conservation and conversion of energy as applicable to elementary education.

#### SOCIOLOGY

# **SOC 101** Introduction to Sociology

5-0-5

Course designed specifically for students pursuing the degree of Human Services Associate. Introductory course to the principles of sociology. An attempt to provide an understanding of culture, collective behavior, community life, social institutions, and social change. Presents the scientific study of human behavior in relation to others, the general laws affecting the organization of such relationships, and the effects of social life on human personality and behavior.

## **SOC 102** Principles of Sociology

Study of the principles of sociology; attempts to provide an understanding of culture, collective behavior, community life, social institutions, and social change. Presents the scientific study of human behavior in relations with others, the general principles affecting the organization of such relationships, and the effects of social life on human personality and behavior.

## SOC 102-H Principles of Sociology (Health Professions)

3-0-3

Study of the principles of sociology designed to provide a sociologic perspective for students preparing for careers in health care. Considers culture, collective behavior, community life, demography, social institutions, and social change; attempts to help students acquire insights into the interrelationship of society and health.

#### **SOC 103** Social Problems

3-0-3

Study of the major social problems of modern society with which the individual must deal; topics as family disorganization (separation, divorce and death), social inequality, alcoholism, crime, and problems associated with industrial and urban development covered. Emphasis placed on causes, consequences, and various means of dealing with the complexities of modern life.

## SOC 150 Sociology I

5-0-5

Prerequisite: Specified score on reading placement test or ENG 100R4

Nature, concepts, and principles of sociology. Presents the scientific study of human 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. Special attention paid to modern industrial societies in general and American society in particular. Includes society, culture, socialization, groups, institutions and organizations, the class system, social change, and social processes.

## **SOC 202 Environmental Sociology**

3-0-3

Environmental impact statements required prior to construction of community, commercial, and industrial complexes; incorporates political and economical considerations along with technical aspects. Designed to train graduates to deal effectively with environmental issues involving society's collective judgement and large amounts of its resources.

# SOC 221 Family

3-0-3

Study of the origin and development of the family as a social institution with emphasis on courtship, marriage, parenthood family relationships, and problems of the contemporary American family.

#### **SPEECH**

## SPH 150 Voice and Diction

3-0-3

Improvement of articulation and pronunciation through drills, readings, and the delivery of simple speeches.

## SPH 160 Public Speaking

3-0-3

Composition, preparation, and presentation of speeches for all occasions.

#### SOCIAL SCIENCE

#### SSC 101 Introduction to Social Sciences

3-0-3

Integrated course in the social sciences, drawing from the fields of sociology, psychology, economics, and political science, introducing the student to the methods of social science and to the basic concepts used by social scientists to explain the functioning of the human world.

#### SSC 201 Social Science

3-0-3

Integrated course in the social sciences, drawing from the fields of anthropology, psychology, history, and sociology.

#### SSC 202 Social Science

3-0-3

Prerequisite: SSC 201

A further study of social sciences with emphasis on economics, political science, and social problems as they relate to the individual.

#### SSC 205 American Institutions

3-0-3

Study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. Current local, national, and global problems viewed in the light of our political and economic heritage.

### **SURGICAL**

#### SUR 1101 Clinical Practice I

0-0-12-4

Beginning experience in the operating room under the supervision of the instructor. Experience regarding theory and practical duties of circulating technician; transportation of the patient to surgery.

#### SUR 1102 Surgical Safety and Orientation

5-3-0-6

Presents purpose of the program, its content, and its function. Importance of operating room organization, interdepartmental relations, and interrelations with other departments in the hospital. Includes medical terminology and symbols; transportation, positioning, and care of the patient in surgery; and ethical and legal responsibilities. Provides an introduction to other coordinated activities, including vital signs, respiratory maintenance, drainage tubes and catheters, and urethal catheterization. Prepares students for experience in emergency, recovery, and delivery room.

#### SUR 1104 Introduction to Microbiology

3-0-0-3

Presentation of the basic principles of microbiology to aid students in understanding the relationship of microorganisms with the maintenance of health and the cause, control, and prevention of disease.

#### SUR 1111 Clinical Practice II

0-0-24-8

Application of theory and clinical practice; continued experience in the operating room under the supervision of the instructor. Experience regarding duties of circulating technician and limited scrubbing experience.

# SUR 1114 Principles of Operating Room Techniques

Introduction to the method of the preoperative surgical hand scrub, historical development of the surgical scrub, gowning, and gloving; aseptic technique and the development of a "sterile conscience," types of drapes, proper handling of drapes, and the importance of proper draping. Various types, sizes, and uses of sutures; different types, parts, and uses of needles used for suturing tissue. Types and uses of drains; types of basic instruments, the classifications, uses, manufacture, and care of instruments. Study of specific responsibilities of the circulating and scrubbed personnel in routine and special procedures.

#### SUR 1115 Pharmacology for Operating Room

2-0-0-2

Familiarizes students with the drugs and agents used in surgery and during surgical procedures. Also deals with the basic mathematics and measurements needed to handle drugs in a surgical situation.

## SUR 1116 Surgical Procedures I

9-0-0-9

Introduction to the various types of incisions used in performing surgery. Relationship between supplies and equipment in the preparation for surgery. Regional anatomy of the operative site. Introduction to surgical procedures including instruments, general surgery, general abdominal, gynecological, obstetrical, thoracic, genitourinary, and orthopedic surgery.

#### SUR 1121 Clinical Practice III

0-0-24-8

Continued experience in duties of circulating and scrubbed technician. Also experience in setup and work room, delivery room, recovery room, or emergency room.

## SUR 1122 Clinical Practice IV

0-0-36-12

Continuation of SUR 1121 with advanced experiences in the duties of the circulating and scrubbed technician.

## SUR 1127 Surgical Procedures II

9-0-0-9

Relationship between supplies and equipment in the preparation for surgery. Regional anatomy of the operative site. Introduction to surgical procedures including eye, ear, nose, throat, plastic, neurosurgery, and cardiovascular. Pediatric and geriatric surgery; diagnostic procedures; radiation therapy; plaster casts; treatment of burns; and special instruments and equipment.

## SUR 1128 Surgical Procedures III

4-0-0-4

Continuation of SUR 1127 with emphasis on advanced surgical procedures. Also includes case studies and seminars.

# SUR 1130 Review of Surgical Technology

3-0-0-3

Complete review of all subject matter covered in the Surgical Technology Program in preparation for taking the national certifying exam.

#### WELDING

# WLD 120 Oxyacetylene Welding

2-3-3

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, and assembly of units. Welding

procedures such as practice in puddling and carrying the puddle; running flat beads; butt welding in the flat, vertical, and overhead position; brazing; hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

## WLD 121 Arc Welding

2-6-4

Operation of AC transformers and DC motor generator arc welding units. Studies made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After students are capable of running beads, they make butt and fillet welds in all positions, and test them in order to detect weaknesses in welding. Safety procedures are emphasized through the course in the use of tools and equipment.

### WLD 122 Commercial and Industrial Practice

2-3-3

Prerequisites: WLD 120 and WLD 121

Designed to build skills through practices in simulated and actual industrial processes and techniques. Sketching and layout on paper of the size and shape description, listing the steps necessary to build the product, and estimating time and material and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding, and nondestructive tests and inspection.

#### WLD 1102 Basic Gas Welding

0-0-3-1

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 1112 Mechanical Testing and Inspection

1-0-3-2

Prerequisite: WLD 1141 and WLD 1142 or WLD 1120 and WLD 1121
Standard methods for mechanical testing of welds. Students are in

Standard methods for mechanical testing of welds. Students are introduced to the various types of tests and testing procedures and perform the details of the test which give adequate information as to the quality of the weld. Types of tests covered are destructive and nondestructive.

## WLD 1120 Oxyacetylene Welding and Cutting

3-0-12-7

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units. Welding procedures such as practice of puddling and carrying the puddle; running flat beads; butt welding in the flat, vertical, and overhead position; brazing; hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

# WLD 1121 Arc Welding

3-0-12-7

Operation of AC transformers and DC motor generator arc welding units. Studies made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After students are capable of running beads, they make butt and fillet welds in all positions, and test them in order to detect weaknesses in welding. Safety procedures are emphasized through the course in the use of tools and equipment.

# WLD 1122 Commercial and Industrial Practices

Prerequisites: WLD 1141 and WLD 1142 or WLD 1120 and WLD 1121

Designed to build skills through practices in simulated industrial processes and techniques, sketching and laying out on paper the size and shape, description, listing the steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding, and non-destructive tests and inspection.

#### WLD 1123 Inert Gas Welding

1-0-3-2

Prerequisites: WLD 1141 and WLD 1142 or WLD 1120 and WLD 1121

Introduction to and practical operations in inert-gas-shield arc welding. Study made of equipment, operation, safety, and practice in the various positions. Thorough study of such topics as principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding.

## WLD 1124 Pipe Welding

3-0-12-7

Prerequisite: WLD 1121 or WLD 1142

Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metals arc welding processes according to Sections VIII and IX of the ASME code.

#### WLD 1125 Certification Practices

3-0-6-5

Prerequisites: WLD 1123 and WLD 1124; WLD 1141 and WLD 1142 or WLD 1120 and WLD 1121

Practice in welding the various materials to meet certification standards. Students use various tests including the guided bend and the tensile strength tests to check the quality of work. Emphasis placed on attaining skill in producing quality welds.

## WLD 1129 Basic Gas and Electric Welding

2-0-6-4

Various processes used for joining materials by welding discussed. Lecture, demonstrations, and practice cover the oxyacetylene and arc welding processes, filler metals used, gases, currents and weldability of metals. Instruction is given in the setup and safe operation of oxyacetylene and arc welding apparatus. Students prepare joints both by hand and by machine cutting with the oxyacetylene torch.

### WLD 1141 Beginning Welding

5-0-15-10

Introduction to the history of oxyacetylene and arc welding, the principles of welding and cutting, nomenclature of the equipment, assembly of unit. 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 the puddle; running flat beads; butt welding in the flat, vertical and overhead positions; and the cutting of straight lines with the torch. Safety procedures are stressed throughout the program of instruction.

## WLD 1142 Intermediate Welding

5-0-15-10

Review of basic oxyacetylene cutting and welding, preparation of metals, types of joints, welding procedures, and testing of the welds. Operation of AC transformers and DC motor generator arc welding machines. Studies are made of

welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After students are capable of running beads, they make butt and fillet welds in all positions and test them to detect weaknesses in welding. Safety procedures are emphasized throughout the course.



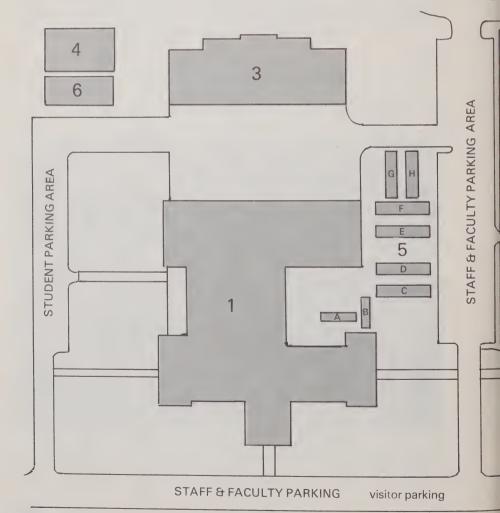
## **GUIDE TO LOCATIONS**

## 1. WHITE BLDG.

- a. all administrative offices
- b. student personnel
- c. cooperative education
- d. electronics
- e. architectural drafting
- f. learning center
- g. bookstore
- h. lounge
- i. nursing
- j. elc. data proc.
- k. machinist
- I. auto mechanics
- m. radiology
- n. surgical

## 2. HUMBER BLDG.

- a. air & water
- b. business
- c. police science
- d. paralegal
- e. agriculture
- f. related
- g. college trans.
- h. library
- i. continuing education









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