

20th Anniversary

**Twenty Years of Progressive Service
1965-1985**



137 South Post Road
Shelby, North Carolina

1985-1987 Academic Bulletin

NOTE

Cleveland Technical College issues this catalog for the purpose of furnishing prospective students and other interested persons with information about the institution and its programs. Announcements contained herein are subject to change without notice and may not be regarded in the nature of binding obligations on the College or the State of North Carolina. Efforts will be made to keep changes to a minimum, but changes in policy by the State Board of Community Colleges, the Department of Community Colleges, or by local conditions may make some alterations in curriculum, fees, etc., necessary.

VISITORS

Visitors, and in particular prospective students, are always welcome at Cleveland Technical College. The Student Services office will provide guide services for groups or individuals between 8:30 a.m. and 5:30 p.m. Monday through Thursday and 8:30 and 4:00 p.m. on Friday. The school is open until 10:00 p.m. Monday through Thursday and until 4:00 p.m. on Friday and individuals may visit at their convenience. Questions about the school and its programs will be answered by someone from the Student Services office.

APPROVED BY

North Carolina State Board of Nursing
North Carolina Department of Veterans Education
American Medical Association for Radiologic Technology

MEMBER INSTITUTION OF

American Association of Community and Junior Colleges
North Carolina Association of Colleges and Universities
North Carolina Department of Community Colleges
Southern Association of Colleges and Schools
Southern Association of Community and Junior Colleges

ACCREDITED BY

The Commission on Colleges of the
Southern Association of Colleges and Schools
North Carolina State Board of Community Colleges

GENERAL INFORMATION

CLEVELAND TECHNICAL COLLEGE "An Equal Opportunity Educational Institution"

DIRECTORY OF CORRESPONDENCE

Telephone (704)484-4000

Inquiries will receive prompt attention if addressed to the Administrative Offices below at Cleveland Technical College, 137 South Post Road, Shelby, North Carolina 28150:

Academic Affairs	Vice-President— Instruction
Administrative Affairs.....	The President
Admission	Director of Admissions
Adult Basic Education.....	Coordinator, Basic Programs
Entrance Prodedures	Director of Admissions
Evaluation of Credits.....	Director of Admissions
Financial and Business Affairs	Vice-President-Business Affairs
Gifts and Bequests	The President
High School Program, GED	Coordinator, Basic Programs
Human Resources Development Program.....	Recruiter, HRD
Job Placement Service	Director of Student Placement
Non-Credit Courses	Dean of Continuing Education
Placement Testing.....	Director of Career Center
Registration.....	Registrar
Student Financial Aid.....	Director of Financial Aid
Student Affairs	Vice-President-Student Services
Transcripts.....	Registrar
Tutoring	Coordinator, Learning Lab
Veteran's Affairs.....	Director of Veteran's Affairs

TABLE OF CONTENTS

Directory of Correspondence.....	1
Calendar of Events 1985-86.....	3
Calendar of Events 1986-87.....	4
General Information.....	5
List of Curriculum Programs.....	8
Admissions.....	9
Academic Regulations.....	15
Student Services.....	20
Financial Information.....	27
Associate Degree Programs.....	39
Associate in General Education Degree.....	39
Communications Technology.....	43
Business, Accounting and Management Department.....	45
Accounting.....	45
Business Administration.....	46
Industrial Management.....	48
Real Estate.....	50
Computer Programming Department.....	52
Business Computer Programming.....	52
Secretarial and Fashion Sciences Department.....	54
Secretarial-Executive.....	54
General Office Technology.....	55
Secretarial-Medical.....	56
Fashion Merchandising and Marketing.....	58
Criminal Justice Department.....	60
Criminal Justice-Law Enforcement Option.....	60
Criminal Justice-Corrections Option.....	61
Criminal Justice-Security Option.....	62
Radiologic Technology Department.....	64
Course Descriptions - Associate Degree Programs.....	66
Allied Services Department.....	96
Electronics Engineering Technology.....	96
Air Conditioning, Heating and Refrigeration.....	98
Auto Body Repair.....	101
Auto Mechanics.....	103
Diesel Vehicle (Truck) Maintenance.....	105
Electrical Installation and Maintenance.....	107
Electronic Servicing.....	110
Food Service Specialist.....	112
Industrial Maintenance.....	113
Light Construction.....	115
Machinist.....	116
Plumbing and Pipefitting.....	119
Welding.....	120
Nursing Department.....	122
Practical Nursing.....	122
Vocational Course Descriptions.....	124
Industry and Community Services.....	140
Continuing Education.....	140
Learning Resources Center.....	158
Personnel of the College.....	160

CALENDAR OF EVENTS

Summer Quarter 1985

May 29	Wednesday.....	Orientation
June 3	Monday.....	Registration
June 5	Wednesday.....	First Day of Classes
June 12	Wednesday.....	Late Registration Ends
July 1-5	Monday-Friday.....	Student Holidays
August 6	Tuesday.....	Last Day to Drop Classes
August 27	Tuesday.....	Summer Quarter Ends-Graduation

1985-86

Fall Quarter

August 26	Monday.....	Orientation
August 28	Wednesday.....	Staff Development Day
September 9	Monday.....	Registration
September 11	Wednesday.....	First Day of Classes
September 18	Wednesday.....	Late Registration Ends
November 5	Tuesday.....	Last Day to Drop Classes
November 26	Tuesday.....	Fall Quarter Ends-Graduation
November 28-29	Thursday, Friday.....	Thanksgiving Holidays

Winter Quarter

November 25	Monday.....	Orientation
December 2	Monday.....	Registration
December 4	Wednesday.....	First Day of Classes
December 11	Wednesday.....	Late Registration Ends
December 18	Wednesday.....	Christmas Holidays Begin After Classes
January 2	Thursday.....	Classes Resume
February 11	Tuesday.....	Last Day to Drop Classes
March 4	Tuesday.....	Winter Quarter Ends-Graduation

Spring Quarter

March 3	Monday.....	Orientation
March 5	Wednesday.....	Registration
March 10	Monday.....	First Day of Classes
March 14	Friday.....	Late Registration Ends
March 31	Monday.....	Easter Holiday
April 18	Friday.....	Staff Development Day
May 6	Tuesday.....	Last Day to Drop Classes
May 27	Tuesday.....	Spring Quarter Ends-Graduation

Summer Quarter

May 26	Monday.....	Orientation
May 29	Thursday.....	Registration
June 4	Wednesday.....	First Day of Classes
June 11	Wednesday.....	Late Registration Ends
June 30-July 4	Monday-Friday.....	Student Holidays
August 5	Tuesday.....	Last Day to Drop Classes
August 26	Tuesday.....	Summer Quarter Ends-Graduation

CALENDAR OF EVENTS**1986-87****Fall Quarter**

August 25	Monday.....	Orientation
August 27	Wednesday.....	Staff Development Day
September 8	Monday.....	Registration
September 10	Wednesday.....	First Day of Classes
September 17	Wednesday.....	Late Registration Ends
November 4	Tuesday.....	Last Day to Drop Courses
November 25	Tuesday.....	Fall Quarter Ends-Graduation
November 27-28	Thursday, Friday.....	Thanksgiving Holidays

Winter Quarter

November 24	Monday.....	Orientation
December 1	Monday.....	Registration
December 3	Wednesday.....	First Day of Classes
December 10	Wednesday.....	Late Registration Ends
December 19	Friday.....	Christmas Holidays Begin After Classes
January 5	Monday.....	Classes Resume
February 17	Tuesday.....	Last Day to Drop Courses
March 10	Tuesday.....	Winter Quarter Ends-Graduation

Spring Quarter

March 9	Monday.....	Orientation
March 11	Wednesday.....	Registration
March 16	Monday.....	First Day of Classes
March 20	Friday.....	Late Registration Ends
April 10	Friday.....	Staff Development Day
April 20	Monday.....	Easter Holiday
May 12	Tuesday.....	Last Day to Drop Courses
June 2	Tuesday.....	Spring Quarter Ends-Graduation

Summer Quarter

June 1	Monday.....	Orientation
June 3	Wednesday.....	Registration
June 10	Wednesday.....	First Day of Classes
June 17	Wednesday.....	Late Registration Ends
June 29-July 3	Monday-Friday.....	Student Holidays
August 11	Tuesday.....	Last Day to Drop Courses
September 1	Tuesday.....	Summer Quarter Ends-Graduation

HISTORY

The 1963 North Carolina General Assembly authorized a system of comprehensive community colleges, technical institutes, industrial education centers, and extension units to be established, and placed under the jurisdiction of the State Board of Education.

The Cleveland Unit of Gaston College was established on July 1, 1965, as a result of the vision and effort of many individuals over several years. The Shelby Chamber of Commerce and the County Commissioners worked with the State Board of Education and Gaston College in establishing a unit of the college. Two buildings were rented by the County Commissioners at 118 North Morgan Street to start the school.

On July 11, 1965, James B. Petty was elected director of the Unit. The first classes began in September 1965, in the old Porter Brothers and McBrayer buildings. The number of classes and students has grown rapidly since that date.

On October 2, 1967, a local Board of Trustees was officially appointed and the Extension Unit became Cleveland County Technical Institute, a unit of the Department of Community Colleges of North Carolina.

In July 1969, the institute leased the County Home property at 137 South Post Road for a campus and moved to the new location.

Having secured a grant of \$500,000 from the Cleveland County Board of Commissioners and matched by a like amount from the State of North Carolina, architects were commissioned in 1972 to plan a long range building program on the present campus and the first two buildings for the new campus layout. The first two new buildings were completed and placed in use for the Fall Quarter 1974.

In June 1977 the voters of Cleveland County approved a \$5,000,000 bond referendum to construct the next two phases of the long-range development plan for the campus.

Construction began in summer 1979 on these buildings to add approximately 100,000 additional square feet of permanent facilities; including a new Learning Resources Center, classrooms, shops, laboratories, snack bar, bookstore, and offices. Shop additions were placed in use for Fall Quarter 1980. The main additional construction, known as the Campus Center Building, was placed in use in March 1981. Formal dedication was held October 18, 1981.

On March 3, 1980, the Cleveland County Board of Commissioners voted to concur with the name change as requested by the Board of Trustees from the name of Cleveland County Technical Institute to the name of Cleveland Technical College.

PURPOSE

Cleveland Technical College is a two year public college whose purpose is to provide the adult citizens of Cleveland County with opportunities for personal growth and development. This purpose shall be pursued consistent with the philosophy of the "open door", which reflects the commitment of Cleveland Technical College to meet each student at her or his skill level and to help that student improve.

To fulfill this purpose the College will:

1. Provide a comprehensive series of quality one and two year technical, vocational and general education programs that will impart profitable skills to students.
2. Provide the opportunity for individuals to complete Adult Basic Education, High School Equivalency Programs, and General Educational Development Preparatory/Examination Program (GED).
3. Provide short term courses that will meet adult educational and community service needs.
4. Provide guidance and counseling services that can assist students to better understand themselves and their career options.
5. Provide cultural and other enrichment programs that can enhance the quality of life in Cleveland County.

ACCREDITATION

Cleveland Technical College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools; the North Carolina State Board of Community Colleges; the American Medical Association for Radiologic Technology; the North Carolina State Board of Nursing for Licensed Practical Nursing.

VISITORS

Visitors need to receive permission from the main office prior to visiting classrooms, shops, or labs.

NIGHT OFFERINGS

The College offers an extensive night program which includes most of the credit courses given in the daytime, as well as non-credit courses primarily for adult general interest or occupational upgrading or retraining.

The availability of credit courses at night allows the student who must work while attending school the opportunity to coordinate school activities with employment. A student may enroll for both day and night classes.

It is possible to complete all work toward a degree or diploma by attending at night. The rate of progress through a program will depend upon the number of courses taken each quarter. A reduced load will require a longer period to complete program requirements.

The College reserves the right to cancel any class, day or night, for which there is insufficient enrollment.

NOTICE OF COLLEGE REGULATIONS

The college has a genuine interest and concern for the integrity of all students; therefore all regulations found in this catalog, the student handbook, announcements posted on bulletin boards will be followed by all students. Each student is responsible for becoming familiar with these publications and reading official announcements to be informed of current policies.

NON-DISCRIMINATION POLICY

From its founding Cleveland Technical College's Board of Trustees and Staff have recognized the importance of equal opportunity in all phases of the College's operations and have adhered to a policy of non-discrimination on the basis of race, color, sex, age, religion, national origin, physical or mental disability, or other non-relevant factors. This policy continues to apply to both students and employees at all levels of the school's operations. Anyone who believes this policy has been violated may seek satisfaction through the Due Process procedures outlined in this catalog.

CURRICULUM PROGRAMS OF STUDY

GENERAL EDUCATION AND COMMUNICATIONS DEPARTMENT

- *Associate in General Education Degree (G-020)
- *Communications Technology (T-154) (ASSOCIATE IN APPLIED SCIENCE DEGREE)

BUSINESS, ACCOUNTING AND MANAGEMENT DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREES)

- *Accounting (T-016)
- *Business Administration (T-018)
- *Industrial Management (T-049)
- *Real Estate (T-127) (Proposed - pending approval)

COMPUTER PROGRAMMING DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREE)

- *Business Computer Programming (T-022)

SECRETARIAL AND FASHION DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREES)

- *Secretarial-Executive (T-030)
- *Fashion Merchandising and Marketing Technology (T-143)
- *General Office Technology (T-033)
- *Secretarial-Medical (T-032)

CRIMINAL JUSTICE DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREE)

- *Criminal Justice - Protective Service Technology (T-129)

RADIOLOGIC TECHNOLOGY DEPARTMENT (ASSOCIATE IN APPLIED SCIENCE DEGREE)

- Radiologic Technology (Day only) (T-061)

ALLIED SERVICES DEPARTMENT

- *Electronic Engineering Technology (ASSOCIATE IN APPLIED SCIENCE DEGREE) (T-045)

VOCATIONAL DIPLOMAS IN:

- *Air Conditioning, Heating, and Refrigeration (V-024)
- *Auto Body Repair (V-001)
- *Auto Mechanics (V-003)
- *Diesel Vehicle (Truck) Mechanics (V-013)
- *Electrical Installation and Maintenance (V-018)
- *Electronic Servicing (V-042)
- **Food Service Specialist (V-053)
- *Industrial Maintenance (V-028)
- **Light Construction (V-029)
- *Machinist (V-032)
- **Plumbing and Pipefitting (V-037)
- *Welding (V-050)

NURSING DEPARTMENT (VOCATIONAL DIPLOMA)

- Practical Nursing (Day only) (V-038)

*CURRICULUMS OFFERED IN BOTH DAY AND NIGHT SCHEDULES

**OFFERED AT PRISON UNIT ONLY

(The College reserves the right to cancel any class or curriculum, day or night, for which there is insufficient enrollment.)

ADMISSIONS

ADMISSIONS INFORMATION

POLICY AND PROCEDURE

Cleveland Technical College operates under an "open door" admissions policy to offer occupational and adult education to all persons who are able to profit from instruction. Placement of students in the various programs of instruction is selective with special emphasis on career guidance and individual admissions counseling. The objective is to assist the student in establishing realistic goals and to assure reasonable success in the particular program of instruction the student desires to pursue.

As a part of the admissions process for curriculum students, placement tests may be given for guidance purposes, transcripts of previous education are required, and a personal interview is held with each student prior to placement in a program of instruction.

Application for admission forms and detailed information on programs of instruction offered may be secured by writing to: Student Services Office, Cleveland Technical College, 137 South Post Road, Shelby, North Carolina 28150 or by calling (704) 484-4000.

GENERAL REQUIREMENTS

Admission is available to persons who are eighteen years of age or older. In case a person is less than eighteen and a high school graduate, the minimum age requirement has been met.

High School graduation or its equivalent is ordinarily required for admission to curriculum programs. However, exceptions may be made in certain circumstances. Adult education and Learning Laboratory courses are offered for students who need to strengthen their general education or eliminate deficiencies.

A general medical examination may be required for some programs.

The College reserves the right to refuse admission to a student if it appears that such action is in the best interest of the College and/or the student. Any student so refused admission may appeal this action through due process.

Specific procedures for admission to continuing educational programs will be found under that section of this catalog.

ADMISSIONS REQUIREMENTS FOR ALL CURRICULUM PROGRAMS

1. Be at least eighteen years of age, or the applicant's high school class must have graduated.
2. Take local placement test if requested by admissions office. These tests are used to assist the applicant in the selection of a program of study suited to interest and general capabilities and in registering for the appropriate sections in English and Mathematics.
3. A complete physical and dental examination is required for Practical Nurse applicants: a complete physical examination is required for Radiologic Technology applicants. (See page 64 for additional requirements for Rad. Tech. applicants and page 122 for additional requirements for Practical Nurse applicants.)
4. Have a personal interview with an Admissions office representative and the Department Head for applicants to allied health programs.
5. High School graduation or its equivalent is ordinarily required for curriculum programs. Provide a transcript showing high school graduation, GED score of 225 above, or a state issued GED Certificate. However, exceptions may be made in certain circumstances where other evidence is available to indicate the applicant can profit from the program for which the person has applied.

ADMISSION PROCEDURE FOR ALL CURRICULUM PROGRAMS

1. Submit completed application form.
2. Have transcripts of all previous education mailed to the College.
3. Have counseling interview (after taking the test battery if this has been requested by the admissions office).
4. Receive a letter of acceptance from the Director of Admissions.

PROVISIONAL ACCEPTANCE

An applicant for admission who has not met the requirements listed above of submission of transcripts of previous education, evidence of high school graduation or equivalency, and/or testing before the beginning of the quarter for which entry is desired, may be granted provisional acceptance for one academic quarter. All admission requirements must be met within that quarter to be eligible to register for the following quarter.

SPECIAL STUDENT CLASSIFICATION

Special students are those who are enrolled for course credit but not in a curriculum leading to the diploma or the associate degree. Students enrolled in this status will normally be required to meet the prerequisites for the course or to demonstrate a necessary level of competence although they do not have to meet the admission requirements for curriculum programs.

AUDIT STUDENTS

A student may elect to audit a course or courses. Those auditing receive no credit and do not have to take any examinations; otherwise, participation in class is on the same basis as a credit student. The fee for auditing is the same as the fee for credit.

WITHDRAWAL

Students desiring withdrawal from the College should contact the Office of Student Services to obtain necessary forms and procedures for official withdrawal. Withdrawal with a grade W will be allowed except during the final three weeks of a quarter. After that point a grade of NC will be assigned.

READMISSION

Any student who officially withdraws from the College and later wishes readmission must contact the Student Services Office. Readmission conditions will depend upon the individual circumstances, but generally a student is eligible to return at such time as an appropriate course schedule can be worked out.

A former student will not be readmitted until all former and current expense obligations to any program or activity under the administrative jurisdiction of the College have been satisfied.

Any student who is financially indebted to the College by failure to completely meet any outstanding debt such as the following: bad check, tuition, bookstore, library, activity, graduation, parking fines, promissory note, equipment or supplies debt, or any required payment to the College will not be eligible for readmission nor acquire any transcript until such indebtedness is completely cleared.

TRANSFER CREDIT

Cleveland Technical College permits admission with transfer credit for students from member institutions of the North Carolina Department of Community Colleges and other reputable institutions.* Content of such courses must closely parallel those for which credit is sought at the College. Each application for transfer of credit will be evaluated according to the individual situation. Quality points earned at the other institution do not transfer.

*Provided the transfer student is eligible to return to the last institution attended.

TRANSFER CREDIT TO OTHER SCHOOLS OR COLLEGES

There are an increasing number of schools and colleges who are accepting course work completed in a technical program or in the general education program at CTC for credit toward the Bachelor's Degree. Most of these colleges consider each applicant and his record individually and the courses for which credit is sought must be similar to the course(s) offered by that institution. Some colleges give credit on the basis of examinations. Many colleges give full credit for the Associate in Applied Science Degree or Associate in General Education Degree toward a Bachelor of Arts, Bachelor of Science or Bachelor of Technology.

For those students who do desire to continue their education after graduation from CTC, there are expanding opportunities to do so.

The following colleges have indicated to us their willingness to accept transfers from Cleveland Technical College. Most of them prefer that the Associate Degree be completed before transferring.

Gardner-Webb College*

Limestone College*

Winthrop College*

Western Carolina University*

Mars Hill College—all degree programs

UNC-Charlotte—E.E.T. into their Bachelor of Engineering Technology program; Criminal Justice into their B. S. in Law Enforcement program. Other programs and courses evaluated on individual basis.

Appalachian State University—Accounting, Business Administration, Secretarial and Industrial Management transfers into their Bachelor of Technology degree programs.

*will accept all programs except Radiologic Technology and Electronics Engineering Technology

Campbell University—General Education, Business Administration and Accounting.

Our students have also transferred to the following colleges:

Winston-Salem State University

A.&T. State University

N.C. Central University

Pembroke State University

Fayetteville State University

Virginia Polytechnic Institute and State University

U. of S.C. at Spartanburg

Johnson C. Smith University

Belmont-Abbey College

Sacred-Heart College

Shaw University

Barber-Scotia College

Livingstone College

Spelman College

Several out-of-state colleges

Some of the other colleges not listed will consider some transfer of courses on an individual evaluation basis. Any student interested in pursuing that possibility should talk with the department chairman of the planned major field at the particular college to which transfer is desired.

TRANSFER RESPONSIBILITY

The College staff will cooperate with each student in planning a transfer program. However, it is the responsibility of the student to determine that courses and credit will transfer to the receiving institution.

The acceptance of courses taken at Cleveland Technical College is determined solely by the institution to which the student transfers.

The student planning to transfer will have less difficulty in completing his transfer satisfactorily if he follows these steps:

1. Decide early which senior college to attend. Contact the college for recommendations concerning appropriate courses.
2. Obtain a current copy of the catalog of that college and study its entrance requirements.
3. Confer with faculty advisor at CTC about transfer plans.
4. Check carefully at least a quarter or two before transfer to be sure that all necessary requirements are being met and all necessary steps are taken.

Changes in the student's major field of study or choice of a senior institution may result in transfer problems. Such changes should be made only after careful consultation with an advisor.

TRANSFER OF CREDIT WITHIN CLEVELAND TECHNICAL COLLEGE

Credit earned in any institutional degree program may be credited toward a degree or diploma program upon evaluation by the Director of Admissions. Credits earned in a diploma program are not usually acceptable to an associate degree program but may be credited toward a second diploma major. If graduation requirements change during the time a student is enrolled, the student may elect to satisfy the requirements in effect at the time of the original enrollment or the new requirements.

Any student who is currently enrolled or has graduated from a curriculum program of the College and wishes to transfer to another curriculum program must follow these procedures:

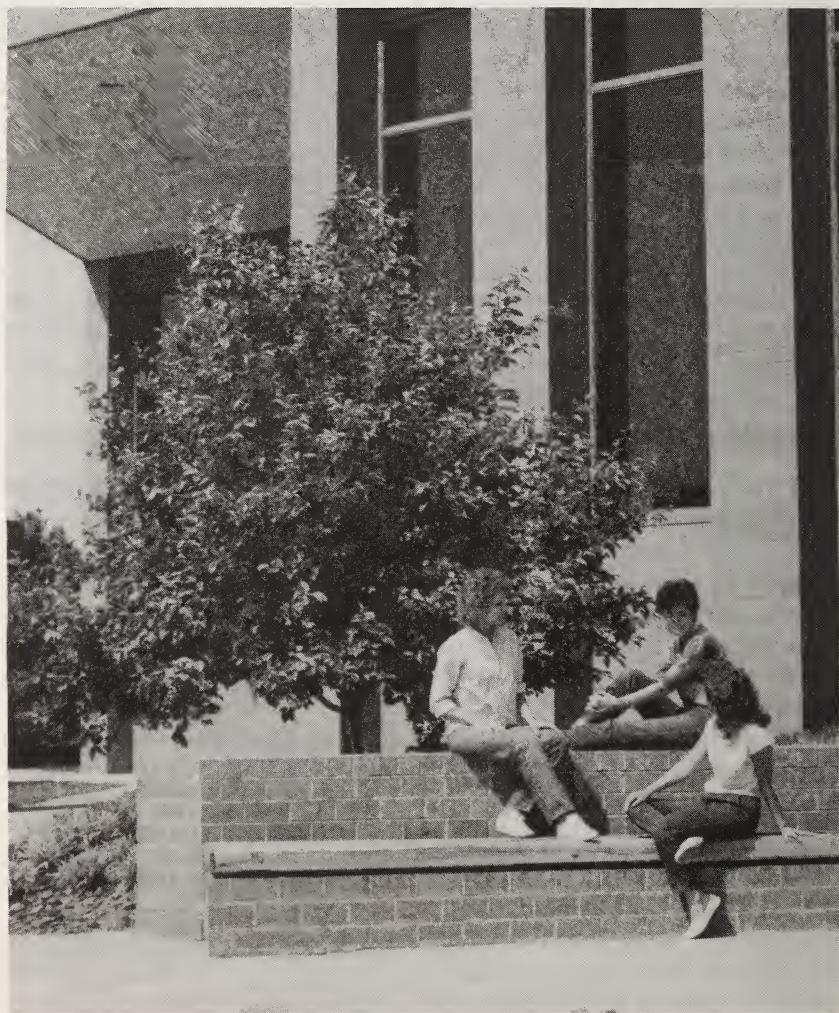
1. Submit an application stating the desired curriculum and quarter of entrance.

2. Meet the admission requirements for the desired program as stated in the school catalog.

Applicants will receive notification of admission by letter from the Director of Admissions along with an "Evaluation of Transfer Credit" form denoting hours for which credit will be given.

REGISTRATION

When acceptance letters are sent to applicants the date for registration is announced. At registration, students will be assigned class schedules, pay fees, and purchase books. Each student is expected to register and begin classes on schedule. A student is not registered *until tuition and fees are paid in the Business Office.*



ACADEMIC REGULATIONS

DROP-ADD PERIOD

At the beginning of every quarter there is a period for students to change schedules and to drop and add courses. This time limit for such changes is one week from the first day of classes. No student is to make a change without first being cleared by the Academic Advisor and the Registrar. After this change period courses may be dropped but courses may not be added. Courses dropped (within the last three weeks of a quarter) will result in a grade of no credit (NC) being entered on the student's transcript.

GRADING SYSTEM

Students will be evaluated on the achievement of technical skills, ability to work under supervision, interest in work, initiative, and ability to apply related information.

At the end of each quarter students will be evaluated in each course as follows:

Letter Grade	Numerical Grade	Explanation	Quality Points
A	93-100	Excellent	4 Points per qtr./hr.
B	85-92	Good	3 Points per qtr./hr.
C	77-84	Average	2 Points per qtr./hr.
D	70-76	Below Average	1 Point per qtr./hr.
NC	Below 70	(No Credit) Non-Completion of course requirements	0 Point per qtr./hr.
I	Work not completed	Requirements may be completed in next qtr.	0 Point per qtr./hr.
W		Official Withdrawals	0 Point per qtr./hr. (No credit hours earned)
CE		Credit by Exam	0 Point per qtr./hr.
AU		Audit	0 Point per qtr./hr.

Any student who receives an I may request to negotiate a written contract with the instructor involved. Contracts negotiated between the student and the instructor will specify a definite completion date for the requirements in addition to the types of activities set forth by the instructor to help the student achieve the minimum objectives of the course. If the student does not complete the minimum objectives in the time negotiated in the contract, the student will be dropped from the course and a no credit (NC) will be entered on the record. Upon completion of the contract in the specified time the instructor will notify the registrar to change the I to a letter grade. The contract completion date must be within the quarter following receipt of the I.

QUALITY POINT AVERAGE

The QPA is the most important example of a student's academic progress. The computation of a QPA is shown below as an example to simplify the average. It is determined by dividing the total number of quality points earned by the total number of quarter hours attempted, excluding I, W, CE, and Y grades. The cumulative QPA is based on all grades while a student is enrolled in a curriculum. The current QPA is an indication of one quarter of work in a curriculum.

EXAMPLE OF COMPUTING THE QPA

Course	Grade	Hrs. Attempted	QP per Credit Hour	Grade Points Earned
ENG 101	A	4	x 4	= 16
SOC 101	B	4	x 3	= 12
MAT 110	C	4	x 3	= 12
BIO 101	D	4	x 2	= 8
		<u>16</u>		<u>48</u>
<u>Quality Points Earned</u>		= QPA	<u>3.00</u>	= 3.00
Hours Attempted			16)48.00	

QUARTERLY DEAN'S LIST

Students who receive a 3.5-4.0 grade point average at the end of the quarter with no grade lower than C on any course and are enrolled full-time will be on the Dean's List for that quarter. For purposes of the Dean's List, a night half-time vocational student qualifies.

CLASS ATTENDANCE POLICY

Absences are a serious deterrent to good scholarship; it is impossible to receive instruction, obtain knowledge or gain skill when absent. Although there are numerous reasons for absences such as personal illness, death in the family, work conflicts, or unexpected emergencies, all absences will be counted in the 20% maximum. A student, who, during a quarter, incurs in any course an absence in excess of twenty per cent (20%) of the class hours, for that course may be dropped from the course (without credit).

Absences may be considered legitimate and eligible for make-up at the discretion of the instructor. The student is responsible for seeing the instructor, giving the reason for the absences, and requesting make-up assignments. This is to include students on rotating shift work schedules.

An instructor may refuse admission to class to any student who arrives more than ten minutes late to a class. One-half day's absence will be counted if a student leaves thirty minutes or more early.

The student may appeal any decision under these policies to the Due Process Committee.

ACADEMIC PROGRESS

The following cumulative grade point averages are the minimums which must be attained in order for a student to make reasonable progress toward graduation. A 2.00 grade point average is required for graduation.

ASSOCIATE DEGREE PROGRAMS

Cumulative Quarter Hours	Minimum Grade Point Average
0-24	1.20
25-48	1.40
49-72	1.60
73-96	1.80
	(2.00 for Gen. Edu. Degree)
97 or more	2.00

VOCATIONAL DIPLOMA PROGRAMS

0-18	1.25
19-36	1.50
37-54	1.75
55 or more	2.00

Any student who falls below the specified minimum at the end of any quarter will be placed on academic probation for the following quarter. (*To be removed from probation the student must attain the appropriate minimum grade point average by the end of the probation quarter; otherwise, the student will be suspended from that program for at least one quarter.)

Re-entry in cases of suspended students is handled on an individual basis, but will often result in an extended delay due to the course sequence of the curriculum. Re-entry is affected by applying under the same procedures as an original application.

The privilege of appeal is provided to the suspended student. The student is required to write a letter to the Due Process Committee explaining the appeal and must appear before this Committee in person should the Committee so desire. The appeal may be carried to the Board of Trustees at the student's request.

*In certain specialty programs (i.e., Practical Nursing and Radiologic Technology) every major specialty course must be passed each quarter before enrolling for the following quarter.

COURSE REPEAT REGULATIONS

A student who does not complete a required major curriculum course must repeat the course until it is completed before being eligible to graduate with the Associate Degree or the diploma.

When a course is repeated, the first attempt will be omitted from computation of minimum graduation requirements and only the second grade will count.

CREDIT HOURS, CONTACT HOURS, AND COURSE LOAD

Each course listed is followed by a notation on the number of quarter hours credit it carries. Normally, the number of quarter hours earned is based on the number of class, laboratory, or shop hours spent under supervision of the course instructor per week for the quarter.

Usually one (1) quarter hour credit is given for each hour of class per week, for each two hours of laboratory work per week, or for each three hours of manipulative laboratory or shop per week.

Contact hours are the number of actual clock hours a student is in attendance during one week.

Students enrolled for 12 or more credit hours are classified as full-time students. Students enrolled in less than 12 credit hours are classified as part-time.

Course load for veterans benefits is as follows: (1) for diploma vocational programs: full-time attendance equals 22 or more contact hours per week; 3/4 time attendance equals 16-21 contact hours per week; 1/2 time attendance equals 11-15 contact hours per week; (2) for degree programs: full-time attendance equals 12 or more credit hours per quarter; 3/4 time attendance equals 9-11 credit hours per quarter; 1/2 time attendance equals 6-8 credit hours per quarter. (For less than 1/2 time attendance in any program the VA does not pay a monthly allowance but will only pay the actual cost of tuition.)

CREDIT BY PROFICIENCY EXAMINATION

A student may be allowed credit toward graduation for past schooling or work experience through proficiency examinations. The student should confer with the Faculty Advisor for qualifications for these provisions and to be informed of the procedure to follow.

A grade symbol of CE (credit examination) will be awarded for courses for which credit is given on the basis of proficiency examination. The course hours for such courses posted as CE will be computed toward graduation requirements but not for the computation of Honors, nor for computation of overall QPA.

GRADUATION HONORS

To graduate with High Honors a student must earn a QPA of 3.5-4.0 in courses presented for graduation. To graduate with Honors a student must earn a QPA of 3.0-3.49 in all courses presented for graduation. To qualify for either honor, a student must not have received any grade lower than a C in the program being completed.

OUTSTANDING STUDENT AWARDS

These awards are made to students who have distinguished themselves by being most outstanding in terms of scholastic achievement, performance and maturity or purpose during their program of instruction at the College. One student may be recognized for each one-year vocational program and each two-year degree program.

REQUIREMENTS FOR GRADUATION

The following are established as minimum requirements for graduation from curriculum programs:

1. Complete course requirements outlined by the curriculum pursued, and earn at least a 2.0 QPA in courses presented for graduation.
2. Complete not less than 96 credit hours for the Associate in General Education degree, 108 credit hours for the Associate in Applied Science Degree, or 64 credit hours for a vocational diploma.
3. Meet with assigned faculty advisor no later than the third (3rd) week of the quarter in which graduation requirements are expected to be completed and complete a graduation check list which is to be submitted to the Registrar. The Registrar will make a complete check of the student's record and either notify the Vice-President for Student Services that everything is in order or notify the student through the advisor that it is not.
4. It is the student's responsibility to check with the Registrar at least 3 weeks in advance of graduation to see that a diploma has been ordered.
5. A graduation fee is required at the time of submission of the graduation check list.
6. Fulfill all financial obligations to the College and secure clearance from the Library.
7. Be present for graduation exercises which are held at the end of each quarter each year. Exceptions to this requirement, in case of unavoidable absences, may only be granted by the Vice-President for Student Services.
8. All prospective graduates must complete one full quarter of work (at least 12 credit hours) at the College before graduation.

STUDENT SERVICES

The Division of Student Services at Cleveland Technical College strives to promote student development by offering a program of services from pre-admissions to successful placement on jobs upon graduation.

Throughout this process such services as testing, counseling, admissions, financial aid, orientation, registration, student activities, health services, research and placement are provided. It is intended that each student will benefit frequently from each service offered.

The first priority of Student Services is the needs and interests of each student enrolled. If these needs and interests are met, then those services provided would have played a major role in assisting students to develop to the maximum and to take their place in a modern day society.

The same services are offered to night students as to day students. The major difference is a more restricted availability of full-time student services staff members at night. Each counselor works one night a week. The Director of Student Activities, working with the Student Government Association, plans a full program for night students.

COUNSELING AND ADVISING

Each student is assigned a counselor who is a member of the Student Services staff and an academic advisor who is generally a faculty member from the curriculum in which the student is enrolled. The academic advisor helps the student plan an academic program and class schedules. The counselor is available to help with personal, educational and vocational problems.

Your counselor and your advisor will assist you in finding available answers to your needs while enrolled at the College but the student must begin the process by seeking out the counselor or advisor.

TESTING

Counseling and testing services are available for students to aid them in determining special interests or abilities. Interest tests can be given at the request of the individual student who may be uncertain of the appropriateness of the program selected or who wishes to utilize the service during pre-registration for aid in determining an initial choice of program. The testing service will also be used to insure the homogeneity of classes.

THE OFFICIAL ACADEMIC RECORD (TRANSCRIPT)

A report of grades earned in each course is produced at the end of each term. A student may be placed on probation or suspended from a program of studies for unsatisfactory work.

An official record of all the student's courses, credits, and grades earned (transcript) is kept in the Registrar's office. The student should maintain a record of courses, credits, and grades each term and check from time to time to see that that record agrees with the Registrar. The record may also help determine eligibility for any activity that requires specific scholastic standards. Copies of the official record are available to the student upon request.

RELEASE OF INFORMATION FROM STUDENT OFFICIAL ACADEMIC RECORDS

The College recognizes the responsibility for maintaining records for each student to preserve authentic evidence of the events and actions that are important and can contribute to the efforts to educate the student and to facilitate the achievement of the educational goals of the College. The following general principles and procedures govern the release of information from student official records:

1. Written consent of the student concerned is required before a transcript or information from his or her official record may be released. Exceptions to the above statement are outlined below:
 - a. The Registrar may release transcripts or information from official records including reports of academic directory information from student records which includes the following: student's name, address, telephone number, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of enrollment, degrees and awards received, and the most recent previous educational agency or institution attended by the student.
 - c. The Registrar may release information pertaining to honor achievements for publication.
2. A student's identification photograph is available to College personnel only.
3. A hold may be applied to the release of a transcript, or other information requested from an official record, for a student who has an overdue indebtedness to the college. Such a student continues to have the right to see the official record upon request.

4. The use and release of information from student official records will be determined as outlined above and in compliance with state and federal legislation relating to such records. Action in situations that may not have been anticipated and/or defined above will at all times be based upon the best knowledge available to the professional staff of the College.

JOB PLACEMENT

Cleveland Technical College maintains a placement service to help interested students and alumni find employment. The job placement office works with students individually in meeting their employment needs, whether it is full-time or part-time. Those students or alumni seeking employment should complete an application with the Job Placement Office in Student Services.

STUDENT HOUSING

The College does not have dormitory accommodations available. Any student who needs to locate housing in Shelby should contact the local Chamber of Commerce who will provide a list of local realtors, a local map and other newcomer information.

STUDENT HEALTH

The College does not provide medical, hospital, or surgical services nor does the College assume responsibility for injuries incurred by students when taking part in intramural sports, class or student activities. Medical services are available at the emergency room of Cleveland Memorial Hospital. A doctor is on duty 24 hours a day in the emergency room.

ORIENTATION

To promote rapid and sound adjustment to the educational philosophy, program, and standards of the College new students are expected to participate in an orientation program. The objectives of the orientation program are:

1. To acquaint the new student with the College, its facilities, resources, services, activities, policies, and organizations.
2. To assist the student in taking full advantage of the opportunities offered by the College.
3. To help in developing effective approaches to the problems frequently encountered by beginning students.

THE CAREER DEVELOPMENT CENTER

Cleveland Technical College maintains a career center to assist students and alumni with career needs such as choosing a suitable career, changing occupations, finding a job within a career field, or selecting a school or training program.

ALUMNI ASSOCIATION

Each Cleveland Tech student receiving a diploma or degree is considered a member of the Alumni Association. The aim of the association is to keep former students informed of Cleveland Tech growth, activities, and services. Alumni are encouraged to take advantage of placement services.

EXTRACURRICULAR ACTIVITIES

The Student Government Association and a variety of clubs, organizations, and intramural sports are supervised by the Director of Student Activities. Student clubs may be organized with the approval of the SGA and the President of the College. These clubs may be related to the vocational goals of the students, or may serve as civic organizations or special interest areas of the students.

STUDENT PUBLICATIONS

1. Student Newspaper - The "Tiger Paw" is published 10 months each year. This paper is published by and for the students at CTC.
2. Annual - The school annual, "The Bridge", is published yearly by the students. Any interested student as well as journalism students are invited and encouraged to participate.
3. Student Handbook - The student handbook is published annually as a service to the student body.
4. Paw Prints - The student newsletter is published bimonthly. This letter publishes articles of interest to students.

STUDENT GOVERNMENT ASSOCIATION

The Student Government Association at CTC takes an active part in life at school. The purpose of this organization is:

1. To represent the individual thinking, the integrity, the ideas, and the interests of the students within Cleveland Technical College.
2. To encourage cooperation between students, faculty, and administration.
3. To sponsor activities or endeavors that will be of benefit to the student body and Cleveland Technical College.
4. To do all things necessary to promote the welfare of the student body.

Members of the CTC SGA attend the North Carolina Comprehensive Community College Student Government Association meetings. This enables students to meet new people and exchange ideas from different schools for the enhancement of their respective organizations.

STUDENT CONDUCT

Self-discipline is an essential element of individual growth and development. Accordingly, students are expected to display the qualities of courtesy and integrity that characterize the behavior of mature ladies and gentlemen.

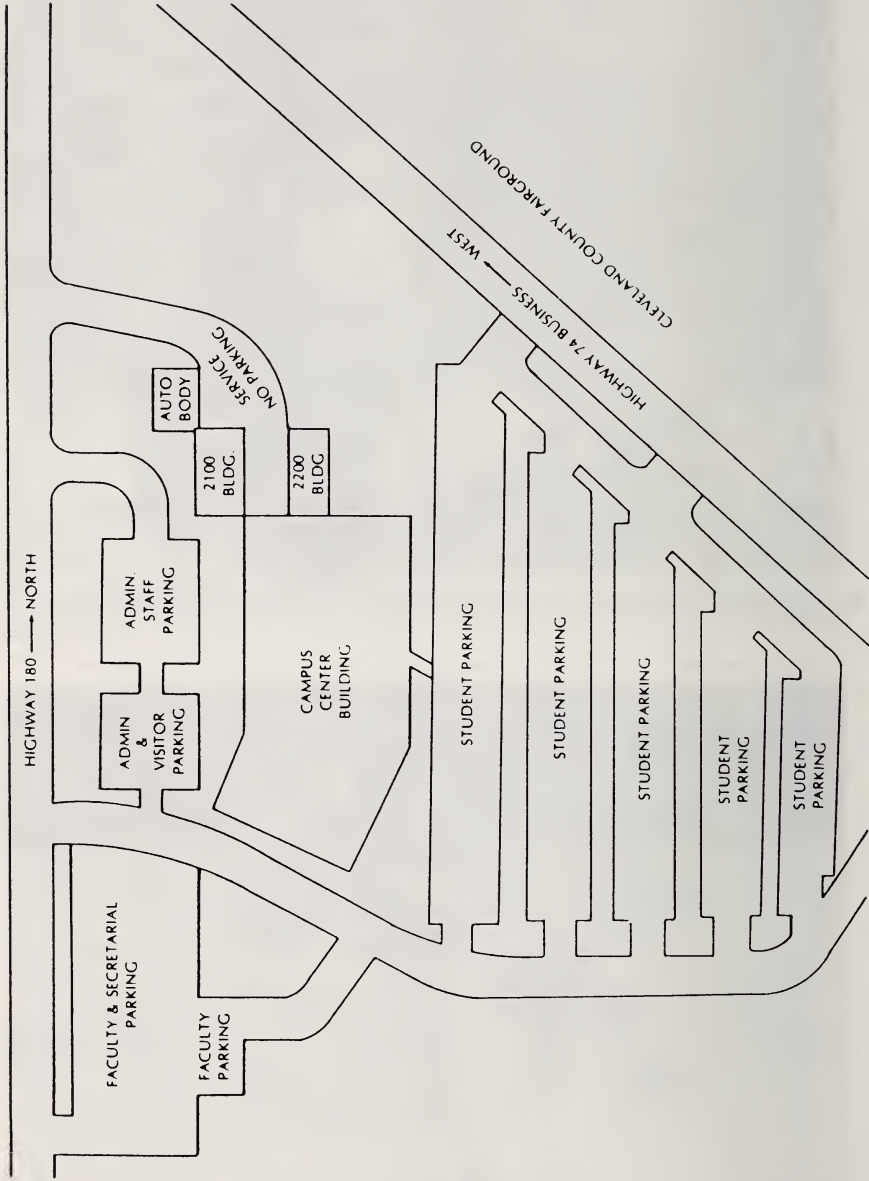
It is expected that students will be governed by such rules and regulations as may be established by the College.

The College does not permit the use or possession of alcoholic beverages or narcotics in any form on the campus or at College sponsored functions. Violations of rules and regulations may subject the student to disciplinary measures or dismissal.

DUE PROCESS PROCEDURES ON GRIEVANCES

1. A student wishing to appeal any decision at the College should first appeal the decision to the instructor or administrator making the decision.
2. If not satisfied, an appeal may be made in writing to the Due Process Committee which will recommend action to the President. The Executive Vice-President of the College serves as Chairman of the Due Process Committee.
3. Further appeal may be made directly to the President in writing.
4. Final appeal would be made directly to the Board of Trustees in writing. The Board will make a decision based on the written appeal and the forwarded recommendations of the President and Due Process Committee.





FINANCIAL INFORMATION

Cleveland Technical College operates on the quarter system. Each quarter is eleven weeks in length. Students pursuing a program of study are required to register and pay all fees at the beginning of each quarter. A student is not registered until tuition and fees are paid in the Business Office. Every effort is made to keep the student's expenses at a minimum. Tuition cost is set by the State Board of Education and is subject to change.

TUITION

Current rates for all general education, technical or vocational curriculum students:*

North Carolina Students:

Full-time (12 or more credit hours)	\$ 51.00 per quarter
Part-time (less than 12 credit hours)	\$ 4.25 per qtr. credit hr.

Out-of-State Students:

Full-time (12 or more credit hours)	\$ 255.00 per quarter
Part-time (less than 12 credit hours)	\$ 21.25 per qtr. credit hr.

*Tuition and fees are waived by the State for persons 65 years of age or older. If accident insurance were desired these persons would need to purchase this at the current rate.

FINANCIAL RESPONSIBILITY

Students are not permitted to default in the payment of fees, fine, loans, or other financial obligations due the school. All tuition, fees, and any other expenses must be paid prior to entering class. Any deviation from this policy must be approved by the President of the College.

RESIDENCE STATUS FOR TUITION PAYMENT

1. General Stature 116-143.1 (b) passed by the 1973 General Assembly of North Carolina reads:

"To qualify for in-state tuition a legal resident must have maintained his domicile in North Carolina for at least 12 months immediately prior to his classification as a resident for tuition purposes. In order to be eligible for such classification, the individual must establish that

his or her presence in the State during such twelve-month period was for purposes of maintaining a bona fide domicile rather than for purposes of mere temporary residence incident to enrollment in an institution of higher education; further, (1) if the parents (or court-appointed legal guardian) of the individual seeking resident classification are (is) bona fide domiciliaries of this State, this fact shall be prima facie evidence of domiciliary status of the individual applicant and (2) if such parents or guardian are not bona fide domiciliaries of this State, this fact shall be prima facie evidence of non-domiciliary status of the individual."

2. Regulations concerning the classification of students by residence for purposes of applicable tuition differentials, are set forth in detail in *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes*. Each enrolled student is responsible for the contents of that Manual, which is the controlling administrative statement of policy on this subject. Copies of the Manual are available on request at Student Services.

BOOKS, SUPPLIES, AND BOOKSTORE

A student is required to buy the necessary textbooks and supplies. An average cost of books will vary from \$30 to \$100 per quarter, depending on the curriculum and number of courses taken. Books and supplies are sold during regular bookstore hours.

STUDENT INSURANCE

Certain risks are inherent in any work involving regular contact with mechanical and electrical equipment. While stringent precautions will be taken to insure safety, it is felt to be in the interest of all students to provide some measure of insurance protection.

A group policy, providing the desired insurance protection, is available through the Business Office. The cost of the insurance is approximately \$1.60 per year. If you are not already covered by accident insurance we strongly recommend this policy to you.

Any accident, regardless of how minor it may be, must be reported to the instructor in the area. The policy is limited in coverage, both in the time period covered and the amounts provided for each accident. Information concerning the policy and coverage is distributed during each registration period and is also available in Student Services. Claims for accidents should be turned in at Student Services.

Personal liability insurance is required of all Practical Nursing and Radiologic Technology students. The cost of the coverage is \$10.50 per year.

GRADUATION FEE

All students eligible to graduate from a curriculum program will be required to pay a graduation fee (approximately \$20.00) one month prior to the time they are to complete their programs. The fee covers the cost of graduation (cap and gown, diploma or degree with case).

STUDENT ACTIVITY FEE

All students enrolled for seven or more credit hours are required to pay a student activity fee of \$8.00 each Fall, Winter, Spring quarter. Students enrolled for less than seven credit hours will pay a student activity fee of \$4.00 each quarter. All summer quarter students will pay a \$4.00 student activity fee. The Student Government Association budgets this money yearly with the approval of the Administration. Included in the budgeting are the following items: The Tiger Paw, The Bridge, men's and women's athletics, intramurals, fall, spring, and summer festivals, SGA dues and conventions, ID cards, parking stickers, and other student related activities.

CHARGE FOR RETURNED BANK CHECKS

There will be a charge of \$5.00 assessed any student who gives the College a bank check which is returned from the bank because of insufficient funds.

REFUND POLICY

Tuition refunds may be authorized only in the event that the student must withdraw for unavoidable reasons. In such cases, two-thirds of the tuition paid may be refunded if the student withdraws within ten days after the first day of classes as published in the Calendar of Events. Tuition refunds will not be considered after that time.

Tuition refunds will not be made for tuition of \$5.00 or less. Refunds will not be made to students enrolled in short-term, non-credit classes, activity fees, or for accident insurance fees. Full refund will be made should the College cancel a class or program. Refund checks are normally issued within three weeks after the close of late registration.

PARKING (MOTOR VEHICLE AND TRAFFIC REGULATIONS FOR CLEVELAND TECHNICAL COLLEGE)

1. General Information

The control and enforcement of motor vehicle conduct is necessary both for the safety of the individual and the efficient operation of Cleveland Technical College.

- A. In the following information the term campus shall refer to that property operated by Cleveland Technical College and those other properties when used by CTC for educational purposes.
- B. The term motor vehicle shall include all vehicles which are covered by the motor laws of North Carolina.
- C. No student may receive end-of-quarter grades until receiving clearance from the Campus Security Committee and paying all fines.
- D. Student parking is in the large lot on the fairground side of the campus.

II. Registration of Vehicles

- A. All faculty, staff and students, part-time and full-time, shall be required to have their vehicle or vehicles registered by the business office and to affix an appropriate decal on the driver's side of the rear bumper. There shall be no charge to register vehicles.
- B. Campus visitors, law enforcement vehicles, and service vehicles are specifically exempted from registering their vehicles. However they are expected to obey all other regulations.

III. Regulations

- A. It shall be the responsibility of the Campus Security Committee to recommend traffic regulations to the President of the College for presentation to the Board of Trustees for approval.
- B. Enforcement of regulations shall be administered by the Campus Security Committee.
- C. Those students assessed fines shall pay those to the Campus Business Office (For redress, see part IV.)
- D. The following shall be considered violations of campus motor vehicles regulations and the corresponding fine:

1. Vehicle showing no registration	\$5.00
2. Parking in improper area.....	3.00
3. Parking by backing vehicle into area	1.00
4. Double parking or blocking a legally parked vehicle	3.00
5. Speeding in excess of 10 mph	3.00
6. Failure to yield right-of-way to pedestrian.....	3.00
7. Reckless driving	5.00

- E. This College reserves the right to remove any illegally parked vehicle by a College vehicle, privately owned wrecker, or other means. The violator shall be responsible for any tow charge in addition to the violation fee.
- F. The registered operator is responsible for the use of the vehicle.

IV. Redress

- A. A committee shall be made to exist which will be known as the Campus Safety and Traffic Committee.

- B. It shall be the responsibility of this committee to determine final disposition of fines for which anyone may feel that he/she was unnecessarily charged.
- C. This committee shall be composed of the following:
 1. One member of the Campus Security Committee, not the chairman.
 2. One member of the Campus Safety Committee, not the chairman.
 3. One member of the Student Government Association, not the president.
- V. The Campus Security Committee shall have power to recommend changes in the above regulations provided the change is properly communicated to the administration, faculty, staff, and students of Cleveland Technical College.

FINANCIAL AID INFORMATION

The fundamental purpose of the financial aid program at Cleveland Technical College is to provide financial assistance, based on financial need, to students who normally could not attend post-secondary school without aid. Financial aid at Cleveland Tech is based on a needs analysis. The student may complete any one of three (3) approved needs analysis forms and be eligible to be considered for aid available. These forms are the Financial Aid Form (FAF)-accepted, the Family Financial Statement (FFS)-preferred, or the Application for Federal Student Aid. For aid other than the Pell (Basic) Grant additional forms may be required.

Based on the belief that post-secondary education should not be a privilege reserved only for those who have the personal or family resources to afford it, these policies are adopted for CTC's Financial Aid Program:

- Financial aid at Cleveland Tech consists of scholarships, grants, loans, work study or any combination of these as determined by the financial aid office.
- The family of the student or the student has the primary responsibility for post-secondary educational cost. Financial aid awarded by the College is based on the need of the student to supplement the family or student contributions.
- Students receiving financial aid who withdraw from the College must personally notify the Financial Aid Office of this action. Also, any changes in name, marital status, address, academic program, or enrollment status must be reported to the Financial Aid Office.
- The primary purpose of financial aid is to assist the student in receiving an education. To be assured of continued financial aid, students must maintain satisfactory progress as defined in this catalog under "satisfactory progress".

- Any commitment of federal funds (Pell Grant, SEOG, CWSP, Nursing) is tentative and contingent upon subsequent congressional appropriation and actual receipt of funds by Cleveland Technical College.
- The Financial Aid Office reserves the right, on behalf of the College, to review and adjust or cancel an award anytime there is indication of changes in financial status, academic program, good academic standing, or failure to observe reasonable standards of conduct.
- Recipients of financial aid from the College are to notify the Financial Aid Office of any other financial aid extended to them from sources outside the College prior to acceptance of outside aid.
- Much Student aid is based on full-time enrollment. Twelve (12) credit hours is required for full-time status; 9-11 credit hours for 3/4 time status, and 6-8 credit hours for 1/2 time status. No student aid is normally paid for less than 1/2 time enrollment.

APPLICATION PROCESS

All applicants for financial aid at Cleveland Technical College shall have completed and mailed to American College Testing (ACT) the Family Financial Statement (FFS) or the other standard need analysis document approved by CTC. All students shall apply for a PELL (Basic) Grant if they wish to be considered for other federal, state, or institutional financial aid that is based on need. Students are encouraged to complete the application process as soon as income taxes and reports are filed or the source of income has been verified. In addition to verification of income, whether taxable or non-taxable, students may be requested to verify or document federal income taxes paid, number in household, number attending post-secondary institutions, and independent student status. Students should mail the FFS on or before the first of July to insure completion of the application process prior to the first of September. Students completing and mailing the FFS needs analysis applications, on the day of registration are not awarded their grant until the application process is complete.

SATISFACTORY PROGRESS STANDARDS FOR FINANCIAL AID

Introduction

The Higher Education Act of 1965, as amended by Congress in 1980, mandates institutions of higher education to establish minimum standards of "satisfactory progress" for students receiving financial aid. For the purpose of maintaining a consistent policy for all students receiving financial aid administered by the college's Financial Aid Office, these standards are applicable to all financial aid programs including all Federally sponsored Title IV programs.

Satisfactory Progress Defined

To continue to receive financial aid, a student must demonstrate satisfactory progress as defined below.

- 1) Satisfactory progress for Financial Aid at CTC is defined as any student in good academic standing, not on academic probation, and who has completed one-half ($1/2$) or more of the work registered for the previous quarter.
- 2) Continuing students applying for financial assistance (Title IV funds which include PELL Grant, Supplemental Educational Opportunity Grant, College Work-Study, Guaranteed Student Loan, Plus Loan, and State Student Incentive Grant) will be evaluated each fall quarter to determine, by the Standards of Satisfactory Progress, whether the student has successfully completed the minimum percentage of work toward his/her objective, degree, or certificate. Other students entering during the same academic year mentioned above will be evaluated by the FAO the entering quarter.
- 3) The maximum time frame a full-time student would have to complete his/her course should be:

3 years or 12 quarters for technical and general education programs

$1\frac{1}{2}$ years or 6 quarters for vocational programs.

A half-time or three quarter student must satisfactorily complete the appropriate fraction of maximum hours established for completion of his/her course work.

Students who change from one curriculum program to another are subject to the maximum time frame mentioned in the above paragraph.

If a curriculum student is placed on academic probation or suspension for the first time and applies for admission as a "new" student in another program, the financial aid award is terminated. The student may reestablish eligibility for the federal student aid funds after attending one or more quarters and removing the academic probation, or attend one quarter with good standing in a new program when suspended.

Re-entry status is determined by internal evaluation and transfer of credit. After the re-entry quarter, the first definition of satisfactory progress applies.

TYPES OF FINANCIAL ASSISTANCE

All financial aid programs fall into one of three categories: grants, loans, or employment. Grants are outright gifts of money and do not have to be repaid. Scholarships are also considered gift aids. Loans are borrowed monies which you must repay with interest. Employment allows you to work and earn the money you need.

The different programs which come under these categories are listed below. The application procedures and the eligibility requirements, as stated in the academic bulletin, apply for any program. Students having a 4-year degree may apply for any program except Pell Grant and SEOG.

GRANTS

Pell Grant

All financial aid applicants are required to apply for the Pell Grant. The Pell Grant is a federal student aid entitlement program which provides a foundation of financial assistance to which other forms of aid may be added. Awards at Cleveland Technical College range from approximately \$200 - \$1575 a year (including dependent/self-supporting and in-state/out-of-state residents).

The U. S. Department of Education determines the eligibility based on a formula developed annually and reviewed by Congress. This formula is applied consistently to all applicants and takes into account income, assets, family size, etc. The formula uses the information provided on the application to produce an eligibility index number. This number will appear on a Student Aid Report (SAR) which will be mailed directly to your home approximately 4 to 6 weeks after submitting the application. When you receive your SAR, bring it immediately to the Financial Aid Office (FAO).

Supplemental Education Opportunity Grant (SEOG)

The SEOG is a federal program; however, it is not an entitlement program like the Pell Grant. Recipients are determined by the Director of Financial Aid according to need and is primarily for students with exceptional needs.

A SEOG could range from \$200 to \$2000 according to the family income and their ability to assist the student. CTC's average award is \$300.

Job Training Partnership Act (JTPA)

This is a federally funded, skill development program for economically disadvantaged students. Application and recipient selection is processed through the Job Placement Office on campus.

North Carolina Student Incentive Grant (NCSIG)

Legal residents of North Carolina who are accepted for enrollment or are enrolled on a full-time basis may apply for a Student Incentive Grant. Students must demonstrate substantial financial need based on the ACT Family Financial Statement. NCSIG awards may not exceed one half of a student's unmet need, or \$2000 per academic year, whichever is less.

To be considered for the NCSIG applicants should mail the FFS to ACT prior to March 1 preceding the award year.

EMPLOYMENT

College Work-Study

College Work-Study is a federal program which provides jobs on campus for students who need financial aid and who must earn part of their educational expenses. Students should indicate on their FFS if they would like consideration for this program. In arranging a job, the following is considered; the student's need for financial assistance, class schedule, and academic progress. The salary is based on the current minimum wage. The Work-Study award is established by the FAO at a limit that cannot be exceeded. Once the student has earned the total amount of the award, he/she cannot continue to be employed under Work-Study for that academic year.

CTC SCHOLARSHIP PROGRAMS

NC Rehabilitation Association Scholarship Program - The purpose of this program is to promote professional excellence in Rehabilitation through the granting of a scholarship (s) to the student (s) in Rehabilitation who best demonstrates his/her potential to contribute to the advancement of Rehabilitation in the State of North Carolina.

NC Sheriff's Association Undergraduate Criminal Justice Scholarship Program - The NC Sheriff's Association has established a scholarship program for students enrolled in curriculum programs in Criminal Justice, Juvenile Justice, Correction Service or Police Science.

NC Community College Scholarship Program - To qualify as a candidate for these scholarships, a person would have to meet the established criteria. A copy of the eligibility criteria is available in the FAO. Applications must be submitted to the FAO and selection is determined by interview before the scholarship committee.

The Wachovia Technical Scholarship is awarded annually to two students who are enrolled full-time in the second year of a technical curriculum and is based on need and scholastic promise.

Memorial Scholarships

The Clyde Cash Memorial Scholarship Fund established December, 1981 in memory of Clyde Cash, Chemistry instructor, provides annual scholarship awards to graduating seniors from Cleveland County High Schools.

The Robert Hoover Memorial Scholarship Fund established June, 1982 in memory of Bob Hoover, English instructor, provides annual scholarship awards to graduating seniors from Cleveland County High Schools.

The Ruth Anthony Memorial Scholarship established May, 1984, in memory of Ruth Anthony, professional business-woman for Fields Young, Inc., provides an annual scholarship to a person applying for admission to a secretarial/science curriculum at Cleveland Technical College. The recipient must exhibit the desire and ability to be the best professional secretary possible. The Selection Committee will select the recipient based on need, interest, and aptitude. Applications must be submitted to the FAO by April 1.

Gamma Beta Phi Scholarship - The Gamma Beta Phi offers a scholarship of \$100 per quarter to a worthy student. Students interested in applying for this scholarship should do so at the FAO.

Vocational Rehabilitation - Students with mental, physical or emotional handicaps which limit employment opportunities may be eligible. For information, students should contact the nearest Vocational Rehabilitation Services, Shelby, NC 28150.

North Carolina National Guard Tuition Assistance Program (NCNG) - The NC General Assembly has provided a state funded Tuition Assistance Program for members of the NC National Guard (NCNG). Assistance is available to active NCNG members who successfully participate in unit training and have a minimum of two years remaining as a member of the guard from the end of the academic period for which tuition assistance is provided. Extension of enlistment may be necessary. Up to \$500 per year is available for tuition and it is subject to annual renewal for a maximum of four years. Applications are available at guard units and the Office of the Adjutant General, P. O. Drawer 2628, Raleigh, NC 27611.

Other Scholarships - Other scholarships from various community clubs and organizations are providing funds periodically. When available, these funds are awarded to students on a need basis. Applicants must follow normal procedures of applying for Financial Aid.

Veterans Programs

Veterans and War Orphans Grants - These grants are available to immediate family members of deceased or disabled veterans (service connected). Families of POW's and MIA's classified as such for ninety days are eligible. Students should contact: Division of Veterans Affairs, P. O. Box 26206, Raleigh, NC 27611.

Veterans Benefits - Cleveland Technical College is approved for eligible veterans and wives, widows and children of disabled or deceased veterans. Applications may be obtained at the CTC Veterans Office or the nearest county Veterans Office.

Other Sources

American Business Women's Club Scholarships
 Cleveland County Negro Women's Club Scholarships
 Cleveland County Nurses Auxiliary Scholarship

Students interested in the above should contact the appropriate agency. The Financial Aid Office assists in directing students to these agencies.

Scholarship recipients are expected to be full-time students. Students selected for scholarships who withdraw/drop courses must notify the FAO. The reason for withdrawing/dropping courses will be evaluated to see if the scholarship should be forfeited. Replacement for the scholarship are at the discretion of the FAO. This recipient will be selected from the pool of candidates interviewed for the original scholarships.

LOANS

NC Insured Student Loan

To be eligible to apply, a student must be a resident of North Carolina, enrolled or accepted for enrollment on at least a half-time basis. An undergraduate student may borrow \$2,500 a year, not to exceed the cost of education, except a first-year student may borrow up to \$2,500 a year not to exceed one-half the cost of education.

If the adjusted gross income of the student's family is more than \$30,000 the borrower will have to demonstrate need in order to qualify for the federal interest benefits.

The annual percentage rate on the loan is nine percent. An insurance fee of up to 1% and a 5% origination fee are deducted from the loan check.

A grace period of 6 months is allowed after half-time enrollment ceases and before repayment begins.

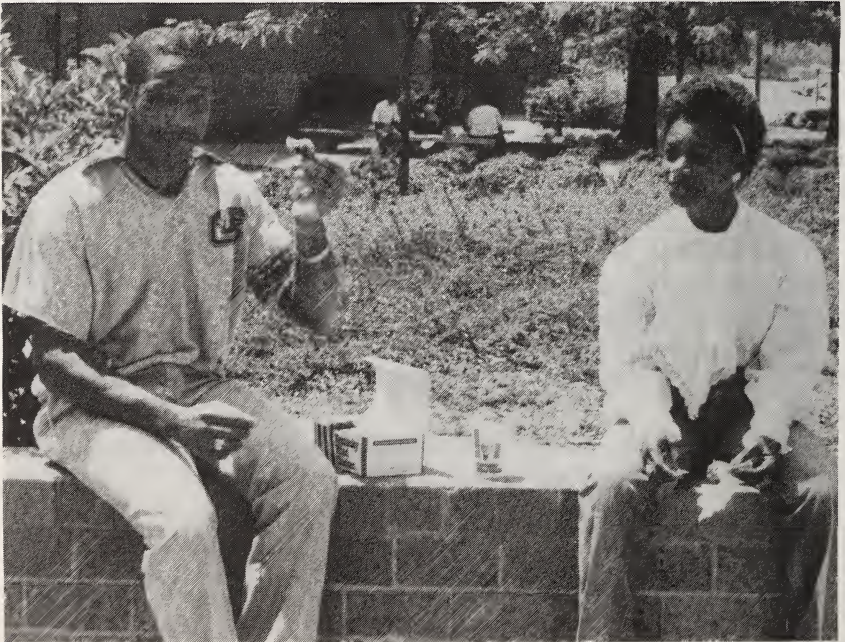
Students interested in obtaining a loan application must request one in writing from College Foundation, Inc., 1307 Glenwood Avenue, Raleigh, NC 27605.

Students who are not legal residents of North Carolina are also eligible for Guaranteed Student Loans in their state of residence. These students should contact the Financial Aid Office for details.

The NC Student Loan Program for Health, Science, and Mathematics - The purpose of this loan program is to provide financial assistance to and encourage North Carolinians who desire to pursue career opportunities in the health, science, and mathematics disciplines. The General Assembly makes available appropriations for loans for the instructional programs of Radiologic Technology, Business Computer Programming, and Electronic Engineering Technology at Cleveland Technical College.

The NC Lender of Last Resort - (Wachovia Bank & Trust Co.) This program is a joint effort of the NC State Education Assistance Authority and Wachovia Bank and Trust Company, N.A. Through the Lender of Last Resort Program, Wachovia will lend to eligible borrowers who are non-resident students planning to attend NC post-secondary educational institutions and are unable to obtain a Guaranteed Student Loan under their home state program.

NC Vocational Technical Student Loan Program - This loan program established April, 1984, makes funds available for loans to students enrolled in the vocational and technical curriculums. A student may borrow a maximum of \$300 each academic year under the program.



GENERAL EDUCATION AND COMMUNICATIONS DEPARTMENT

ASSOCIATE IN GENERAL EDUCATION DEGREE (G—020)

PURPOSE OF CURRICULUM

The General Education curriculum has two main purposes. One is to provide the student with two years of general education and interest type course work culminating in an Associate Degree in General Education. The second purpose is to provide the student with freshman and sophomore level course work that will be transferable to many colleges and universities. The College will have on file agreements with institutions concerning transferability. If the student is interested in transferring to a different institution from one of these, the student should contact the admissions office of the college in question to determine possible transfer status. Transfer credit is always a prerogative of the receiving institution. If transfer of credit is the student's purpose, the student and an advisor should outline a program of study to correspond to the requirements of the college of interest.

Courses included in the General Education curriculum are those which are usually the entire requirements of the freshman and sophomore program in four-year colleges of arts and sciences (exclusive of foreign languages required by some colleges).

ADMISSION REQUIREMENTS

The minimum admission requirement is high school graduation or its equivalent. Students who do not meet all academic requirements may be granted provisional admission for one quarter, after which they must either have met entrance requirements or be classified as non-degree students. The College offers an Adult High School Diploma Program and administers the High School Equivalency Examination (GED).

THE CURRICULUM

The required courses in the curriculum are selected to provide the basic general education requirements of liberal arts programs and to meet basic needs for successful progress toward program objectives. Electives should be chosen in accordance with student interests and ultimate objectives. Students may wish to place heavy emphasis on courses in business, technical, or social science areas, depending on their educational or occupational plans.

The general education program is designed for the student who is basically interested in two years of education beyond the high school. This program provides a basic core of course work in the following areas:

English and Literature.....	12 Quarter Hours
Fine Arts.....	8 Quarter Hours
Social Science and History.....	24 Quarter Hours
Science and Mathematics.....	20 Quarter Hours

This introduction into the broad fields of knowledge permits the student to explore self and clarify life goals. With this background one is able to intelligently choose additional course work in terms of interests and social needs.

When the student has completed basic general education requirements and accumulated electives to a total of 96 quarter hours, an Associate in General Education Degree will be granted.

REQUIRED COURSES FOR GRADUATION (64 Quarter Hours)

Course Title	Hours Per Class	Week Lab	Credit Hours
English and Literature (12 Quarter hours)			
ENG 101 English Grammar and Composition I	4	0	4
ENG 102 English Grammar and Composition II	4	0	4
Select <i>one</i> of the following:			
ENG 105C Masterpieces of World Literature	4	0	4
ENG 205C Major American Writers	4	0	4
ENG 207C Southern American Writers	4	0	4
Fine Arts (8 Quarter Hours)			
Select <i>two</i> of the following:			
ART 101 Art Appreciation	4	0	4
ART 205C Film Appreciation	4	0	4
ENG 107C Theatre Appreciation	4	0	4
MUS 101 Music Appreciation	4	0	4

Social Science and History (24 Quarter Hours)

PSY 101	Introduction to Psychology	4	0	4
SOC 101	Introduction to Sociology	4	0	4
Select <i>one three course sequence</i> from the following:				
HIS 101	World Civilization I	4	0	4
HIS 102	World Civilization II	4	0	4
HIS 103	World Civilization III	4	0	4
HIS 110C	American History I	4	0	4
HIS 111C	American History II	4	0	4
HIS 112C	American History III	4	0	4
Select <i>one of the following</i> :				
HUM 101C	Dimensions of Human Experience	4	0	4
HUM 103C	Major World Religions	4	0	4

Science and Mathematics (20 Quarter Hours)

MAT 101C	Principles of Mathematics	4	0	4
MAT 102C	Algebra I	4	0	4
Select <i>one three course sequence</i> from the following:				
BIO 101	Biology I	3	2	4
BIO 102	Biology II	3	2	4
BIO 103	Biology III	3	2	4
CHM 101	Chemistry I	3	2	4
CHM 102	Chemistry II	3	2	4
CHM 103	Chemistry III	3	2	4
PHY 201C	Physics I	3	2	4
PHY 202C	Physics II	3	2	4
PHY 203C	Physics III	3	2	4

NOTE: Courses not chosen as required may be selected as electives.

Total Credit Hours Required Courses.....	64
Elective Hours.....	32
Total Credit Hours Required to Graduate.....	96

ELECTIVES (RECOMMENDED FOR TRANSFERABILITY):

ART 102	Beginning Drawing	3	2	4
ART 103	American Art History	4	0	4
ART 202C	Advanced Drawing	3	2	4
ART 203C	Painting Seminar	3	2	4
AVM 100C	Introduction to Television and Cable Production	4	0	4
BIO 201	Zoology	3	2	4
BIO 202	Botany	3	2	4
CJC 103	The Art of Self Defense	4	0	4
DRA 105	Theatrical Performance	4	0	4
DRA 106C	Dramatic Productions	4	0	4
ENG 100C	Basic English Skills	4	0	4
ENG 104	Reading Dynamics	4	0	4
ENG 116C	Journalism I	4	0	4
ENG 117C	Journalism II	4	0	4
ENG 118C	Publications Design and Pro- duction II	3	2	4

ENG	119C	Publications Design and Production II	3	2	4
ENG	120C	Publications Design and Production III	3	2	4
ENG	121C	Publications Design and Production IV	3	2	4
ENG	201C	The History of the English Language	4	0	4
ENG	203C	Creative Writing	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
ENG	206C	Voice and Diction	4	0	4
ENG	209C	Creative Writing Workshop	4	0	4
ENG	210C	Effective Communication	2	0	2
MAT	100C	Basic Arithmetic Skills	4	0	4
MAT	117C	Introduction to Statistics	4	0	4
MAT	131C	Algebra II	4	0	4
MAT	132C	Trigonometry	4	0	4
MAT	134C	Algebra III	4	0	4
MAT	201C	Introduction to Calculus	4	0	4
MAT	202C	Differential Calculus	4	0	4
MAT	203C	Integral Calculus	4	0	4
MAT	210C	College Math for Teachers	2	0	2
MUS	100C	Voice	4	0	4
MUS	201C	Music of the Twentieth Century	4	0	4
MUS	202C	Musical Theater	4	0	4
POL	204	Great Decisions-Foreign Policy	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
PSY	202	Group Processes	4	0	4
PSY	208C	Human Growth and Development	4	0	4
SOC	202	Marriage and Family	4	0	4
SOC	203	Contemporary Issues	4	0	4
SOC	208	Black Studies	4	0	4

OTHER ELECTIVES (WHICH MIGHT OR MIGHT NOT TRANSFER):

Any course from the associate in applied science degree curriculums with approval of department head.



ASSOCIATE IN APPLIED SCIENCE DEGREE

COMMUNICATIONS TECHNOLOGY (T-154)

The Communications Technology curriculum prepares individuals to enter the communications field in industry or education. Students will acquire technical and professional experiences in various aspects of media production.

Graduates may be employed as media technicians in libraries, public schools, community colleges, universities, media centers, television and cablevision stations, movie studios, theatres, and industrial education departments. The program provides students with a broad range of skills from which they may choose to specialize. Technicians may have duties including photography and graphic art; producing and editing; directing; maintaining equipment; controlling light and sound; video recording; transmission operations; and, other areas related to television broadcasting plus film and audio-visual production.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title,	Class	Hours Lab	Credit
AVM	100C	Introduction to Television and Cable Production	4	0	4
AVM	101C	Advanced Television and Cable Production	4	2	5
AVM	102C	Introduction to AV Equipment and Basic Production	3	2	4
AVM	200C	Media Production I	3	2	4
AVM	201C	Media Production Lab Project	0	10	5
AVM	202C	Media Production II	3	2	4
AVM	203C	Media Production III	3	2	4
AVM	204C	Selective Media	3	2	4
AVM	205C	Equipment Repair	3	2	4
AVM	206C	Lighting and Sound	2	2	3
CAT	116	Photography I	3	2	4
CAT	117	Photography II	3	2	4
CAT	118	Basic Film Technology	3	2	4
			<hr/> 36	<hr/> 34	<hr/> 53

RELATED COURSES:

ART	102	Beginning Drawing	3	2	4
ART	205C	Film Appreciation	4	0	4
BUS	204C	Business Communications	4	0	4
DRA	105	Theatrical Performing	4	0	4
EDP	106	Computer Operation and Documentation	3	2	4
ELN	100C	Introduction to Electronics	4	0	4
MAT	101C	Principles of Math	4	0	4
			<hr/> 27	<hr/> 2	<hr/> 28

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	107C	Theatre Appreciation	4	0	4
ENG	116C	Journalism I	4	0	4
ENG	204	Fundamentals of Speech or	4	0	4
DRA	106C	Dramatic Production			
			20	0	20

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 105



BUSINESS, ACCOUNTING, AND MANAGEMENT

ASSOCIATE IN APPLIED SCIENCE DEGREES

ACCOUNTING (T-016)

Accounting is often called "the language of business." It is the language employed to communicate financial information. The accounting profession is important to the complete spectrum of business fields, ranging from governmental to small private business. Accountants are found in such forms of business operations as the sole proprietorship, partnership and corporation. Positions are available to accountants in general accounting, auditing, payroll accounting, credit and other specialized fields.

The Accounting curriculum is designed to provide sound academic training in the accumulation and maintenance of accounting. The student learns to perform such duties as: maintaining journals and ledgers, preparing cost data and summarizing tax information. The degree of Associate in Applied Science in Accounting will be awarded upon successful completion of this curriculum.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	123	Business Finance I	4	0	4
BUS	124	Business Finance II	4	0	4
BUS	222	Accounting III	4	4	6
BUS	223	Intermediate Accounting I	4	4	6
BUS	224C	Intermediate Accounting II	4	4	6
BUS	225	Cost Accounting I	2	2	3
BUS	226C	Cost Accounting II	2	2	3
BUS	229	Taxes I	4	0	4
BUS	230C	Taxes II	4	0	4
BUS	269	Auditing I	2	2	3
EDP	240C	Computer Augmented Accounting	3	2	4
			<hr/> 42	<hr/> 26	<hr/> 59

RELATED COURSES:

BUS	101	Introduction to Business	4	0	4
BUS	109	Business Mathematics I	4	0	4
BUS	110	Office Machines I	1	2	2
BUS	111C	Business Mathematics II	4	0	4
BUS	115	Business Law I	4	0	4
BUS	116	Business Law II	4	0	4
BUS	219	Credit Procedures and Problems	4	0	4
BUS	235	Business Management	4	0	4
ECO	102	Economics I	4	0	4
ECO	104	Economics II	4	0	4
			<hr/>	<hr/>	<hr/>
			37	2	38

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4

Select 6 more hours from any course with a prefix of:

ENG, ART, PHY, SOC, CHM, MAT, PSY, BIO, DRA, MUS, POL			6	0	6
			<hr/>	<hr/>	<hr/>
			18	0	18

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 119

BUSINESS ADMINISTRATION (T-018)

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in the state, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. 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 many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration curriculum are to develop: (1) Understanding of the principles of organization and management in business operations; (2) Understanding our 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 operation in a rapidly expanding economy.

The graduate of the Business Administration curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties might include: 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. Positions are available in businesses such as advertising; banking; credit, finance, retailing; wholesaling; hotel, tourist and travel industry; insurance; transportation; manufacturing and communications.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
BUS	101	Introduction to Business	4	0	4
BUS	109	Business Mathematics I	4	0	4
BUS	110	Office Machines I	1	2	2
BUS	111	Business Mathematics II	4	0	4
BUS	115	Business Law I	4	0	4
BUS	116	Business Law II	4	0	4
BUS	123	Business Finance I	4	0	4
BUS	124	Business Finance II	4	0	4
BUS	204C	Business Communications	4	0	4
BUS	219	Credit Procedures and Problems	4	0	4
BUS	229	Taxes I	4	0	4
BUS	203C	Taxes II	4	0	4
BUS	233	Personnel Management	4	0	4
BUS	235	Business Management	4	0	4
BUS	239	Marketing	4	0	4
			<u>57</u>	<u>2</u>	<u>58</u>

RELATED COURSES:

BUS	102	Typewriting I	2	2	3
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	222	Accounting III	4	4	6
ECO	102	Economics I	4	0	4
ECO	104	Economics II	4	0	4
EDP	106	Computer Operations and Documentation	3	2	4
EDP	240C	Computer Augmented Accounting	3	2	4
			<u>28</u>	<u>18</u>	<u>37</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4

Select 8 more hours from any course with a prefix of:

ENG, ART, PHY, SOC, CHM, MAT, PSY, BIO, DRA,

MUS, POL

8	0	8
<hr/>	<hr/>	<hr/>
20	0	20

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 119

INDUSTRIAL MANAGEMENT (T-049)

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 psychology 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.

These requirements have set forth the objectives in developing this program to prepare people for supervisory and mid-management responsibilities in industry.

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

COURSE HOURS AND REQUIREMENTS**MAJOR COURSES**

		Title	Class	Hours Lab	Credit
ECO	201	Labor Economics	4	0	4
EDP	106	Computer Operation and Documentation	3	2	4
ENV	206	Environmental Law	4	0	4
ISC	107	OSHA	4	0	4
ISC	120	Principles of Industrial Management I	4	0	4
ISC	121	Principles of Industrial Management II	4	0	4
ISC	122C	Industrial Drawing	4	0	4
ISC	209	Plant Layout	4	0	4
ISC	211	Work Measurement	4	0	4
ISC	213C	Production Planning	4	0	4
ISC	218	Plant Security	4	0	4
ISC	220	Management Problems	4	0	4
ISC	224	Elements of Industrial Hygiene	4	0	4
ISC	243C	Free Enterprise	4	0	4
PHY	107	General Physics	4	0	4
			<u>59</u>	<u>2</u>	<u>60</u>

RELATED COURSES:

BUS	123	Business Finance I	4	0	4
BUS	235	Business Management	4	0	4
MAT	101C	Principles Math	4	0	4
MAT	102	Algebra I	4	0	4
MAT	117C	Introduction to Statistics	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	103	Report Writing	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
PSY	101	Introduction to Psychology	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES:

12

Total hours required for graduation = 112

REAL ESTATE (T-127)

(Proposed - Pending Approval)

The purposes of the Real Estate curriculum are to: (1) prepare the individual to enter the real estate industry, (2) provide an educational program for persons directly involved in various phases of the real estate industry, and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through a thorough introduction to real estate principles, practices, industry ethics, finance, law, appraisal techniques and trends.

The curriculum will provide the opportunity for an individual to enter public or private employment in real estate areas such as sales, finance, development, market analysis, valuation and property management. Advanced real estate job opportunities are available in area such as brokerage, management, appraising or consulting.

COURSE AND HOUR REQUIREMENTS:

MAJOR COURSES

			Hours		
		Title	Class	Lab	Credit
BUS	162	Fundamentals of Real Estate I	4	0	4
BUS	163	Fundamentals of Real Estate II	4	0	4
BUS	164	Real Estate Law	4	0	4
BUS	209	Real Estate Finance	4	0	4
BUS	221	Real Estate Investment and Taxation	4	0	4
BUS	228	Land Use Policy And Governmental Influence on Real Estate	4	0	4
BUS	234C	Real Estate Sales and Brokerage	4	0	4
BUS	236C	Land Development	4	0	4
BUS	238C	Real Estate Merchandising	4	0	4
BUS	292	Appraisal I	4	0	4
BUS	293	Appraisal II	4	0	4
BUS	294	Appraisal III	4	0	4
BUS	296	Property Management	4	0	4
CIV	105	Architectural Materials and Methods I	4	0	4
			56	0	56

RELATED COURSES:

BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6

Select 24 hours from the following:

BUS	101	Introduction to Business	4	0	4
BUS	102	Typewriting I	2	2	3
BUS	109	Business Mathematics I	4	0	4
BUS	110	Office Machines	1	2	2
BUS	111C	Business Mathematics II	4	0	4

BUS	115	Business Law I	4	0	4
BUS	116	Business Law II	4	0	4
BUS	123	Business Finance I	4	0	4
BUS	124	Business Finance II	4	0	4
BUS	204C	Business Communications	4	0	4
BUS	219	Credit Procedures and Problems	4	0	4
BUS	222	Accounting III	4	4	6
BUS	229	Taxes I	4	0	4
BUS	230C	Taxes II	4	0	4
BUS	233	Personnel Management	4	0	4
BUS	235	Business Management	4	0	4
BUS	239	Marketing	4	0	4
ECO	102	Economics I	4	0	4
ECO	104	Economics II	4	0	4
EDP	106	Computer Operations and Documentation	3	2	4
EDP	240C	Computer Augmented Accounting	3	2	4
					36

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4

Select 8 more hours from any course with a prefix of:

ENG, ART, PHY, SOC, CHM, MAT, PSY, BIO, DRA,
MUS, POL.

8	0	8
20	0	20

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 116

COMPUTER PROGRAMMING DEPARTMENT

BUSINESS COMPUTER PROGRAMMING (T-022)

Business Computer Programming is designed to prepare individuals for gaining employment in either computer operations or computer programming in a business environment. Entry-level jobs as computer operator, computer programmer, trainee computer programmer, and data entry operator are available. With experience and additional education, the individual may enter jobs such as data processing manager, computer programmer manager, systems analyst and systems manager.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
EDP	101	Introduction to Data Processing I	4	0	4
EDP	102C	Introduction to Data Processing II	3	2	4
EDP	109	COBOL Programming I	3	2	4
EDP	110	COBOL Programming II	3	2	4
EDP	116	Business BASIC Language I	3	2	4
EDP	117	Business BASIC Language II	3	2	4
EDP	118C	Business BASIC Language III	3	2	4
EDP	204	COBOL Programming III	3	2	4
EDP	210C	Data Processing Applications	3	2	4
EDP	212	Data Base Management	4	0	4
EDP	221	Computer Systems	4	0	4
EDP	230	RPG II Language I	3	2	4
EDP	231	RPG II Language II	3	2	4
EDP	240C	Computer Augmented Accounting	3	2	4
EDP	290C	Advanced Computer Experience	1	6	4
MAT	117C	Statistics	4	0	4
			<u>50</u>	<u>28</u>	<u>64</u>

RELATED COURSES:

BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	222	Accounting III	4	4	6
MAT	101C	Principles of Math	4	0	4
MAT	102C	Algebra I	4	0	4
			<u>20</u>	<u>12</u>	<u>26</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
ENG	210C	Effective Communication	2	0	2
PSY	101	Introduction to Psychology	4	0	4
			<u>18</u>	<u>0</u>	<u>18</u>

WORKEXP/ERIENCE/ELECTIVES:

4

Total hours required for graduation = 111



SECRETARIAL AND FASHION SCIENCES DEPARTMENT

ASSOCIATE IN APPLIED SCIENCE DEGREES

SECRETARIAL-EXECUTIVE (T-030)

The purposes of the Executive Secretarial curriculum are to:

Prepare the individual to enter the secretarial profession.

Provide an educational program for individuals wanting education for upgrading (moving from one secretarial position to another) or retaining (moving from present position to secretarial position).

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 typing, shorthand, transcription and office machines operation. Through these skills the individual will be able to perform office-related activities and through the development of personal competencies and qualities will be provided the opportunity to enter the secretarial profession.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
BUS	102	Typewriting I	2	2	3
BUS	103	Typewriting II	2	2	3
BUS	104	Typewriting III	2	2	3
BUS	106	Shorthand I	2	2	3
BUS	107	Shorthand II	2	2	3
BUS	108	Shorthand III	2	2	3
BUS	110	Office Machines I	1	2	2
BUS	112	Records Management	2	2	3
BUS	122C	Payroll Accounting	2	2	3
BUS	201	Machine Dictation and Transcription	2	2	3
BUS	205	Advanced Typewriting	2	2	3
BUS	206E	Dictation and Transcription I	2	2	3
BUS	207E	Dictation and Transcription II	2	2	3
BUS	208E	Dictation and Transcription III	2	2	3
BUS	211	Office Machines II	0	2	1
BUS	214	Secretarial Procedures	2	2	3
BUS	273C	Introduction to Word Processing	3	0	3
BUS	274C	Word Processing I	2	2	3
BUS	275C	Word Processing II	2	2	3
COE	100	Introduction to Cooperative Education	1	0	1
EDP	240C	Computer Augmented Accounting	3	2	4
			40	38	59

RELATED COURSES:

BUS	101	Introduction to Business	4	0	4
BUS	109	Business Mathematics	4	0	4
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	204C	Business Communications	4	0	4
BUS	210	Typing Office Practice	2	2	2
BUS	271	Office Management	4	0	4
Select one additional Business related course (See Advisor)			4	0	4
			<u>30</u>	<u>10</u>	<u>35</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	3	0	4
ENG	104	Reading Dynamics	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
Select one additional General Education course			4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES: 4

Total hours required for graduation = 118

GENERAL OFFICE TECHNOLOGY (T-033)

The purposes of the General Office curriculum are to: (1) prepare the individual to enter clerical-office occupations, (2) provide an educational program for individuals wanting education for upgrading (moving from one position to another) or retraining (moving from present position to a clerical position), and (3) 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 typewriting, filing and business machines. Through these skills and through development of personal competencies and qualities, the individual will be able to function effectively in office-related activities.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
BUS	101	Introduction to Business	4	0	4
BUS	102	Typewriting I	2	2	3
BUS	103	Typewriting II	2	2	3
BUS	104	Typewriting III	2	2	3
BUS	109	Business Mathematics	4	0	4
BUS	110	Office Machines	1	2	2
BUS	112	Records Management	2	2	3

BUS	115	Business Law I	4	0	4
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	122C	Payroll Accounting	2	2	3
BUS	201	Machine Dictation and Transcription	2	2	3
BUS	204C	Business Communications	4	0	4
BUS	205	Advanced Typewriting	2	2	3
BUS	210	Typing Office Practice	2	2	3
BUS	211	Office Machines II	0	2	1
BUS	214	Secretarial Procedures	2	2	3
BUS	271	Office Management	4	0	4
BUS	273C	Introduction to Word Processing	3	0	3
BUS	274C	Word Processing I	2	2	3
BUS	275C	Word Processing II	2	2	3
COE	100	Introduction to Cooperative Education	1	0	1
			<u>55</u>	<u>34</u>	<u>72</u>

RELATED COURSES:

EDP	240C	Computer Augmented Accounting	3	2	4
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Select two of the following:

BUS	117C	Personal Law	4	0	4
BUS	123	Business Finance I	4	0	4
BUS	229	Taxes	4	0	4
BUS	231C	Leadership Development	4	0	4
BUS	232	Sales Development	4	0	4
BUS	235	Business Management	4	0	4
BUS	239	Marketing	4	0	4
BUS	243	Advertising	4	0	4
BUS	245	Retailing	4	0	4
ECO	102	Economics I	4	0	4
ECO	104	Economics II	4	0	4
EDP	101	Introduction to Data Processing	4	0	4
MAT	100C	Basic Arithmetic Skills	4	0	4
			<u>11</u>	<u>2</u>	<u>12</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
		Select one additional General Education course	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES:

6

Total hours required for graduation = 110

SECRETARIAL-MEDICAL (T-032)

The purposes of the Medical Secretarial curriculum are to: (1) prepare the individual to enter the medical secretarial profession through work in doctors offices, clinics, hospitals, and other health agencies; (2) provide an educational program for individuals wanting education for upgrading (moving from one medical secretarial position to another) or retraining (moving from present position to medical secretarial position); (3) 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.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
BUS	102	Typewriting I	2	2	3
BUS	103	Typewriting II	2	2	3
BUS	104	Typewriting III	2	2	3
BUS	106	Shorthand I	2	2	3
BUS	107	Shorthand II	2	2	3
BUS	108	Shorthand III	2	2	3
BUS	112	Records Management	2	2	3
BUS	183M	Medical Terminology and Vocabulary I	4	0	4
BUS	202M	Medical Dictation and Transcription I	2	2	3
BUS	203M	Medical Dictation and Transcription II	2	2	3
BUS	205	Advanced Typewriting	2	2	3
BUS	206E	Dictation and Transcription I	2	2	3
BUS	211	Office Machines II	0	2	1
BUS	216	Medical Secretarial Procedures	2	2	3
BUS	271	Office Management	4	0	4
BUS	273C	Introduction to Word Processing	3	0	3
BUS	274C	Word Processing I	2	2	3
BUS	275C	Word Processing II	2	2	3
BUS	284M	Medical Terminology and Vocabulary II	4	0	4
COE	100	Introduction to Cooperative Education	1	0	1
			44	30	59

RELATED COURSES:

BIO	107	Anatomy and Physiology I	3	2	4
BIO	108	Anatomy and Physiology II	3	2	4
BUS	109	Business Mathematics	4	0	4
BUS	110	Office Machines I	1	2	2
BUS	120	Accounting I	4	4	6
BUS	121	Accounting II	4	4	6
BUS	204C	Business Communications	4	0	4
BUS	248C	Medical Insurance	2	2	3
			<u>25</u>	<u>16</u>	<u>33</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	104	Reading Dynamics	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
		Select one additional General Education course	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES: 6

Total hours required for graduation = 118

FASHION MERCHANDISING AND MARKETING TECHNOLOGY (T-143)

This curriculum is designed to prepare the individual to be a productive employee in an entry-level job and to provide the knowledge and skills necessary for career advancement in mid-management positions in various fashion merchandising and marketing businesses and industries.

Through study and application in areas such as fabric science, fundamentals of art and design, elements of fashion, salesmanship, fashion buying and merchandising, display design, merchandise planning and control, credit procedures and problems, the individual will be able to enter jobs such as: sales associate, assistant to fashion coordinator, executive trainee, advertising assistant, display assistant, merchandising distributor in retail distribution centers and advertising agencies.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours		Credit
				Lab		
DMK	240	Math for Retail Buying	4	0		4
DMK	249	Fashion Buying and Merchandising	4	0		4
DMK	260	Visual Merchandising	4	0		4
FAS	101	Principles Fashion Merchandising	4	0		4
FAS	102	Modeling and Social Usage	2	2		3
FAS	103	Fashion Accessories	4	0		4
FAS	104	Fashion Sketching	4	0		4
FAS	105C	Professional Development	4	0		4
FAS	208	Fashion Salesmanship	4	0		4
FAS	209	Fashion Writing and Communications	4	0		4
FAS	210	Fashion Advertising and Sales Promotion	4	0		4
FAS	211C	Introduction to Apparel Design	4	0		4
FAS	212	Psychology of Dress	4	0		4
			<u>50</u>	<u>2</u>		<u>51</u>

RELATED COURSES:

BUS	101	Introduction to Business	4	0		4
BUS	102	Typewriting I	2	2		3
BUS	109	Business Mathematics	4	0		4
BUS	204C	Business Communications	4	0		4
BUS	239	Marketing	4	0		4
BUS	243	Advertising	4	0		4
BUS	245	Retailing	4	0		4
ECO	102	Economics I	4	0		4
EDP	101	Introduction to Data Processing	4	0		4
TEX	100	Fabric Science	4	0		4
			<u>38</u>	<u>2</u>		<u>39</u>

GENERAL EDUCATION:

ART	101	Art Appreciation	4	0		4
ENG	101	Grammar and Composition I	4	0		4
ENG	102	Grammar and Composition II	4	0		4
ENG	204	Fundamentals of Speech	4	0		4
HUM	110	History of Costume	4	0		4
			<u>20</u>	<u>0</u>		<u>20</u>

WORK EXPERIENCE/ELECTIVES:

6

Total hours required for graduation = 116

CRIMINAL JUSTICE DEPARTMENT

CRIMINAL JUSTICE-LAW ENFORCEMENT OPTION (T-129)

Law enforcement techniques have evolved from rather simple jobs, requiring simple qualifications, to more complex activities requiring a large capacity for highly specialized knowledge.

The program is designed to provide technical training for students who have definite interest and adaptability to a law enforcement career. It offers practical, technical, and general instruction to meet the requirements of various law enforcement agencies and provides the students with the skills, knowledge, and attitudes necessary for employment at the operational level and for development toward management roles.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
CJC	101	Introduction to Criminal Justice	4	0	4
CJC	102	Introduction to Criminology	4	0	4
CJC	110	Juvenile Delinquency	4	0	4
CJC	115	Criminal Law	4	0	4
CJC	116	Laws of Arrest, Search and Seizure	4	0	4
CJC	118	Criminal Justice Information Services	4	0	4
CJC	201	Traffic Planning and Management	4	2	5
CJC	205	Criminal Evidence	4	0	4
CJC	208	Patrol Procedures	4	0	4
CJC	209	Criminal Investigation I	4	0	4
CJC	210	Criminal Investigation II	4	0	4
CJC	211	Introduction to Criminalistics	4	2	5
CJC	220	Police Organization and Management	4	0	4
CJC	225	Criminal Procedures	4	0	4
CJC	240	Defence Tactics and Firearms	2	2	3
CJC	249	Seminar in Criminal Justice	4	0	4
			62	6	65

RELATED COURSES:

CAT	116	Photography I	3	2	4
POL	102	Government-National	4	0	4
POL	103	Government-State and Local	4	0	4
PSY	101	Introduction to Psychology	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
SOC	101	Introduction to Sociology	4	0	4
			27	2	28

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
MAT	101C	Principles of Math	4	0	4
PSY	238	Dynamics of Group Encounter	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES: 4

Total hours required for graduation = 117

CRIMINAL JUSTICE-CORRECTIONS OPTION (T-129)

The corrections option is designed to give students an overview of the origins, processes, organization and contemporary trends of corrections in America. It deals with the total spectrum of management, control and treatment of juvenile and adult offenders both in institutions and in community programs.

It further provides the student with technical and practical instruction to help them meet the requirements of the various correctional institutions locally as well as state wide.

COURSE AND HOUR REQUIREMENTS

MAJOR COURSES

		Title	Class	Hours Lab	Credit
CJC	101	Introduction to Criminal Justice	4	0	4
CJC	110	Juvenile Delinquency	4	0	4
CJC	115	Criminal Law	4	0	4
CJC	116	Law of Arrest, Search and Seizure	4	0	4
CJC	118	Criminal Justice Information Services	4	0	4
CJC	203	Introduction to Corrections	4	0	4
CJC	204	Introduction to Probation	4	0	4
CJC	205	Criminal Evidence	4	0	4
CJC	207	Confinement Facilities Administration	4	0	4
CJC	215	Contemporary Correctional Issues	4	0	4
CJC	221	Correctional Administration	4	0	4
CJC	223	Correctional Law	4	0	4
CJC	224	Rehabilitation Techniques	4	0	4
CJC	225	Criminal Procedures	4	0	4
CJC	230	Correctional Counseling	4	0	4
CJC	240	Defense Tactics and Firearms	2	2	3
CJC	249	Seminar in Criminal Justice	4	0	4
			<u>66</u>	<u>2</u>	<u>67</u>

RELATED COURSES:

CAT	116	Photography I	4	0	4
POL	102	Government-National	4	0	4
POL	103	Government-State and Local	4	0	4
PSY	101	Introduction to Psychology	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
SOC	101	Introduction to Sociology	4	0	4
			<u>27</u>	<u>2</u>	<u>28</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
MAT	101C	Principles of Math	4	0	4
PSY	238	Dynamics of Group Encounter	4	0	4
			<u>20</u>	<u>0</u>	<u>20</u>

WORK EXPERIENCE/ELECTIVES:

4

Total hours required for graduation = 119

CRIMINAL JUSTICE-SECURITY OPTION (T-129)

The security option is designed to provide the student with a general background in this field. It is intended for individuals desiring to work in the private security sector as well as those interested in security administration.

The security option allows the student to develop the skills and knowledge necessary for employment in this area. It provides the student with an introduction to security and alarm systems. It teaches the students the differences and similarities between the security and criminal justice systems. It also familiarizes the student with everyday problems associated with security. It further instructs the student in techniques of security investigations. It stresses the relationship between the security investigator and the remainder of the criminal justice system.

COURSE AND HOUR REQUIREMENTS**MAJOR COURSES**

		Title	Class	Hours Lab	Credit
CJC	101	Introduction to Criminal Justice	4	0	4
CJC	106	Security Investigation	4	0	4
CJC	110	Juvenile Delinquency	4	0	4
CJC	115	Criminal Law	4	0	4
CJC	116	Laws of Arrest, Search and Seizure	4	0	4
CJC	118	Criminal Justice Information Services	4	0	4
CJC	205	Criminal Evidence	4	0	4
CJC	208	Patrol Procedures	4	0	4
CJC	222	Introduction to Security Systems	4	0	4
CJC	225	Criminal Procedures	4	0	4
CJC	226	Civil and Criminal Responsibilities	4	0	4
CJC	240	Defense Tactics and Firearms	2	2	3
CJC	245	Electronic Detection and Polygraph	4	2	5
CJC	248	Surveillance Techniques	4	0	4
CJC	249	Seminar in Criminal Justice	4	0	4
ISC	107	OSHA	4	0	4
ISC	118	Plant Security	4	0	4
			66	4	68

RELATED COURSES:

CAT	116	Photography I	4	0	4
POL	102	Government-National	4	0	4
POL	103	Government-State and Local	4	0	4
PSY	101	Introduction to Psychology	4	0	4
PSY	103	Adolescent Psychology	4	0	4
PSY	201	Abnormal Psychology	4	0	4
SOC	101	Introduction to Sociology	4	0	4
			27	2	28

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	4
ENG	102	Grammar and Composition II	4	0	4
ENG	204	Fundamentals of Speech	4	0	4
MAT	101C	Principles of Math	4	0	4
PSY	238	Dynamics of Group Encounter	4	0	4
			20	0	20

WORK EXPERIENCE/ELECTIVES: 4

Total hours required for graduation = 120

RADIOLOGIC TECHNOLOGY DEPARTMENT

ASSOCIATE IN APPLIED SCIENCE DEGREE

RADIOLOGIC (X-RAY) TECHNOLOGY (T-061)

The Radiologic Technology curriculum prepares graduates to be competent Medical Radiographers.

The radiographer is a skilled person qualified by technological education to provide patient services using imaging modalities, as directed by physicians qualified to order an/or perform radiologic procedures.

The radiographer shall perform effectively by:

- A. Applying knowledge of the principles of radiation protection for the patient, self and others.
- B. Applying knowledge of anatomy, positioning and radiographic techniques to accurately demonstrate anatomical structures on a radiograph.
- C. Determining exposure factors to achieve optimum radiographic technique with a minimum of radiation exposure to the patient.
- D. Examining radiographs for the purpose of evaluating technique, positioning and other pertinent technical qualities.
- E. Exercising discretion and judgment in the performance of medical imaging procedures.
- F. Providing patient care essential to radiologic procedures.
- G. Recognizing emergency patient conditions and initiating life saving first aid.

Graduates are eligible to take the national examination given by the American Registry of Radiologic Technologists for certification and registration as medical radiographers.

Graduates may be employed in Radiology departments in hospitals, clinics, physicians' offices, research and medical laboratories, federal and state agencies and industry.

Individuals desiring a career in radiologic technology should take courses in Biology, Algebra and Chemistry and/or Physics prior to entering the program.

COURSE AND HOUR REQUIREMENTS**MAJOR COURSES**

		Title	Hours			Credit
			Class	Lab	Clinic	
RAD	101	Positioning I	3	2	0	4
RAD	102	Principles of Radiographic Technique I	3	2	0	4
RAD	103	Processing Technique	2	2	0	3
RAD	104	Radiographic Anatomy	4	0	0	4
RAD	105	Critique I	1	0	0	1
RAD	106	Clinical I	0	0	15	5
RAD	110	Introduction to Radiologic Technology	1	0	0	1
RAD	111	Positioning II	3	2	0	4
RAD	112	Principles of Radiographic Technique II	2	2	0	3
RAD	113	Critique II	1	0	0	1
RAD	114	Clinical II	0	0	15	5
RAD	121	Positioning III	3	2	0	4
RAD	123	Critique III	1	0	0	1
RAD	124	Clinical III	0	0	24	8
RAD	131	Positioning IV	3	2	0	4
RAD	134	Clinical IV	0	0	24	8
RAD	141	Special Procedures I	2	0	0	2
RAD	201	Radiologic Protection	2	0	0	2
RAD	203	Clinical V	0	0	24	8
RAD	212	Clinical VI	0	0	24	8
RAD	223	Clinical VII	0	0	30	10
RAD	233	Clinical VIII	0	0	39	13
RAD	241	Special Procedures II	2	0	0	2
RAD	245	Seminar I	1	0	0	1
RAD	246	Seminar II	1	0	0	1
			<u>35</u>	<u>14</u>	<u>195</u>	<u>107</u>

RELATED COURSES:

BIO	107	Anatomy and Physiology I	3	2	0	4
BIO	108	Anatomy and Physiology II	3	2	0	4
EDP	106	Computer Operation and Documentation	3	2	0	4
MAT	131C	Algebra II	4	0	0	4
MAT	134C	Algebra III	4	0	0	4
PHY	107	General Physics	4	0	0	4
PHY	108	Radiation Physics	3	2	0	4
			<u>24</u>	<u>8</u>	<u>0</u>	<u>28</u>

GENERAL EDUCATION:

ENG	101	Grammar and Composition I	4	0	0	4
ENG	102	Grammar and Composition II	4	0	0	4
PSY	101	Introduction to Psychology	4	0	0	4

Select one additional course from the following:

PSY 201-Abnormal Psychology

ENG 103-Report Writing

ENG 204-Fundamental of Speech

4	0	0	4
<u>16</u>	<u>0</u>	<u>0</u>	<u>16</u>

WORK EXPERIENCE/ELECTIVES:

0

Total hours required for graduation = 151

COURSE DESCRIPTIONS

GENERAL EDUCATION AND TECHNICAL

- | | |
|--|--------|
| ART 101—Art Appreciation | 4 0 4 |
| An introduction to fundamental elements and principles of creative art expression emphasizing composition, design, shape, value styles, and movement. | |
| ART 102—Beginning Drawing | 3 2 4 |
| A general introduction for the beginning art student who wishes to develop an ability to create two-dimensional representational images in traditional drawing media. | |
| ART 103—American Art History | 4 0 4 |
| A study of the principal painters, sculptors, architects and craftsmen in America from the pre-Columbian time up to the present and the work they produced which has greatly enhanced our cultural heritage. | |
| ART 202C—Advanced Drawing | 3 2 4 |
| Advanced drawing develops the basic skill acquired in Beginning Drawing or other art courses. Topics of study including still life, landscape, and figure drawing. | |
| ART 203C—Painting Seminar | 3 2 4 |
| The painting seminar is offered periodically for students who have had drawing experience and wish to progress to painting. Students will work with various media exploring the techniques of each. | |
| ART 205C—Film Appreciation | 4 0 4 |
| An analysis of the creativity and special techniques that combine to represent the broad range of ideas and emotions of quality motion pictures. | |
| AVM 100C—Introduction to Television and Cable Production | 4 0 4 |
| An introduction to creative techniques, materials, and equipment involved in television taping. Pre-production, production, and post-production principles and methods are designed for beginning and intermediate students to improve their use of home and professional systems. | |
| AVM 101C—Advanced Television and Cable Production | 4 2 5 |
| A continuation of AVM 100C; use of studio equipment or titling and effects; special projects in television production. | |
| AVM 102C—Introduction to Audio-Visual Equipment and Basic Production | 3 2 4 |
| A study of the operation of projection equipment, tape recorders, record players and synchronization equipment. | |
| AVM 200C—Media Production I | 3 2 4 |
| Planning, scripting, and developing sequences for transparencies, audiotapes, displays, videotapes, films; titling, audio mixing, displaying materials, Prerequisite: AVM 102C. | |
| AVM 201C—Media Production Lab Project | 0 10 5 |
| Student will work in cooperation with the photography and the audio-visual services departments in the production of instructional and institutional media. | |

AVM 202C—Media Production II

3 2 4

The development of a photographic series, including film processing, editing negatives, and making, mounting, and displaying prints. Development of a sound-slide series. Prerequisite: CA1 118, AVM 200C.

AVM 203C—Media Production III

3 2 4

The development of a single concept and its production in various forms: live, video, slide series.

AVM 204C—Selective Media

3 2 4

Experience by observation of a variety of media usages. Consideration of advertising study of the vocal aspects of radio and television broadcasting and the principles of personal style and performance in the media. Special emphasis on script writing.

AVM 205C—Equipment Repair

2 4 4

This course is designed to help the student understand the mechanical and electrical operations of projection equipment, tape recorders, record players, cable and television equipment, etc. Emphasis will be on locating, troubleshooting, and repairing equipment.

AVM 206C—Lighting and Sound

2 2 3

A study of the use of lighting for stage, film, and video; a study of studio sound problems, microphone types, the use of audio mixers.

BIO 101—Biology I

3 2 4

An introduction to basic biological principles, including elementary chemistry, cell structure and function, genetics, molecular biology, ecology and evolution.

BIO 102—Biology II

3 2 4

A survey of the animal kingdom including study of selected animals from each of the major groups. Emphasis is placed on the vertebrates.

BIO 103—Biology III

3 2 4

A survey of the plant kingdom including study of selected plants from each of the major groups, with emphasis on the seed plants.

BIO 107—Anatomy & Physiology I

3 2 0 4

A study of the structure and normal function of the human body with man identified as a living organism composed of living cells, tissues, organs, and systems. Included are the basic physiologic aspects of skin; the skeletal, articular muscular, and nervous system; and the special senses. A laboratory portion should include relevant experiments to augment the student's learning of body structure and functions.

BIO 108—Anatomy & Physiology II

3 2 0 4

A continuation of the study of the structure and normal function of man as a living organism. Special emphasis is on the circulatory, lymphatic, respiratory, digestive, urinary, endocrine, and reproductive systems and fluid and electrolyte balance. Laboratory experiences include study of models and small animal dissection for insight into comparative structure and function of man. Prerequisite: BIO 107.

BIO 201—Zoology

3 2 4

A comprehensive study of the animal kingdom including anatomy, physiology, taxonomy, and ecology. Special emphasis will be placed on the invertebrates, and local animals. Prerequisites: BIO 101, 102, 103, or permission of instructor.

- BIO 202—Botany** 3 2 4
A comprehensive study of the plant kingdom including anatomy, physiology, taxonomy, and ecology. Special emphasis will be placed on the higher plants. Prerequisites: BIO 101, 102, 103, or permission of instructor.
- BIO 205—Microbiology** 2 2 4
A study of general microbiology including identification, classification, morphology and culture methods of members of the representative groups. Prerequisite: BIO 101 or permission of instructor.
- BUS 101—Introduction to Business** 4 0 4
A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organizations and management. Student learns the basic fundamentals of the free enterprise system.
- BUS 102—Typewriting I** 2 2 3
Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence and tabulation.
- BUS 103—Typewriting II** 2 2 3
Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence and business forms. Prerequisite: BUS 102 or equivalent.
- BUS 104—Typewriting III** 2 2 3
Emphasis on production typing problems and speed building. Attention to the development of the student's ability of function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 102 or equivalent.
- BUS 106—Shorthand I** 2 2 3
A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms and phrases.
- BUS 107—Shorthand II** 2 2 3
Continued study of theory with greater emphasis on dictation and elementary transcription. Prerequisite: BUS 106 or equivalent.
- BUS 108—Shorthand III** 2 2 3
Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. Prerequisite: BUS 107.
- BUS 109—Business Math I** 4 0 4
This course stresses the fundamental operations and their application to business problems. Topics covered include: fractions, decimals, percents, ratios, payroll, interest, and installment buying. Prerequisite: MAT 100C
- BUS 110—Office Machines I** 1 2 2
Students receive training in the touch method of operation for the electronic printing and display calculator with a goal of 150 strokes per minute by the end of the quarter. Mathematical computations include addition, subtraction, multiplication, division, rounding, fractions, decimals, percents, percentage, rate, base, discounts, payroll, and interest. Prerequisite: BUS 109.

BUS 111C—Business Math II	4	0	4
This course covers advanced business math topics such as markup, markdown, inventory, depreciation, stock, and displaying data. Continuation of BUS 109. Prerequisite: BUS 109.			
BUS 112—Records Management	2	2	3
Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Methods covered are Alphabetic, Numeric, Geographic, Subject, Soundex and Chronological filing.			
BUS 115—Business Law I	4	0	4
A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments and agencies.			
BUS 116—Business Law II	4	0	4
Includes the study of laws pertaining to bailments, sales risk-bearing, partnership-corporation, mortgages and property rights. Prerequisite: BUS 115.			
BUS 117C—Personal Law	4	0	4
A general survey of law as it affects the individual citizen including the court system and protection of the individual's rights. Emphasis is placed on the Bill of Rights to the U.S. Constitution. Laws governing vehicle operation, domestic relations and consumer protection will also be covered.			
BUS 120—Accounting I	4	4	6
Principles, techniques and tools of accounting, summarizing, analyzing and reporting information about service and mercantile enterprises, to include practical application of the principles learned. Prerequisite: BUS 109.			
BUS 121—Accounting II	4	4	6
Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution to management problems. Prerequisite: BUS 120.			
BUS 122C—Payroll Accounting	2	2	3
A detailed study of federal and state regulations, computations, deductions and general accounting for payrolls. Prerequisite: BUS 120.			
BUS 123—Business Finance I	4	0	4
Financing of business units, as individuals, partnerships, corporations and trusts. A detailed study is made of short-term, long-term and consumer financing.			
BUS 124—Business Finance II	4	0	4
Financing federal, state and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: BUS 123.			
BUS 162—Fundamentals of Real Estate I	4	0	4
This introductory course is one of two courses designed to introduce students to the real estate industry and to meet the educational requirements of the North Carolina Real Estate Licensing Board for admission to the real estate broker licensing examination. The student will study fundamental principles and theories of real estate. Topics covered include terminology, North Carolina's Licensing Law, organizational structure, brokerage, contracts, leases and ownership.			

- BUS 163—Fundamentals of Real Estate II** 4 0 4
 This introductory course is a continuation of BUS 162, Fundamentals of Real Estate I. The student will study theory and practice of real estate. Topics discussed include fundamental operation of real estate, the real estate industry and its relationship to financing, appraising and law, listing and closing of real estate and building construction. Upon completion of this course, the student will have met the educational requirements of the North Carolina Real Estate Licensing Board for admission to the real estate broker licensing examination. Prerequisite: BUS 162.
- BUS 164—Real Estate Law** 4 0 4
 The legal aspects pertaining to the sale, purchase, and management of real property are covered in this course. Additional topics are the nature of real property and the process of handling real estate transactions form the preparation of the listing contract to the closing of the sale.
- BUS 183M—Medical Terminology and Vocabulary** 4 0 4
 This course teaches the student the mechanics of understanding medical words—their roots, prefixes and suffixes. Student learns to spell, pronounce and define medical terms that may be encountered by a medical secretary.
- BUS 201—Machine Dictation and Transcription** 2 2 3
 Objectives of this course is to develop skill in using various transcription machines and to transcribe correctly at the typewriter. The student will thereby, gain a knowledge of many kinds of business correspondence, increase business vocabulary and develop an understanding of secretarial procedures.
- BUS 202M—Medical Dictation and Transcription I** 2 2 3
 This course prepares the student to become a skilled medical transcriptionist using a typewriter, transcribing unit and pre-recorded cassettes and belts. Material covered includes case studies, physical examinations, operation records, medical correspondence, and x-ray or pathological reports, etc. Prerequisites: BUS 183M, BUS 205.
- BUS 203M—Medical Dictation and Transcription II** 2 2 3
 This course is a continuation of BUS 202. The student continues to build skill and speed in transcribing various medical records at the typewriter. Upon successful completion of course requirements the student will receive the AMRA certificate. Prerequisite: BUS 202M.
- BUS 204C—Business Communications** 4 0 4
 Develops skills and techniques in writing and typing business communications. Emphasis is placed on writing and typing action-getting sales letters and prospectuses. Business reports, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry are covered in this course. Prerequisite: BUS 102 and ENG 101.
- BUS 205—Advanced Typewriting** 2 2 3
 Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letters forms, statistical tabulation, and the typing of reports, manuscripts and legal documents. Prerequisite: BUS 104.

- BUS 206E—Dictation and Transcription I** 2 2 3
 Develops the skill of taking dictation and to transcription at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Prerequisite: BUS 108.
- BUS 207E—Dictation and Transcription II** 2 2 3
 Covering materials appropriate to the course of study, the student develops the accuracy, speed and vocabulary to meet the stenographic requirements of business and professional offices. Prerequisite: BUS 206.
- BUS 208E—Dictation and Transcription III** 2 2 3
 Principally a speed building course covering materials appropriate to the course of study, with emphasis on building transcription speed and the producing of mailable copies. Prerequisite: BUS 207.
- BUS 209—Real Estate Finance** 4 0 4
 This course is a study of real estate finance, including an analysis of financial institutions, techniques, and instruments necessary in real estate. Topics of instruction include the source of funds, types of mortgages, roles of government, agencies, interest rates, loan costs, closing, and competition in the money market. Prerequisite: BUS 162 and BUS 163 or license.
- BUS 210—Typing Office Practice** 2 2 3
 A course designed to familiarize the student with the correct typing of business correspondence. Emphasis is placed upon correct procedures and adaptability of varying office methods. Prerequisite: BUS 205.
- BUS 211—Office Machines II—Duplicating Processes** 0 2 1
 This course is designed to teach the student the correct procedures to follow in preparing, copying and duplicating master. In addition, the student learns to operate various types of copying and duplicating equipment. Prerequisite: BUS 104.
- BUS 214—Secretarial Procedures** 2 2 3
 Designed to acquaint the student with the responsibilities encountered by a secretary during a work day. Among these are the following: receptionist duties, handling and mail, telephone techniques, telegrams, office records, travel information, purchasing of supplies, office organization and insurance claims. Prerequisite: BUS 104.
- BUS 216—Medical Secretarial Procedures** 2 2 3
 This course introduces the medical secretary to the activities, responsibilities, skills and work habits encountered in the professional office. Some of these are meeting and handling patients, processing medical records and forms, managing the office and assisting the doctor. Suggested Prerequisite: BUS 104.
- BUS 219—Credit Procedures and Problems** 4 0 4
 Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included.

BUS 221—Real Estate Investment & Taxation I

4 0 4

This course is a study of fundamental investment concepts such as location, timing, and methods of financing needed by the prospective investor for successful real estate investment. Special emphasis will be placed on investment during the development process, what to buy, and how to buy. Other topics to be discussed are how to take title for individual ownerships or partnerships, when to invest in real estate corporations and trusts, tax consequences and investment, and the influence of federal and state laws on real estate investments.

BUS 222—Accounting III

4 4 6

Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes among other aspects, the balance sheet, income and surplus statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital. Prerequisite: BUS 121.

BUS 223—Intermediate Accounting I

4 4 6

This course presents concepts adhered to in modern accounting; which includes the principles, procedures, and methods that are applied in the preparation of financial statements. Changes in the form of content of the basic financial statements receive special emphasis. Prerequisite: BUS 222.

BUS 224C—Intermediate Accounting II

4 4 6

This course provides instruction in the organizational, structural, and financial levels of Accounting. Special emphasis being given to owners equity, business financing, bonds and notes, etc. Prerequisite: BUS 223.

BUS 225—Cost Accounting I

2 2 3

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 cost; budgets and executive use of cost figures. Prerequisite: BUS 222.

BUS 226C—Cost Accounting II

2 2 3

Continued study in cost accounting with emphasis on process cost systems, standard cost accounting and cost analysis for management decision making. Prerequisite: BUS 225.

BUS 228—Land Use Policy & Governmental Influence on Real Estate

4 0 4

This course is a study of local and national trends in the development, use, and value of real property, as well as governmental policies and their effect on the real estate market. Skills are developed in the analysis, research, and correlation of the various trends, policies, and factors affecting real estate.

BUS 229—Taxes I

4 0 4

Preparation of Individual Tax Returns— 1040EZ, 1040A, 1040, Schedule A and B—are covered in this course, along with other supporting schedules and forms.

BUS 230C—Taxes II

4 0 4

This course provides instruction to Business and Professional Tax Returns. More involved and complicated tax situations—Capital Gains and Losses, Retirement Plans, etc.—are given special emphasis. Instruction in Partnership and Corporation Taxes and Tax Returns is also provided. Prerequisite: BUS 229.

- BUS 231C—Leadership Development** 4 0 4
Leadership Development helps students attain the personal attributes and managerial skills that foster success on the job. Case histories, self-assessment quizzes, and step-by-step guidelines build students' self-confidence while covering personality development, speechpower, memory, creativity, creative selling, telephone technique, management and leadership, personal appearance, business and social success, and employment.
- BUS 232—Sales Development** 4 0 4
A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstration required.
- BUS 233—Personnel Management** 4 0 4
Principles of organization and management of personnel, procurement, placement training, performance checking, supervision, remuneration, labor relations, fringe benefits and security.
- BUS 234C—Real Estate Sales & Brokerage** 4 0 4
This course is a study of the current sales techniques in the real estate industry, including problems in selling as well as emphasis on consumer motivation and reactions. Such factors as real estate salesmanship, location of prospects, bringing the prospect and the property together, the use of advertising in selling, time use, the basic development of a sales plan, a sales presentation, and the closing techniques. Prerequisite: BUS 162 and BUS 163 or license.
- BUS 235—Business Management** 4 0 4
Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing and financing. Clarification of the decision-making function versus the operating function. Role of management in business qualifications and requirements.
- BUS 236—Land Development** 4 0 4
This course is a study of land and population economics, land utilization, and the development factors related to manufacturing, labor, transportation, and commerce in or near the development location. Topics include the property survey, maps, plotting, boundary location, right of way, easements, and zoning laws.
- BUS 238C—Real Estate Merchandising** 4 0 4
This course is a survey of the field of real estate advertising with emphasis on the relationship to the market structure of our economy.
- BUS 239—Marketing** 4 0 4
An overall survey of the field of marketing; with detailed emphasis being placed on marketing policies, functions and institutions involved in the marketing process.
- BUS 243—Advertising** 4 0 4
The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; products and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.

- BUS 245—Retailing** 4 0 4
A study of the role in retailing in the economy including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends.
- BUS 248C—Medical Insurance** 2 2 3
This course is designed to provide medical office personnel with a basic understanding of medical insurance, terminology, types of health insurances available and claims processing for the medical secretary.
- BUS 269—Auditing I** 2 2 3
Principles of conducting audits and investigations; setting up accounts based upon audits; collecting data on working papers; arranging and systemizing the audit and writing the audit report. Emphasis placed on detailed audits, internal auditing and internal control. Prerequisite: BUS 223.
- BUS 271—Office Management** 4 0 4
Presents the fundamental principles of office management. Emphasis is on the role of office management including its functions, office automation, planning, controlling, organizing, and actuating office problems.
- BUS 273C—Introduction to Word Processing** 3 0 3
This course is designed to provide the student with a basic knowledge of word processing and its uses in the modern office.
- BUS 274C—Word Processing I** 2 2 3
This course is the first of two courses designed to instruct students in using a word processing system for creating, editing, printing, and storing documents. Through the use of training materials students will learn to produce mailable business documents.
- BUS 275C—Word Processing II** 2 2 3
This course is the most advanced word processing course of the three offered. Students will apply skills acquired in BUS 274C Word Processing I to daily office tasks. Prerequisite: BUS 274C.
- BUS 284M—Medical Terminology and Vocabulary II** 4 0 4
This course emphasizes a more detailed and comprehensive study of medical terms. The student's ability to spell, define and pronounce medical words is enhanced as she studies basic anatomical terminology. Suggested prerequisite: BUS 183.
- BUS 287C—Small Business Management** 4 0 4
"How to" introduction to the practices and problems involved in small business operations. For business people who will one day find themselves financially able to start or buy a business; it provides an overview of the major problems they will face and the pitfalls they must avoid if success is to be assured.
- BUS 290C—Personal Finance and Money Management** 4 0 4
This course presents an in-depth study of personal financial decisions the average person can expect to confront, including the basics of budgeting; the intricacies of home ownership, income tax, and investment, and the wise use of insurance, wills, and trusts.

BUS 292—Appraisal I	4	0	4
This course is a study of the methods and techniques used in estimating the value of residential properties. Topics include site evaluation, building materials, methods of appraising property, preparation of the residential appraisal report.			
BUS 293—Appraisal II	4	0	4
A continuation of BUS 202 Appraisal I. Student will analyze the economic factors affecting the value of real estate and neighborhood, local, state, and federal influence. Prerequisite: BUS 292.			
BUS 294—Appraisal III	4	0	4
A continuation of BUS 293. This course is a study of the capitalization of income and the income approach to value. Topics covered include an analysis of steps to estimate the value of income-producing properties such as apartments, hotels, motels, office buildings, retail stores, and industrial buildings. Other areas of study include recapture rates, capitalization rates, and appraisal of lease interests. Prerequisite: BUS 923.			
BUS 296—Property Management	4	0	4
This course is a study of the nature of property management, the types of property, lease preparation, protection of property, and property maintenance. Other topics include fair housing, tenant selection, advertising, ethics, budgeting, and associations with people.			
CAT 116—Photography I	3	2	4
An introduction to the field of photography, photographic equipment and materials. A study of the fundamental techniques of the camera and its expressive possibilities in relation to the field of design and visual communications. Assigned camera projects, darkroom procedures and equipment.			
CAT 117—Photography II	3	2	4
Continuation of CAT 116.			
CAT 118—Basic Film Technology	3	2	4
A study of basic film techniques including camera use, lighting, exposure, editing, emphasis on distinction between film and video; animation; projects in "Super-8mm."			
CHM 101—Chemistry I	3	2	4
Fundamental principles and laws underlying chemical action with special emphasis on the non-metals, their compounds, theories and problems. Laboratory deals with the non-metallic elements and their compounds, and the theories of qualitative and quantitative analysis. A working knowledge of algebra is highly recommended before entry into these courses which must be completed in sequence. Prerequisite MAT 101C.			
CHM 102—Chemistry II	3	2	4
A continuation of CHM 101. Prerequisite: CHM 101.			
CHM 103—Chemistry III	3	2	4
A continuation of CHM 101 and CHM 102. Prerequisite: CHM 102.			
CIV 105—Architectural Materials & Methods	4	0	4
General coverage of basic materials and methods used in the construction of architectural structures. The fundamentals of construction according to the type and quality of construction in buildings are given adequate consideration in both the classroom and construction sites.			

- CJC 101—Introduction to Criminal Justice** 4 0 4
A general course to familiarize the student with a philosophy and history of criminal justice, including its legal limitations in a democratic republic, a survey of the primary duties and responsibilities of the various criminal justice agencies, a delineation of the basic processes of justice, an evaluation of criminal justice's current position, and an orientation relative to criminal justice as a vocation.
- CJC 102—Introduction to Criminology** 4 0 4
An in-depth look and study of the nature and causes of crime; theories of crime and punishment, the law enforcement officer's role in the control of crime, and a look at society as a cause or control of crime development.
- CJC 103—The Art of Self Defense** 4 0 4
It is becoming increasingly important in our society for men and women to learn how to recognize and react to potentially violent situations. This course is designed to instill the basic skills required for one to react in a positive and confident manner when such confrontation cannot be avoided.
- CJC 106—Security Investigation** 4 0 4
This course is designed to familiarize the student with utilization of personnel security questionnaires and other sources of background data to assure complete investigations. Familiarization with investigative techniques and procedures are emphasized along with the working relationship between the security investigator and other members of the Criminal Justice community.
- CJC 110—Juvenile Delinquency** 4 0 4
A study of the nature and extent of juvenile delinquency; methods of research; delinquency and the law; delinquency causation and principles of delinquency control. Emphasis is on North Carolina Juvenile Delinquency procedures and practices.
- CJC 115—Criminal Law** 4 0 4
This course is designed to present a basic concept of criminal law and to provide a legal groundwork for those who seek to enter the criminal justice field. Historical development of criminal laws will be discussed from sources such as English Common Law.
- CJC 116—Laws of Arrest, Search, and Seizure** 4 0 4
The constitutional requirements and limitations for a lawful arrest and legal search; delinquency and the law; delinquency causation and principles of requirements will be studied.
- CJC 118—Criminal Justice Information Services** 4 0 4
Analysis of methods of communications within the police area. These shall include basic incident reporting, verbal communications; records administration, and basic research design. The overall importance of each area as they relate to the information flow and the impact of that flow on the Criminal Justice System will be studied.
- CJC 200C—Basic Police Techniques** 6 18 12
An elective course designed to meet and exceed the North Carolina Training and Standards Council requirement for police officer basic training. This course will be taught by a combination of in-service and academic professionals utilizing a hands-on approach to learning.

- CJC 201—Traffic Planning and Management** 4 2 5
A study which covers the history of the traffic enforcement problems and gives overviews of the problem as it exists today. Attention will be given to the three "E's" and the organization of the traffic unit. The responsibilities to the traffic function of the various units within the law enforcement agency, enforcement tactics, evaluation of the traffic program effectiveness, and the allocation of man and materials.
- CJC 203—Introduction to Corrections** 4 0 4
A history and philosophy of the field of correction with an examination of the total correctional process from law enforcement through the administration of justice, probation, prisons, and correctional institutions and parole.
- CJC 204—Introduction to Probation and Parole** 4 0 4
A look at probation as a judicial process and parole as an executive function are examined as community-based correctional programs and the use of pardons is reviewed providing an overview of this administrative process.
- CJC 205—Criminal Evidence** 4 0 4
This course is designed to cover the kinds and degrees of evidence and the rules governing the admissibility of evidence in court.
- CJC 206C—Police Photography** 4 0 4
Instruction covers the processing and printing of film; what pictures to take of a crime scene; legal aspects of crime photography; preparation of courtroom photo evidence; lighting at a crime scene; care of photographic equipment.
- CJC 207—Confinement Facilities Administration** 4 0 4
This course is designed to familiarize the student with the supervision and the 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.
- CJC 208—Patrol Procedures** 4 0 4
Various functions of the Patrol Division, the basic divisions of the police force will be discussed. This course utilizes a "field problem" approach to learning by providing various alternatives of action on the part of the student.
- CJC 209—Criminal Investigation I** 4 0 4
This course introduces the student to fundamentals of investigation, crime scene search, recording, collection and preservation of evidence. Sources of information, interview and interrogation, case preparation, and court presentation will be discussed.
- CJC 210—Criminal Investigation II** 4 0 4
A continuation of Criminal Investigation I with emphasis on specific offenses such as homicide, burglary, robbery, larceny, narcotics, arson, and sex crimes. Prerequisite: CJC 209.
- CJC 211—Introduction to Criminalistics** 4 2 5
Study of Criminal Investigation including a general survey of the methods and techniques used in modern scientific investigation of crime, and emphasis upon the practical use of these modern methods by the student. Laboratory techniques will be demonstrated and the student will participate in the actual use of the scientific laboratory and its equipment.

- CJC 215—Contemporary Correctional Issues** 4 0 4
A look at current trends and controversial issues within the correctional institutions. A critical look at serving time, punitive vs. rehabilitation techniques are explored along with philosophical concepts of incarceration.
- CJC 220—Police Organization and Management** 4 0 4
Introduction of principles of organization and administration, personnel management, training, communication, records and property maintenance will be discussed. Emphasis will be based on administrative decision making and leadership styles necessary for the proper functioning of a police organization.
- CJC 221—Correctional Administration** 4 0 4
Emphasis in the principles of administration in the correctional setting including budgeting, financial control, recruitment and development of staff, administration, decision making, public relations, and other correctional administrative functions are explored.
- CJC 222—Introduction to Security Systems** 4 0 4
An overview of the total security concept. A breakdown into industrial, commercial, and retail security. A general background of security designed for the individuals interested in employment in private security will also be discussed.
- CJC 223—Correctional Law** 4 0 4
A look at specific laws as they pertain to correction, care, custody, and control. A look at the basic responsibilities of the correctional officer concerning the law, liability and consequences of actions taken.
- CJC 224—Rehabilitation Techniques** 4 0 4
This course is designed to provide the student with the opportunity to explore the different avenues of rehabilitation. The new and innovative techniques of rehabilitation will be emphasized as they relate to successful methods.
- CJC 225—Criminal Procedures** 4 0 4
This course is designed to provide the student with a review of court system procedures from incident to final disposition. The principles of constitutional, federal, state, local and civil laws as they apply to and affect Criminal Justice personnel is studied.
- CJC 226—Civil and Criminal Responsibility** 4 0 4
This course emphasizes the civil and criminal legal responsibility of security personnel. It involves control and supervision of company property including entries and exits. It stresses the legal liability of the individual and the company.
- CJC 230—Correctional Counseling** 4 0 4
This course is designed to provide the student with information pertaining to counseling techniques as they apply to the needs of a corrections officer. Areas to be examined: vocational rehabilitation, alcohol detoxification, welfare services, child guidance and mental health clinics, employment services, etc.
- CJC 240—Defensive Tactics and Firearms** 2 2 3
Actual firearm training including on the firing range practice, proper use and care of weapons will be demonstrated, with student participation.

- CJC 245—Electronic Detection and Polygraph** 4 2 5
 This course is designed to provide the student with an understanding of electronic detection devices and equipment. It stresses the legal limiting their use. The use of the polygraph as an investigative aid is covered along with the PSE. The importance of the pre-test interview, question formulation and post-test interview is stressed and demonstrated.
- CJC 248—Surveillance Techniques** 4 0 4
 This course is designed to cover all types of surveillance techniques and the use of the surveillance equipment. Emphasis is placed on loss prevention in relation to employee and customer activities in industrial, commercial, and retail settings. Will also look at legal implication of surveillance equipment.
- CJC 249—Seminar in Criminal Justice** 4 0 4
 An overview of the Criminal Justice System. Critical analysis of all areas of the system with emphasis on student oral participation will be emphasized.
- COE 100—Introduction to Cooperative Education** 1 0 1
 A study of cooperative work experience education. All phases of the program are reviewed with particular attention devoted to preparing the student for entry into the world of work. The individual process of career decision making and methods of securing and retaining a job are emphasized.
- COE 101-106—Work Experience I-VI each - up to** 0 20 2
 Through the Cooperative Education Program the student works on a part-time basis in a position closely related his or her program of study and for an employer selected and/or approved by the college. In addition to on-the-job supervision by the employer, the student is supervised periodically by a co-op coordinator from the institution. Prerequisite: One quarter as a full-time student at CTC and full admission to the Co-op Program. Corequisite: COE 100.
- DFT 110C—Introduction to Drafting** 4 0 4
 In this course, the student will learn to organize for presentation on prints mechanical, architectural, and geographic information. This information will be presented through use of orthographics, isometrics, sectional drawings, detail drawings, dimensioning, notes and lettering. The course emphasis will be on the general presentation of this information as applied to different areas of drafting and drawing. The student will develop these skills through actual practice with the most common drawing tools.
- DFT 113C—Drafting for Electronics** 4 0 4
 The fundamentals of drafting are presented with an emphasis on applications in the electronics field. Basic skills and techniques are included such as the use of drafting instruments, types of drawings, construction of drawings both with instruments and freehand, lettering and dimensioning, and how to read prints. In addition to basic skills, specialized experience will be included which directly relates to the electronics industry, such as types of drawings common to electronics, special symbols used, schematic diagrams, and layout diagrams with an emphasis on printed circuit work.
- DMK 240—Math for Retail Buying** 4 0 4
 Concerns itself with the scientific use of numbers in merchandising, and the figures and mathematical techniques that are employed to translate fashion into the profit-making activities of planning, pricing, and controlling quantities. Prerequisite: BUS 109.

- DMK 249—Fashion Buying and Merchandising** 4 0 4
This course examines in depth the planning, buying, and selling of merchandise. The course deals with buying as a career and the organization of Retail Stores. Merchandising techniques that are used to plan assortments, determine sources of supply, select merchandise, negotiate buying, and follow through on the sales of merchandise are some of the more important parts of this course.
- DMK 260—Visual Merchandising** 4 0 4
Examines display as a visual merchandising medium, and covers the principles of display design and their applications to fashion merchandising environs.
- DRA 105—Theatrical Performance** 4 0 4
Drama 105 is designed to give the student experience in an appreciation of a variety of behind the scene and on-stage procedures that are requisite to a theatrical production.
- DRA 106C—Dramatic Production** 4 0 4
Designed to give the student further experience in theatrical productions with emphasis placed on technical theatre.
- ECO 102—Economics I** 4 0 4
The fundamental principles of economics including the institutions and practice by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution and consumption both in relation to the individual enterprise and to society at large.
- ECO 104—Economics II** 4 0 4
Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance and economic problems.
- ECO 201—Labor Economics** 4 0 4
Emphasis is placed on the history of the labor movements in the United States, the development of methods and strategies by labor organizations and by management, the shift in the means of public control; and the factors on income and economic security.
- EDP 101—Introduction to Data Processing I** 4 0 4
This course provides an introduction to the fundamentals of computers and information processing, and gives an overview of common computer applications.
- EDP 102C—Introduction to Data Processing II** 4 0 4
This course is designed to build upon the knowledge gained in EDP 101 by studying more complex computer systems currently in use and examining common application software packages in the computer lab. Prerequisite: EDP 101 or equivalent experience.
- EDP 106—Computer Operation and Documentation** 3 2 4
This course is designed to provide the student with fundamental principles of operating computer systems. It is designed to provide the student with concepts of documentation such as program, system, and operation flowcharting, console keyboarding, and word processing. Prerequisite: Typing ability.

- EDP 109—COBOL I** 3 2 4
This course is designed to give the student an introduction to the COBOL programming language and to provide basic skills in the use of this language. The student will analyze, evaluate, and program commercial applications. Prerequisite: EDP 106.
- EDP 110—COBOL II** 3 2 4
A course in the COBOL Programming Language including fundamentals and applications within a Disc Operating System (DOS) environment. The student will develop logic and write advanced COBOL programs. Prerequisite: EDP 109 or its equivalent in experience.
- EDP 116—Business Basic Language I** 3 2 4
A thorough course in the Business Basic Language beginning at the entry level. Microprocessor application of this language will be stressed.
- EDP 117—Business Basic Language II** 3 2 4
The objective of this course is to continue with the concepts of business information processing using the Business Basic Language. This objective is pursued on several levels. First, the structure of business information systems is examined. Next, computer programming skills are developed in the Basic Business Language. Finally these two fundamentals are linked to provide the students with proper backgrounds to successfully program business problems. Prerequisite: EDP 116 or its equivalent in experience.
- EDP 118C—Business Basic Language III** 3 2 4
An advanced course in the utilization of BASIC programming language. Interactive programming techniques, error checking routines, and file handling applications are stressed. Programming assignments will include system projects that simulate the business environment.
- EDP 200C—Intermediate Computer Orientation** 1 3 2
This is a survey course for those students interested in a general approach to microcomputers. Hands-on experiences enable the student to apply what is discussed in lecture. Operation of a microcomputer, programming in the BASIC language, computer terminology, word-processing, profile file handling, and visicalc spread sheets will be discussed and demonstrated using the TRS-80 Model II microcomputer.
- EDP 204—COBOL III** 3 2 4
A group project programming course organized under the data processing organizational environment of a business; a simulation of a business data processing department and how it operates within the company. Prerequisite: EDP 110.
- EDP 210C—Data Processing Applications** 3 2 4
This course is designed to teach computer users and business professionals how to utilize and implement current micro-computer business software now available on the market. One or more of the most popular software packages will be selected to be taught each quarter. Learning will be facilitated through the solving of practical business problems in a "hands-on" environment.
- EDP 212—Data Base Management** 4 0 4
The theories of base construction, inquiry, and updating are presented. Several systems of data base management are studied in a practical environment.

- EDP 221—Computer Systems** 4 0 4
An advanced study of systems analysis with emphasis upon data systems and file organization techniques, the design of forms, and methods used by the systems analyst beginning with the feasibility study. Prerequisite: EDP 101 and one computer language course or its equivalent in experience.
- EDP 230—RPG II Language I** 3 2 4
A course in the Report Program Generator (RPG II) Language theory, fundamentals, applications, including a study of the language rules and programming methods. The student will develop problem solutions and write several RPG II programs.
- EDP 231—RPG II Language II** 3 2 4
An advanced course in the Report Program Generator—RPG II Programming Language developed for the student who has completed EDP 230 or its equivalent in RPG experience. The student develops additional programming skills in writing RPG II programs on more complex commercial business programs. The student will code several programs using these more advanced methods.
- EDP 232—RPG II Language III** 3 2 4
A group project programming course organized under the data processing organizational environment of a business; a simulation of a business data processing department and how it operates within the company. Prerequisite: EDP 230 or its equivalent in experience.
- EDP 240C—Computer Augmented Accounting** 3 2 4
This course is designed to provide the student with fundamental principles of computerized accounting on microcomputers. It is designed to provide the student with concepts of automated accounting in the environments of general ledger, depreciation, accounts receivable, accounts payable, and payroll.
- EDP 290C—Advanced Computer Experience** 1 6 4
This course is designed to provide the student an opportunity for advanced computer experience. Possible projects include actual work experience with designing and using current computer applications; and designing computer applications for office automation, information management systems, or decision support systems. The student will be able to learn some of the more advanced computer applications from practical experience.
- EDU 121C—Effective Teaching Strategies** 2 0 2
Emphasis is placed on learning effective teaching techniques to enhance expertise as an learning effective teaching techniques to enhance expertise as an instructor. Practical examples will be studied with use of videotaping to evaluate organization, techniques, and behaviors.
- ELC 112—Electronics Fundamentals I** 3 2 4
Presents fundamental principles of Direct Current electricity including: units of measurement, OHM's law, Kirchoff's laws, simple series, parallel, and series parallel resistive circuits, R-C & L-R circuits, power, resistance, current, capacitance, magnetism, and basic circuit components. Lab work will cover the proper use and care of hand tools, and measuring equipment such as the VOM and VTVM. Interpretation of schematic diagrams and component identification, and verification of basic electrical laws will be included.

- ELC 113—Electronics Fundamentals II** 3 2 4
Presents fundamental principles of Alternating Current electricity including: resistive, capacitive, and inductive circuits, impedance, phase relationships, resonant and nonresonant series and parallel LRC circuits, inductive coupling, and air and iron core transformers concepts. Lab work will include use of the DVM, and oscilloscope, and verification of basic electrical laws. Prerequisites: ELC 112, MAT 101C
- ELC 114—Active Devices** 3 2 4
Covers basics of vacuum tubes and solid state devices including: transistors, diodes, photocells, and thermistors. Lab experiments will verify the function of these components in circuits. Prerequisites: ELC 113, MAT 102C
- ELC 115C—Rotary Machines and Controls** 3 2 4
Concepts of motor construction; power requirements; mechanical aspects of electric motors, including DC and stepping motors; and single and multiphase AC motors. The course includes wiring, testing, starting, reversing, and speed control of various types of motors. Motor control circuits include electro-mechanical and solid-state devices and timers or sequencing switches. Information also aids in proper choice of motor types for specific applications.
- ELN 100C—Introduction to Electronics** 4 0 4
A survey of electronics with particular attention to what electronics consists of. A non-mathematical approach will be utilized in this course. Students learn also the magnitude of the Electronics Engineering Technology degree requirements.
- ELN 121—Electronic Circuits I** 3 2 4
Covers the building blocks of electronics such as: power supplies, amplifiers, oscillators, feedback circuits, and tuned circuits. Lab work will give experience in building and troubleshooting these circuits. Prerequisite: ELC 113.
- ELN 122—Electronic Circuits II** 3 2 4
Allows the student to study the relationships of the circuits covered in ELN 121. Discussion will center around the networks formed by interconnection of these circuits. Prerequisite: ELN 121.
- ELN 123—Introduction to Microprocessors** 3 2 4
A study of the computer in its smallest physical form. The student will be given practice in BASIC programming and the utilization of the microprocessor in manufacturing situations.
- ELN 208C—Industrial Electronics** 3 2 4
Electronics as applied in industrial control and production systems: study includes types of components and circuits used to control processes and equipment such as DC motors, drives, switching and controls, high power equipment and its installation and safety considerations. Includes the study of circuits used in sensing and control as well as monitoring manufacturing processes.
- ELN 218—Logic Fundamentals** 3 2 4
Covers basic logic circuit design and application including: OR gates, AND gates, NOR gates, NAND gates, binary numbering systems and Boolean Algebra.
- ELN 219—Pulse and Logic Circuits** 3 2 4
This course continues the study of topics covered in ELN 218 and introduces bistable and monostable multivibrators, integrators, Schmit trigger circuits, and transistor switches. Prerequisite: ELN 218.

- ELN 235C—Industrial Instrumentation** 3 2 4
Principles of measurement of electrical values and other parameters for use in the automatic control of machinery and equipment are covered. Electronic circuits necessary for the processing of information and display are investigated. Several types of transducers for the detection and conversion of various parameters are studied and their interfacing with indicators and other systems are discussed.
- ELN 241—Electronic Systems I** 3 2 4
A general survey of electronic systems with emphasis on their description in block diagram format. Systems to be studied are those used in communications, computing, measurement, automatic control, and others of a specialized nature as appropriate. Prerequisite: ELN 123.
- ELN 242—Electronic Systems II** 3 2 4
Introduction to fundamental aspects of electronic communication systems with special emphasis on need for modulation, types of modulation, frequency spectra and bandwidth requirements. Qualitative study of the principles of AM, SSB, and FM including the generation and detection of signals and their frequency spectra. Transmission and propagation of radio signals will be studied. Prerequisite: ELN 241.
- ELN 243—Electronic Systems III** 3 2 4
Study of specialized electronic communication system such as TV, microwave, radar, and optical communication systems. Discussion of sampling and pulse systems including techniques of multiplexing such as PAM, PDM, PCM, and PPM. Prerequisite: ELN 242.
- ELN 246—Electronics Systems Project** 3 2 4
A class emphasizing independent research and design work by the student. The student will select a project in consultation with the instructor; perform the required research; compile data; formulate a theoretical model; and construct, test, and evaluate a working model of the selected project. Prerequisite: ELN 241.
- ENG 100C—Basic English Skills** 4 0 4
Provides a review of basic English skills which will prepare students for the competencies needed in English 101 and 102. Course content includes a study of major structural errors, grammar, mechanics, punctuation and spelling.
- ENG 101—Grammar and Composition I** 4 0 4
A historical survey of the English language, a review of English grammar, and an opportunity to improve written self-expression through expository essays and primary and secondary research. Prerequisite: ENG 100C or equivalent.
- ENG 102—Grammar and Composition II** 4 0 4
A continuation of ENG 101 with special emphasis on expository writing and the development of skills in basic rhetoric, English grammar and usage, sentence structure, topic sentences, paragraph development, and essay development. Prerequisite: ENG 101.
- ENG 103—Report Writing** 4 0 4
A study of standard English and the organization and techniques of modern report writing. Exercises in developing typical reports using writing techniques and graphic devices. Special emphasis is on practical application of occupational writing demands.

ENG 104—Reading Dynamics	4	0	4
Designed to improve the student's ability to read rapidly and accurately. Special emphasis on comprehension, vocabulary, critical and analytical reading skills, and the study of reading materials related to the student's curriculum.			
ENG 105C—Masterpieces of World Literature	4	0	4
A study of novels, short stories, poetry, plays, and non-fiction representative of both classic and contemporary world literature.			
ENG 107C—Theatre Appreciation	4	0	4
A general survey of theatre history including an investigation of the origins of tragedy and comedy. A study of medieval church drama, Shakespeare, the Renaissance and Romantic traditions, Ibsen and realism, Theatre of the Absurd and some of its more recent descendants. Appropriate selections from the literature of some of the above-mentioned periods will be included.			
ENG 116C—Journalism I	4	0	4
A study of journalistic writing with special emphasis on collecting, writing, and editing news stories; a study of freedom of the press and basic news legality. Practical application of newswriting through the development of the college newspaper.			
ENG 117C—Journalism II	4	0	4
Continuation of ENG 116.			
ENG 118C—Publications Design and Production I	3	2	4
A study of techniques and problems in the design, production of publications, including pamphlets, brochures, catalogues, and the college yearbook.			
ENG 119C—Publications Design and Production II	3	2	4
Continuation of ENG 118.			
ENG 120C—Publications Design and Production III	3	2	4
Continuation of ENG 119.			
ENG 121C—Publications Design and Production IV	3	2	4
Continuation of ENG 120.			
ENG 133C—Composition and Documentation	4	0	4
A study of research materials (card catalog, <i>Readers' Guide to Periodical Literature</i> , dictionary, thesaurus, atlas, almanac, newspaper, encyclopedia) available in the Learning Resources Center and instruction in the use of these materials. The student will write extended compositions, summaries, and a library paper to convey an understanding of research methods.			
ENG 201C—The History of the English Language	4	0	4
A study of the major developments in the English language from pre-history to the present with emphasis on American adaptations.			
ENG 203C—Creative Writing	4	0	4
Creative writing laboratory. Emphasis on the imaginative writing with special emphasis on essays, short stories and poetry. Prerequisite: ENG 101.			
ENG 204—Fundamentals of Speech	4	0	4
A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences and interviews.			

- ENG 205C—Major American Writers** 4 0 4
A study of major American authors representative of literary movements from Romanticism to the present.
- ENG 206C—Voice and Diction** 4 0 4
A beginning course designed to assist the student to improve the personal use of one's voice.
- ENG 207C—Southern American Authors** 4 0 4
A study of principal authors, from colonial times to the present, who have made a contribution to a better understanding of the people and institutions of the South.
- ENG 209C—Creative Writing Workshop** 4 0 4
Continuation of ENG 203C—Creative Writing. ENG 203C—Creative Writing is a didactic course. ENG 209C—Creative Writing Workshop will be responsible for all phases of the publication of the literary magazine *Foothill Notes*; i.e., writing, editing, typing, distributing, etc.
- ENG 210C—Effective Communication** 2 0 2
This course is designed to help participants understand their own communication problems, overcome or prevent communication breakdowns, and improve their relationships with others through more effective listening and speaking skills.
- ENV 206—Environmental Law** 4 0 4
A study of local, state, and federal laws and acts concerning environmental quality standards and the use of resources, legal procedure for enforcing laws, and problems concerning enforcement. Included will be environmental standards dealing with polluting sources such as industry, agriculture, municipalities, and individuals.
- FAS 101—Principles of Fashion Merchandising** 4 0 4
This course is designed as an introduction to fashion terminology and the components of fashion. It explores the manner in which economic, sociological, and psychological factors influence fashion demand. A brief history of fashion is discussed along with the roles and responsibilities of designers, manufacturers, and retailers. Great emphasis is also placed on careers in fashion.
- FAS 102—Modeling** 2 2 3
This course is designed as an introduction to the techniques and skills needed to improve one's stance, posture, carriage and body control and business manners in order that each student can better meet the requirements they will face in the business world.
- FAS 103—Fashion Accessories** 4 0 4
Concerns itself with properties, characteristics, and construction of leather, fur, hosiery, intimate apparel, belts, umbrellas, millinery, wigs, jewelry, and cosmetics as they affect the knowledgeable buying and selling of these products.
- FAS 104—Fashion Sketching** 4 0 4
To help students develop fashion sketching techniques for promotion designs which are already complete, for illustrations in magazines, newspapers, poster design, display, etc. Enables student to acquire knowledge of figure proportions.

- FAS 105C—Professional Development** 4 0 4
 This course stresses the individual development of the student's potential in enhancing and training mind and body in the following areas: self-esteem and personality, physical conditioning, nutrition and diet, clothing and appearance, habits or orderliness, overall grooming, graciousness, manners, and consumer awareness.
- FAS 208—Fashion Salesmanship** 4 0 4
 This course will analyze the basics and nature of selling. The course will study the consumer buying habit, behavior and communications process. A thorough study of the importance of personal selling to our socioeconomic system, the way culture influences the behavior of buyers, background information a salesperson should have, techniques and sources of information for identifying prospects, and characteristics for special types of selling and the building of a sales force are covered.
- FAS 209—Fashion Writing and Communication** 4 0 4
 Examines specific areas of fashion writing, such as: Fashion reports, press release, fashion news stories, fashion and trade magazine articles, and fashion show commentary.
- FAS 210—Fashion Advertising and Sales Promotion** 4 0 4
 This course will serve as an introduction to sales promotion activities for all marketing levels with concentration on the specialized techniques and procedures employed to implement the activities of advertising and copy-writing. It will cover the types and objectives of the different sales promotion activities used to sell fashion products and the techniques that are important to implement fashion shows, special events and publicity.
- FAS 211C—Introduction to Apparel Design** 4 0 4
 This course examines the job of the designer, how the designer functions in the context of an apparel manufacturing firm, the mechanics of creation and production, and the principles and elements of design.
- FAS 212—Psychology of Dress** 4 0 4
 Examines the interrelationship between clothing and its cultural, social, psychological, physical economic, and aesthetic implications.
- FAS 215—New York Field Studies Seminar** 1 6 3
 Four days and three nights to New York City's Garment District. To offer students of design, retailing and merchandising a behind-the-scenes look at the fashion industry along with new perspectives on fashion careers. Institutional visits to the Metropolitan Museum's Costume Collection, other museums and the Fashion Group Headquarters. Company visits to design studios, showrooms and factories of apparel-makers, fur, lingerie and accessories, fashion publications and other establishments. Offered upon sufficient enrollment demand once every two years.
- FAS 220C—Fashion Internship** 1 10 2
 This course will give the students an opportunity to have in-field experience and employment in the areas of their interest. Supervision and evaluation will be the responsibility of the employer and the fashion merchandising instructor.

- HIS 101—World Civilization I** 4 0 4
A survey of the cultural beginning of Eastern and Western civilizations, dealing with migrations, cultural diffusion, and the development of governmental and ethical structures through the fall of the Roman Empire.
- HIS 102—World Civilization II** 4 0 4
A continuation of HIS 101 from the Middle Ages, through the Renaissance, the Voyages of Discovery, Colonization, the Reformation and the Ages of Enlightenment.
- HIS 103—World Civilization III** 4 0 4
A continuation beginning with the Industrial Revolution, the impact of industrial imperialism, the American and French Revolutions; the rise of political democracy and modern nationalism to the present.
- HIS 110C—American History I** 4 0 4
A comprehensive survey of American History from colonial times through the Civil War. It is a study of the political and social history of a pluralistic society with emphasis upon manners, mores, literary and artistic movements, religions and philosophical schools of thought, and the general outlook of the American people on particular subjects.
- HIS 111C—American History II** 4 0 4
A continuation of American History I, beginning with the reconstruction period after the Civil War and proceeding through history up to the present.
- HIS 112C—American History III** 4 0 4
A continuation of American History I and American History II. An in-depth study of the United States Supreme Court Justices and landmark decisions, especially those decisions affecting educational institutions.
- HUM 101C—Dimensions of Human Experience** 4 0 4
An interdisciplinary course in the humanities emphasizing some of the major dimensions of human experience, as reflected in philosophy, art, literature, music, history, religion, and psychology.
- HUM 103C—Major World Religions** 4 0 4
A comparative religion course examining six major religions: Hinduism, Buddhism, Zoroastrianism, Islam, Judaism, and Christianity.
- HUM 110—History of Costume** 4 0 4
A study of the costumes of the ancient world, Europe and America and the effects of the social environment upon appearance and the evolution of garments with special emphasis on the influence of history on modern concepts of dress.
- ISC 107—Occupational Safety and Health Act** 4 0 4
A survey of the Williams-Steiger Occupational Safety and Health Act of 1970. Application of the Federal Standards in various industries.
- ISC 120—Principles of Industrial Management I** 4 0 4
The basic managerial decisions; organizational structure including plant location, building requirements, and internal factory organization; problems of factory organization and control, planning, scheduling, routing factory production, and labor control.
- ISC 121—Principles of Industrial Management II** 4 0 4
Continuation of Principles of Industrial Management I. Prerequisite: ISC 120.

ISC 122C—Industrial Drawing	4	0	4
Drafting fundamentals and blueprints interpreting techniques common to commercial buildings covered from a safety technician's point of view. Schematics and diagrams to include electrical, plumbing, and heating installations using appropriate symbols and notes.			
ISC 202—Quality Control	4	0	4
Principles and techniques of quality control, organization, procedures, sampling inspections, quality control and tests for significance stressed.			
ISC 209—Plant Layout	4	0	4
A practical study of factory planning with emphasis on the most efficient arrangements of work areas to achieve lower manufacturing costs. Layouts for small and medium-sized plant, layout fundamentals, selection of production equipment and materials handling equipment. Effective management of men, money, and materials in a manufacturing operation.			
ISC 210—Job Analysis	4	0	4
This study is based on product studies as well as personnel and usage programs. The course utilizes the study of product designs, value analysis, materials and process as an intricate part of productive procedures.			
ISC 211—Work Measurement	4	0	4
Principles of work simplification including administration of job methods improvement, motion study fundamentals and time study techniques, use of flow and process charts; multiple activity charts, operations charts, flow diagrams and methods of evaluation are studied.			
ISC 213C—Production Planning	4	0	4
Day to day plant direction; forecasting, product planning and control, scheduling, dispatching, work loading. Routing and inventory control are studied.			
ISC 218—Plant Security	4	0	4
Survey of the organization and function of the plant security force. Items stressed include: entrance procedures, petty thievery of company owned materials, parking lot security, use of fire arms in an emergency situation, disaster preparedness, and handling of bomb scares.			
ISC 220—Management Problems	4	0	4
A study of personnel and production problems from the standpoint of middle management. Includes selection and development of products, control problems and techniques, development of standards, employer-employee relations. Case studies are extensively utilized.			
ISC 243C—Free Enterprise	4	0	4
An in-depth examination of the component parts of Free Market Capitalism and the complex interaction of producer, consumer and government. The fundamental principles which have contributed so vitally to the economic and industrial preeminence of the United States are employed. Some of these are relying on the industrial, keeping government in its place, and the encouragement of productivity and ingenuity by the worker.			
MAT 100C—Basic Arithmetic Skills	4	0	4
A review course in the principles and manipulations of arithmetic operations. Topics of study include: whole numbers, fractions, decimals, factoring, and simple applications of these areas.			

- MAT 101C—Principles of Mathematics** 4 0 4
A course emphasizing applications of mathematics and geometry. Topics of study include: geometry of plane figures, ratios and proportion, percents, use of calculator, powers and roots, and the metric system of measurement. Prerequisite: MAT 100C or equivalent.
- MAT 102C—Algebra I** 4 0 4
An introductory course acquainting students with the basic principles of the study and application of algebra. Topics of study include: The equation, signed numbers, monomials, polynomials, graphing and set theory. Prerequisite: MAT 101C or equivalent.
- MAT 117C—Introduction to Statistics** 4 0 4
An elementary course concerning the basic concepts of probability theory and the methods of statistical inference. Topics of study include: Sets and functions, probability, sampling, parameters and normal probability distribution. Prerequisite: MAT 102C or equivalent.
- MAT 131C—Algebra II** 4 0 4
A study of the manipulation of polynomials, rational expressions, and solutions of equations. Topics of study to include: linear equations, inequalities, exponents, polynomials, rational expressions, powers, roots, radicals, quadratics, and logarithmic functions. Prerequisite: MAT 102C.
- MAT 132C—Trigonometry** 4 0 4
An intermediate course in the principles and applications of trigonometric functions and algebraic manipulations of trigonometric functions. Outline of study includes: trigonometric functions, solution of triangles, radian measure, trigonometric identities and inverse trigonometric functions. Prerequisite: MAT 102C or equivalent.
- MAT 134C—Algebra III** 4 0 4
A study of the solution of equations and systems of equations through advanced algebraic techniques. Outline of study includes: functions, graphing, operations with polynomials, solution of quadratics, linear equations, inequalities, matrices, determinants and exponential and logarithmic functions. Prerequisite: MAT 131C.
- MAT 201C—Introduction to Calculus** 4 0 4
An introductory course in the principles, concepts and applications of calculus. Outline of study includes: limits, continuity, the derivative, application of derivative, the integral. Prerequisite: MAT 132C or equivalent.
- MAT 202C—Differential Calculus** 4 0 4
The study of the properties and applications of the derivative with emphasis on: conic sections, transcendental functions, exponential and logarithmic functions and infinite series. Prerequisite: MAT 201C or equivalent.
- MAT 210C—College Math for Teachers** 2 0 2
A survey course that explains the development of our number system—from natural numbers, to geometry, to logarithms, to calculus, to modern algebra.
- MAT 203C—Integral Calculus** 4 0 4
The study of the properties and applications of the integral calculus with emphasis on: vectors and solid analytical geometry, partial differentiation, multiple integral and vector calculus. Prerequisite: MAT 202C or equivalent.

- MUS 100C—Voice** 4 0 4
A beginner's introduction to vocal technique and style. The course covers the fundamentals of vocal production. It is geared toward those who have had no previous vocal training.
- MUS 101—Music Appreciation** 4 0 4
Designed to give a basic orientation to music with emphasis on simple form and analysis, instrumentation aesthetics, masterpieces and other significant works.
- MUS 201C—Music of the Twentieth Century** 4 0 4
A survey and analysis of twentieth century music expression with emphasis on style and usage in relation to our culture.
- MUS 202C—Music Theater** 4 0 4
All aspects of the theater will be emphasized and opportunities for participation will be available to all students regardless of music experience or ability.
- NUT 101C—Nutrition and Diet Therapy** 3 0 3
The course focuses on the nutritional requirements of growth and the contribution to good health by proper nutrition. The harmful effects of inadequate diet are discussed. Fundamentals of normal nutrition are used to introduce the student to diet changes made necessary by illness. The principles of meal planning and the selection, preparation, and storage of foods are included.
- PHY 107—General Physics** 4 0 0 4
This course is designed to take the student from basic fundamentals through advanced physics covering such areas as: Structure of matter; electric current; electrostatics, units of measurement; dynamics; magnetism and electromagnetism, electric generators and motors.
- PHY 108—Radiation Physics** 3 2 0 4
The production and control of high voltage and rectification; x-ray tubes and rectifiers and an introduction to therapy and nuclear medicine. Prerequisite: PHY 107.
- PHY 201C—Physics I** 3 2 4
The first quarter of college physics; mechanics (with emphasis on measurement); vectors and scalars; force systems, translational and rotational motion; work and energy; and hydraulics. Prerequisite: MAT 102C
- PHY 202C—Physics II** 3 2 4
The second quarter of college physics; Kinetic Theory of Matter, heat, thermodynamics, wave motion and sound, and the properties of light. Prerequisite: PHY 201C.
- PHY 203C—Physics III** 3 2 4
The third quarter of college physics: electricity and magnetism—static electricity, potential, Ohm's law, parallel and series circuits, Kirchoff's Laws, magnets, induced electromotive force, motors and generators. Also modern physics: relativity; bohr atom, x-ray and gamma rays, and atomic structure. Prerequisite: PHY 202C
- POL 102—Government—National** 4 0 4
English and Colonial background, the articles of confederation and the framing of the Federal constitution will be discussed. The nature of the Federal Union, Federal powers, political parties will be studied, as will the general organization and functions of the national government.

POL 103—Government—State and Local	4	0	4
A study of state government, state-federal inter-relationships, the functions and prerogative of the branches will be made. Problems of administration, legal procedures, law enforcement, police power, revenues and appropriations, with special attention to North Carolina will be discussed.			
POL 204—Great Decisions—Foreign Policy	4	0	4
A discussion of key foreign policy issues faced by the United States and its citizens in the current year.			
PSY 101—Introduction to Psychology	4	0	4
A survey of major psychological theories (behavioral, cognitive, psychoanalytic, and humanistic) including the developmental process, motivation, emotion, frustration and adjustment, attention and perception, and problems of group living. Attention is given to application of these topics, to problems of study, self-understanding, and adjustment to demands of society.			
PSY 103—Adolescent Psychology	4	0	4
A study of the nature and source of the problems of adolescents in western culture; physical, emotional, social, intellectual, and personality development and adolescents.			
PSY 201—Abnormal Psychology	4	0	4
Abnormal behavior studied in the context of modern life: Case studies, differential diagnosis, psychological dynamics of abnormal behavior, including theoretical, clinical and experimental contributions in the field.			
PSY 202—Group Processes	4	0	4
A study of dynamics and leadership roles utilizing group experimentations. Applicability to other settings is also explored.			
PSY 208C—Human Growth and Development	4	0	4
As human beings, we grow and develop throughout life—physically, intellectually, psychologically, and socially. This course uses a developmental approach in examining these processes of development, covers infancy, adolescence, adulthood, and aging.			
PSY 238—Dynamics of Group Encounter	3	2	4
A close-in-depth study of sensitivity training. Student participation will enhance this course in actual group situations in the prison setting. Exploration of group behavior of others and role playing techniques of incarcerated individuals is analyzed along with the dynamics of group relations and interrelations.			
RAD 101—Positioning I	3	2	0 4
This course will cover basic radiographic positions for the upper and lower extremities. Basic radiographic terminology will be taught.			
RAD 102—Principles of Radiographic Technique I	3	2	0 4
The student will be taught the fundamental principles of Radiographic exposure. This course will include all technical information of proper contrast and technical selections needed for Radiography conversion of techniques, evaluation of technical quality, and technical changes necessary to improve quality.			
RAD 103—Processing Technique	2	2	0 3
This course will deal with manual and automatic processing with film critique for darkroom application. All studies of chemistry and all stages of processing will be taught.			

- RAD 104—Radiographic Anatomy** 4 0 4
A study of the anatomy of the nine systems of the Body with special emphasis on the skeletal system.
- RAD 105—Critique I** 1 0 0 1
Evaluation of repeated radiographs and high quality radiographs to instruct students in prevention of technical and positioning errors and how to attain top quality in Radiography. Special emphasis will be placed on position taught in Positioning I.
- RAD 106—Clinical I** 0 0 15 5
Practical experience in a clinical setting. This experience will include practice in ethical and attitudinal situations during patient contact, patient care and basic positioning for radiologic studies of the chest, upper and lower limbs, and the abdomen. The student will process radiographs and apply basic principles in radiographic exposure. Departmental professional procedures will be initiated into the student's clinical routine.
- RAD 110—Introduction to Radiologic Technology** 1 0 0 1
An introduction to the field of Radiology with an overall view of Radiologic Technology and the part Radiology plays in medicine. The student will become completely acquainted with the ethics and basic radiation protection and will be acquainted with the administrative structure of the hospital and departmental functions.
- RAD 111—Positioning II** 3 2 0 4
This course will cover basic radiographic positions of the spine and skull. Prerequisite: RAD 101.
- RAD 112—Principles of Radiographic Technique II** 2 2 0 3
Advanced formulation of techniques for all phases of radiography. Experimentation on various technical procedures with written reports to coordinate results of experiments. Prerequisite: RAD 102.
- RAD 113—Critique II** 1 0 0 1
A continuation of Critique I with special emphasis on positions taught in Positioning II.
- RAD 114—Clinical II** 0 0 15 5
The student will apply, in the hospital, what has been learned in class. All students will be under the supervision of an instructor or a registered technologist.
- RAD 121—Positioning III** 3 2 0 4
This course will cover basic radiographic positions of examinations using contrast media and advance skull positioning. Prerequisite: RAD 111.
- RAD 123—Critique III** 1 0 0 1
A continuation of Critique II with special emphasis on positions taught in Positioning III.
- RAD 124—Clinical III** 0 0 24 8
Continuation of supervised and more critical evaluation of the students practicum within the position.
- RAD 131—Positioning IV** 3 2 0 4
The final study of radiographic positioning other than the routine positions and pediatric radiography. Prerequisite: RAD 121.

RAD 134—Clinical IV	0	0	24	8
Intensified practicum in the hospital to apply all the didactical knowledge the student has acquired in the past year.				
RAD 141—Special Procedure I	2	0	0	2
Detailed studies of special procedures, the related contrast media used, pathology demonstrated and anatomy demonstrated.				
RAD 201—Radiologic Protection	2	0	0	2
This course will deal with the effects of radiation on the body, ways of patient and personal protection and governmental regulations.				
RAD 203—Clinical V	0	0	24	8
Continuation of Practicum with emphasis on finer details of improvements to attain a high quality in practicum.				
RAD 212—Clinical VI	0	0	24	8
Practicum with emphasis on special procedures and examinations not commonly performed on a routine basis.				
RAD 223—Clinical VII	0	0	30	10
Detailed practicum as a prerequisite for final evaluation.				
RAD 233—Clinical VIII	0	0	30	13
Practicum within the hospital with oral and practical examination. General evaluation of the student's practicum capabilities will be summarized.				
RAD 241—Special Procedures II	2	0	0	2
A continuation of Special Procedures I				
RAD 245—Seminar I	1	0	0	1
A general course that will prepare the student for national certification.				
RAD 246—Seminar II	1	0	0	1
A continuation of RAD 245.				
SOC 101—Introduction to Sociology	4	0	4	
An introductory course in the principles of sociology, culture, personality development, social class, and social control. Presents the scientific study of man's behavior in relation to other men, the general laws affecting the organization of such relationships, and the effects of social life on human personality and behavior.				
SOC 202—Marriage and Family	4	0	4	
A course designed to provide understanding of family relationships; a functional approach to the interpersonal relationships of courtship, marriage, and family life.				
SOC 203—Contemporary Issues	4	0	4	
A culminating interdisciplinary course dealing with basic economic, social, scientific and moral issues confronting human society.				

SOC 208—Black Studies

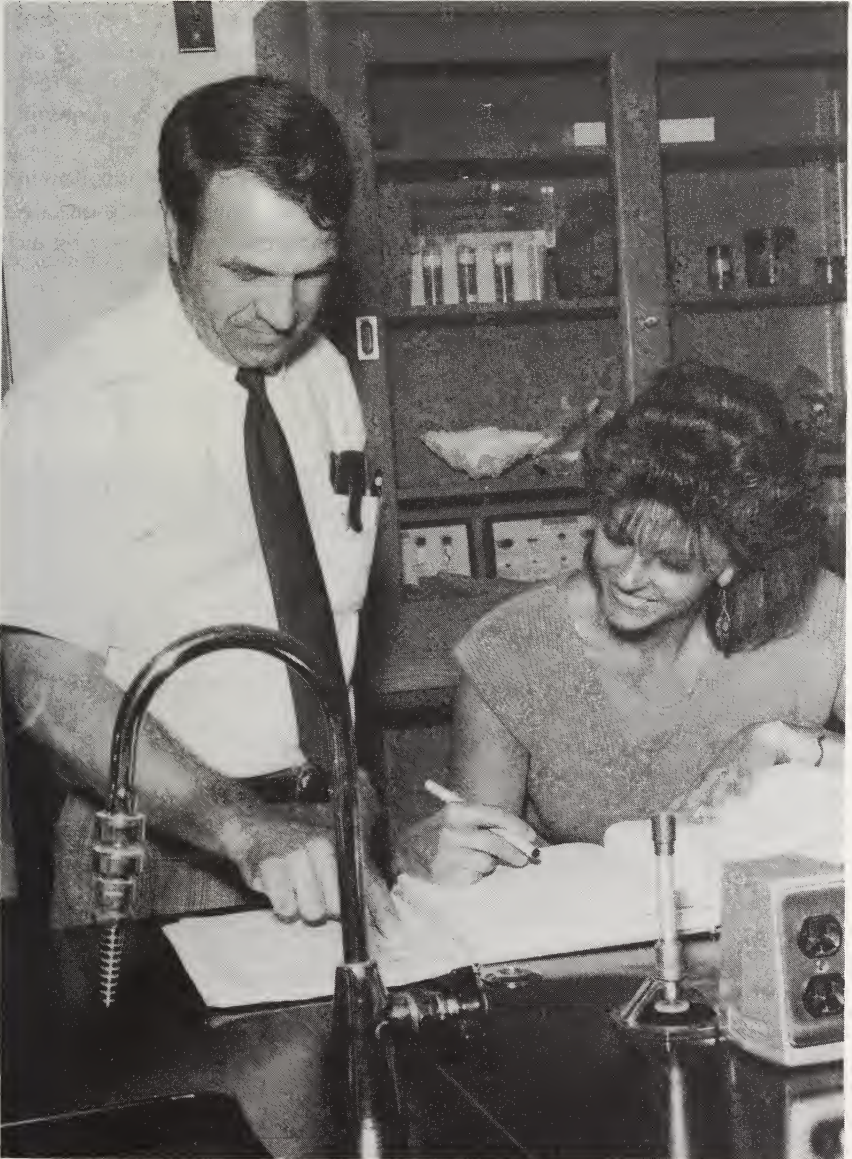
4 0 4

This course is designed to provide opportunities for students to review, discuss and evaluate the experience of Black America through the use of films, filmstrips, records, and tapes as well as selected readings, from autobiographies and biographies of distinguished Black Americans, historical records and documents and outstanding works of literature and art. Resource people in the community are used whenever possible.

TEX 100—Fabric Science

4 0 4

Analyzes textile fibers and the construction of fabrics, and emphasis on the properties that affect their hand, appearance, performance and end use.



ALLIED SERVICES DEPARTMENT

ASSOCIATE IN APPLIED SCIENCE DEGREE

ELECTRONICS ENGINEERING TECHNOLOGY (T-045)

The Electronics curriculum provides a basic background in electronic related theory, with practical applications of electronics for business and industry. Courses are designed to develop competent electronics technicians who may work as assistants to engineers or as liaisons between engineers and skilled craft workers.

The electronics technician will start in one or more of the following areas: research, design, development, production, maintenance or sales. The graduate may begin as an electronics technician, an engineering aid, laboratory technician, supervisor or equipment specialist.

COURSE AND HOUR REQUIREMENTS

			Hours		
			Class	Lab	Credit
Fall Quarter					
MAT	101C	Principles of Mathematics	4	0	4
DFT	113C	Drafting for Electronics	3	2	4
ENG	101	Grammar and Composition I	4	0	4
ELN	100C	Introduction to Electronics	4	0	4
			<hr/>	<hr/>	<hr/>
			15	2	16
Winter Quarter					
MAT	102C	Algebra I	4	0	4
ELN	218	Logic Fundamentals	3	2	4
ENG	102	Grammar and Composition II	4	0	4
ELC	112	Electronic Fundamentals I	3	2	4
			<hr/>	<hr/>	<hr/>
			14	4	16
Spring Quarter					
MAT	131C	Algebra II	4	0	4
EDP	116	Business Basic Language I	3	2	4
ELC	113	Electronic Fundamentals II	3	2	4
ELN	219	Pulse and Logic Circuits	3	2	4
			<hr/>	<hr/>	<hr/>
			13	6	16
Summer Quarter					
MAT	132C	Trigonometry	4	0	4
ELC	114	Active Devices	3	2	4
ELN	123	Introduction to Microprocessors	3	2	4
PSY	101	Introduction to Psychology	4	0	4
			<hr/>	<hr/>	<hr/>
			14	4	16

Fall Quarter

ELN	242	Electronic Systems II	3	2	4
ELN	121	Electronic Circuits I	3	2	4
PHY	201C	Physics I	3	2	4
SOC	101	Introduction to Sociology	4	0	4
			<u>13</u>	<u>6</u>	<u>16</u>

Winter Quarter

ART	101	Art Appreciation	4	0	4
ELN	122	Electronic Circuits II	3	2	4
PHY	202C	Physics II	3	2	4
ELN	243	Electronics Systems III	3	2	4
			<u>13</u>	<u>6</u>	<u>16</u>

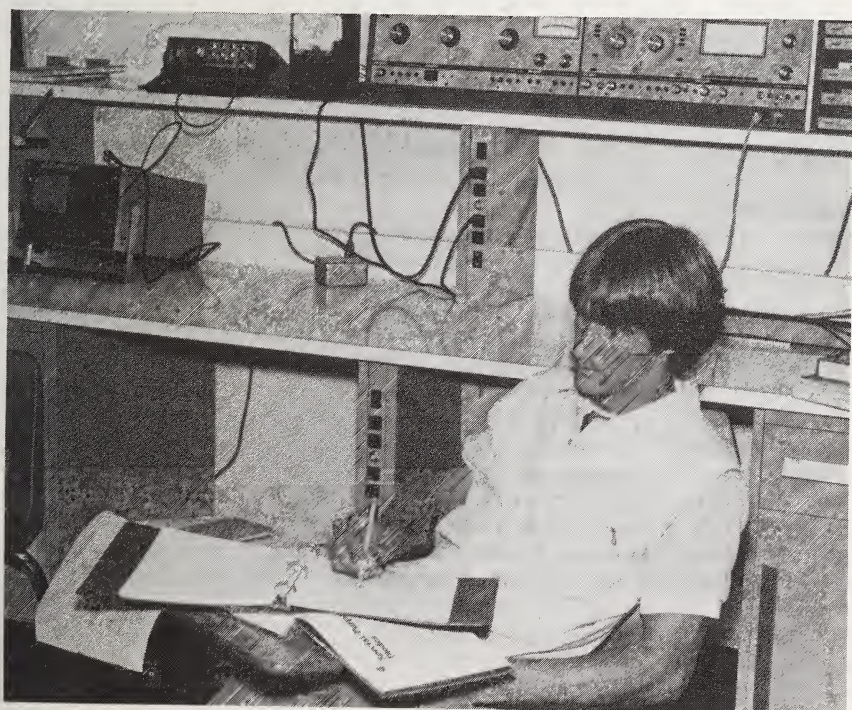
Spring Quarter

ELC	115	Rotary Machines and Controls	3	2	4
PHY	203	Physics III	3	2	4
ELN	208	Industrial Electronics	3	2	4
ELN	241	Electronic Systems I	3	2	4
			<u>12</u>	<u>8</u>	<u>16</u>

Summer Quarter

ELN	246	Electronic Systems Project	4	0	4
ELN	235	Industrial Instrumentation	3	2	4
		*Elective	4	0	4
			<u>11</u>	<u>2</u>	<u>12</u>

Total Hours Required for Graduation = 124



VOCATIONAL DIPLOMAS

AIR CONDITIONING, HEATING REFRIGERATION (V-024)

In recent years the use of air conditioning and refrigeration equipment has increased tremendously. Practically all new building construction for business and commercial use have "all year" comfort systems. Many homes now have air conditioning and the trend is toward greater use of refrigeration or cooling or heating. The food industry has required greater use of refrigeration systems in freezing, storing and display of products. With this great upswing in the use of air conditioning and refrigeration equipment, a greater demand is made on trained personnel to install, operate, maintain and service this equipment.

This curriculum is designed to give the students practical knowledge that will enable them to become capable equipment servicers in the industry. The principal objective has been to outline the required technical and related instruction to enable them to understand the basic principles involved in the construction, operation and maintenance of equipment. Job opportunities exist with companies that specialize in air conditioning, automatic heating sheet metal and commercial refrigeration installation and service. The servicer is employable in areas of sales, maintenance, installation and in the growing fields of truck and trailer refrigeration.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
AHR	1121	Principles of Refrigeration	2	6	4
DFT	110C	Introduction to Drafting Basic	4	0	4
ELC	1102	Basic Electricity for Air Conditioning, Heating and Refrigeration	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
WLD	1101	Basic Gas Welding	1	3	2
			<u>13</u>	<u>15</u>	<u>18</u>
Winter Quarter					
AHR	1115	Fundamentals of Heating	2	6	4
PHY	1101	Applied Physics I	4	0	4
AHR	1123	Principles of Air Conditioning	2	6	4
DFT	1116	Blueprint Reading: Air Conditioning	4	0	4
ISC	1101C	General Industrial Survey	4	0	4
			<u>16</u>	<u>12</u>	<u>20</u>

Spring Quarter

AHR	1128	Automatic Controls	2	6	4
ENG	1102	Communication Skills	4	0	4
AHR	1126	All Year Comfort	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>12</u>	<u>12</u>	<u>16</u>

Summer Quarter

AHR	1122	Servicing Refrigeration Equipment	2	6	4
BUS	287C	Small Business Management	4	0	4
AHR	1124	Servicing Air Conditioning Equipment	2	6	4
AHR	1130C	Year Around Duct System Design	4	0	4
			<u>12</u>	<u>12</u>	<u>16</u>

Total hours required for graduation = 70

NIGHT SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
AHR	1121	Principles of Refrigeration	2	6	4
DFT	110C	Introduction to Drafting	4	0	4
MAT	110C	Basic Arithmetic Skills	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>

Winter Quarter

ELC	1102	Basic Electricity for Air Conditioning, Heating and Refrigeration	2	6	4
ISC	1101C	General Industrial Survey	4	0	4
WLD	1101	Basic Gas Welding	1	3	2
			<u>7</u>	<u>9</u>	<u>10</u>

Spring Quarter

AHR	1115	Fundamentals of Heating	2	6	4
DFT	1116	Blueprint Reading: Air Conditioning	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Summer Quarter

AHR	1123	Principles of Air Conditioning	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Fall Quarter

AHR	1128	Automatic Controls	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

AHR	1126	All Year Comfort Systems	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Spring Quarter

AHR	1122	Servicing Refrigeration Equipment	2	6	4
BUS	287C	Small Business Management	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Summer Quarter

AHR	1124	Servicing Air Conditioning Equipment	2	6	4
AHR	1130C	Year Around Duct System Design	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Total hours required for graduation = 70



AUTO BODY REPAIR (V-001)

The field of automotive body repair and painting requires a large number of well-trained people to meet the growing demand for the many skills needed in this area of employment. People with a background of knowledge and skill in this field have excellent opportunities for jobs with good salaries. Many of these craftsmen, after gaining additional experience, go on to open their own businesses or become body shop foreman, supervisors or managers.

The curriculum devotes much of the student's time in the shop to the learning of the necessary skills and practicing of these skills on car bodies and components. Every attempt is made to make these practical experiences as similar to the actual on-the-job work as possible. The shop and equipment are well-suited to prepare one for entry into an occupation offering many job opportunities. A graduate from this curriculum will receive a diploma from the college.

COURSE AND HOUR REQUIREMENTS

DAY SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
AUT	1111	Auto Body Repair I	2	6	4
AUT	1311C	Auto Body Repair II	3	9	4
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
			13	15	18
Winter Quarter					
AUT	1112	Auto Body Repair III	2	6	4
AUT	1312C	Auto Body Repair IV	3	9	6
PHY	1101	Applied Physics I	4	0	4
		Elective	4	0	4
			13	15	18
Spring Quarter					
AUT	1113	Metal Finishing and Painting I	2	6	4
AUT	1313C	Metal Finishing and Painting II	3	9	6
ENG	1102	Communication Skills	4	0	4
ISC	1101C	General Industrial Survey	4	0	4
			13	15	18
Summer Quarter					
AUT	1114	Body Shop Applications I	2	6	4
AUT	1314C	Body Shop Applications II	3	9	6
PSY	1101	Human Relations	4	0	4
BUS	287C	Small Business Management	4	0	4
			13	15	18

Total hours required for graduation = 72

NIGHT SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
AUT	1111	Auto Body Repair I	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Winter Quarter					
AUT	1311C	Auto Body Repair II	3	9	6
DFT	110C	Introduction to Drafting	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Spring Quarter					
AUT	1112	Auto Body Repair III	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Summer Quarter					
AUT	1312C	Auto Body Repair IV	3	9	6
		Elective	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>
Fall Quarter					
AUT	1113	Metal Finishing and Painting I	2	6	4
ISC	1101C	General Industrial Survey	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Winter Quarter					
AUT	1313C	Metal Finishing and Painting II	3	9	6
ENG	1102	Communication Skills	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>
Spring Quarter					
AUT	1114	Body Shop Applications I	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Summer Quarter					
AUT	1314C	Body Shop Applications II	3	9	6
BUS	287C	Small Business Management	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Total hours required for graduation = 72

Electives can be chosen from other curriculum course offerings in the catalog (subject to the Department Head's approval).

AUTOMOTIVE MECHANICS (V-003)

This is a one-year program providing a thorough training in the theoretical as well as manual skills in servicing, testing and diagnosing. All phases of the electrical system, the power plant, the power train, and the hydraulic braking system will be studied.

The courses are arranged in a sequence that gives the student the required technological and special courses as they are needed to coordinate laboratory experiences.

Emphasis is placed on the mechanical parts and operation of the various automobile units. Troubleshooting and servicing of the live project are also stressed.

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

COURSE AND HOUR REQUIREMENTS

DAY SEQUENCE

Fall Quarter	Title	Class	Hours Shop	Credit
PME 1101	Internal Combustion Engines I	5	3	6
MEC 1199C	Automotive Machine Shop	2	6	4
MAT 100C	Basic Arithmetic Skills	4	0	4
DFT 110C	Introduction to Drafting	4	0	4
WLD 1101	Basic Gas Welding	1	3	2
		<u>16</u>	<u>12</u>	<u>20</u>
Winter Quarter				
PME 1301C	Internal Combustion Engines II	2	6	4
PME 1103C	Automotive Analyzing equipment	5	3	6
PHY 1101	Applied Physics I	4	0	4
ISC 1101C	General Industrial Survey	4	0	4
		<u>15</u>	<u>9</u>	<u>18</u>
Spring Quarter				
AUT 1121	Brakes	2	6	4
AHR 1101	Auto Air Conditioning	2	6	4
ENG 1102	Communication Skills	4	0	4
BUS 287C	Small Business Management	4	0	4
	Elective	4	0	4
		<u>16</u>	<u>12</u>	<u>20</u>

Summer Quarter

PME	1302C	Fuel Systems	5	3	6
PME	1102	Engine Electrical Systems	5	3	6
PME	1221	Front Alignment	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>16</u>	<u>12</u>	<u>20</u>

Total hours required for graduation = 78

NIGHT SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
PME	1101	Internal Combustion Engines I	5	3	6
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
			<u>13</u>	<u>3</u>	<u>14</u>

Winter Quarter

MEC	1199C	Automotive Machine Shop	2	6	4
WLD	1101	Basic Gas Welding	1	3	2
			<u>3</u>	<u>9</u>	<u>6</u>

Spring Quarter

PME	1301C	Internal Combustion Engines II	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Summer Quarter

PME	1103	Automotive Analyzing Equipment Elective	5	3	6
			4	0	4
			<u>9</u>	<u>3</u>	<u>10</u>

Fall Quarter

AUT	1123	Brakes	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

AHR	1101	Auto Air Conditioning	2	6	4
ISC	1101C	General Industrial Survey	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Spring Quarter

PME	1302C	Fuel Systems	5	3	6
PSY	1101	Human Relations	4	0	4
BUS	287C	Small Business Management	4	0	4
			<u>13</u>	<u>3</u>	<u>14</u>

Summer Quarter

PME	1102	Engine Electrical Systems	5	3	6
PME	1221	Front Alignment	2	6	4
			<u>7</u>	<u>9</u>	<u>10</u>

Total hours required for graduation = 78

Electives can be chosen from other curriculum course offerings in the catalog (subject to Department Head's approval).

DIESEL VEHICLE (TRUCK) MAINTENANCE (V-013)

The Diesel Vehicle (Truck) Maintenance program is designed to prepare students to enter the trucking industry as truck mechanics and other industries as Diesel engine mechanics. This program offers an indepth study of four major areas related to the trucking industry. The student successfully completing the program can enter the diesel mechanics field at the apprentice level with the necessary competencies to advance and grow in this career.

COURSE AND HOUR REQUIREMENTS

DAY SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
DSL	1101C	Diesel Engines I	2	6	4
DSL	1102C	Diesel Engines II	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
WLD	1101	Basic Gas Welding	1	3	2
			<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
			13	15	18
Winter Quarter		Title	Class	Hours Shop	Credit
DSL	1103C	Diesel Electrical, Fuel and Air Conditioning Systems I	2	6	4
DSL	1104C	Diesel Electric, Fuel and Air Conditioning Systems II	2	6	4
PHY	1101	Applied Physics I	4	0	4
PME	1227C	Power Accessories Blueprint Reading: Mechanical	4	0	4
			<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
			13	15	18
Spring Quarter		Title	Class	Hours Shop	Credit
DSL	1105C	Diesel Truck Chassis, Suspension and Brakes I	2	6	4
DSL	1106C	Diesel Truck Chassis, Suspension and Brakes II	3	9	6
ENG	1102	Communication Skills	4	0	4
ISC	1101C	General Industrial Survey	4	0	4
			<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
			13	15	18
Summer Quarter		Title	Class	Hours Shop	Credit
DSL	1107C	Power Trains I	2	6	4
DSL	1108C	Power Trains II	3	9	6
PSY	1101	Human Relations	4	0	4
BUS	287C	Small Business Management	4	0	4
			<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
			13	15	18

Total hours required for graduation = 72

NIGHT SEQUENCE

			Class	Hours Shop	Credit
Fall Quarter					
DSL	1101C	Diesel Engines I	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	100C	Introduction to Drafting	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>
Winter Quarter					
DSL	1102C	Diesel Engines II	2	6	4
DSL	1002C	Basic Gas Welding	1	3	2
			<u>3</u>	<u>9</u>	<u>6</u>
Spring Quarter					
DSL	1103C	Diesel Electrical, Fuel and Air Conditioning Systems I	2	6	4
PME	1227C	Power Accessories	1	3	2
			<u>3</u>	<u>9</u>	<u>6</u>
Summer Quarter					
DSL	1104C	Diesel Electrical, Fuel and Air Conditioning Systems II	2	6	4
PHY	1101	Applied Physics I	4	0	4
DFT	1104	Blueprint Reading: Mechanical	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>
Fall Quarter					
DSL	1105C	Diesel Truck Chassis, Suspension and Brakes I	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Winter Quarter					
DSL	1106C	Diesel Truck Chassis, Suspension and Brakes II	3	9	6
ISC	1101C	General Industrial Survey	4	0	4
			<u>7</u>	<u>9</u>	<u>4</u>
Spring Quarter					
DSL	1107C	Power Trains I	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Summer Quarter					
DSL	1108C	Power Trains II	3	9	6
BUS	287C	Small Business Management	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Total hours required for graduation = 72

ELECTRICAL INSTALLATION AND MAINTENANCE (V-018)

The rapid expansion of the national economy and the increasing development of new electrical products is providing need for qualified people to install and maintain electrical equipment. By mid-1960 more than 350,00 were employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional tradesmen are required each year to replace those leaving the industry.

This curriculum will provide 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 which is designed to give the student practical knowledge and application experience in the fundamentals taught in class.

The graduate of the electrical trade program will be qualified to enter an electrical trade in an entry level position, to assist in the planning, layout, installation, check out and maintenance of systems in residential, commercial, or industrial plants. An understanding of the fundamentals of the National Electrical Code regulations as related to wiring installation, electrical circuits, and the measurements of voltage, current, power and power factor of single and polyphase alternating circuits will be stressed. The student 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 through up-grading courses offered in the college.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
ELC	1111C	Basic Electrical Circuits, Machines and Transformers I	2	6	4
ELC	1311C	Basic Electrical Circuits, Machines and Transformers II	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
DFT	1113	Blueprint Reading: Electrical	4	0	4
			<hr/> 16	<hr/> 12	<hr/> 20
Winter Quarter					
ELC	1113	AC/DC Machines and Controls I	2	6	4
ELC	1313C	AC/DC Machines and Controls II	2	6	4
PHY	1101	Applied Physics I	4	0	4
MAT	1110C	Electrical Mathematics	4	0	4
ISC	1101C	General Industrial Survey	4	0	4
			<hr/> 16	<hr/> 12	<hr/> 20

Spring Quarter

ELC	1124	Residential Wiring I	2	6	4
ELC	1324C	Residential Wiring II	2	6	4
ENG	1102	Communication Skills	4	0	4
ELN	1103C	Solid State Devices	4	0	4
			<u>12</u>	<u>12</u>	<u>16</u>

Summer Quarter

ELC	1125	Commercial and Industrial Wiring I	2	6	4
ELC	1325C	Commercial and Industrial Wiring II	2	6	4
PSY	1101	Human Relations	4	0	4
BUS	287C	Small Business Management	4	0	4
ELC	1114	National Electrical Code	4	0	4
			<u>16</u>	<u>12</u>	<u>20</u>

Total hours required graduation = 76

NIGHT SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
ELC	1111C	Basic Electrical Circuits, Machines and Transformers I	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>

Winter Quarter

ELC	1311C	Basic Electrical Circuits, Machines and Transformers II	2	6	4
ISC	1101C	General Industrial Survey	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Spring Quarter

ELC	1113	AC/DC Machines and Controls I	2	6	4
DFT	1113	Blueprint Reading: Electrical	4	0	4
MAT	1110C	Electrical Mathematics	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>

Summer Quarter

ELC	1313C	AC/DC Machines and Controls I	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Fall Quarter

ELC	1124	Residential Wiring I	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

ELC	1324C	Residential Wiring II	2	6	4
ELC	1103C	Solid State Devices	<u>4</u>	<u>0</u>	<u>4</u>
			6	6	8

Spring Quarter

ELC	1125	Commercial and Industrial Wiring I	2	6	4
PSY	1101	Human Relations	<u>4</u>	<u>0</u>	<u>4</u>
BUS	287C	Small Business Management	<u>4</u>	<u>0</u>	<u>4</u>
			10	6	12

Summer Quarter

ELC	1325C	Commercial and Industrial Wiring II	2	6	4
ELC	1114	National Electrical Code	<u>4</u>	<u>0</u>	<u>4</u>
			6	6	8

Total hours required for graduation = 76



ELECTRONIC SERVICING (V-042)

Within recent years improved electronic techniques have provided expanded entertainment and educational facilities in the form of monochrome and color television, frequency modulated radio, high fidelity amplifiers and stereophonic sound equipment. These developments require expanded knowledge and skill of the individuals who would qualify as competent and up-to-date servicemen.

This curriculum provides a training program which will provide the basic knowledge and skills involved in the installation, maintenance and servicing of radio, television and sound amplifier systems. A large portion of time is spent in the laboratory verifying electronic principles and developing servicing techniques.

An electronics serviceman may be required to install, maintain and service amplitude modulated and frequency modulated home and auto radio, transistorized radios, monochrome and color television sets, intercommunication, public address and paging systems, high fidelity and stereophonic amplifiers, record players and tape players.

This work will require meeting the public both in the repair shop and on service calls. A serviceman who establishes a business will also need to know how to maintain business records and inventory.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
ELC	1112	Direct and Alternating Current I	2	6	4
ELC	1312C	Direct and Alternating Current II	3	9	6
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
			13	15	18

Winter Quarter		Title	Class	Hours Shop	Credit
ELN	1123C	Amplifier Systems	2	6	4
ELN	1125	Radio Receiver Servicing	3	9	6
PHY	1101	Applied Physics I	4	0	4
MAT	1110C	Electrical Mathematics	4	0	4
			13	15	18

Spring Quarter		Title	Class	Hours Shop	Credit
ELN	1126C	Transistor Theory and Circuits	2	6	4
ELN	1127C	TV Receiver Circuits and Servicing	3	9	6
ENG	1102	Communication Skills	4	0	4
ELN	1101C	Troubleshooting Concepts	4	0	4
			13	15	18

Summer Quarter

ELN	1128C	Color TV Receiver Servicing	3	9	6
ELN	1130C	Two-Way Mobile Maintenance	2	6	4
PSY	1101	Human Relations	4	0	4
BUS	287C	Small Business Management	4	0	4
			<u>13</u>	<u>15</u>	<u>18</u>

Total hours required for graduation = 72

NIGHT SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
ELC	1112	Direct and Alternating Current I	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

ELC	1312C	Direct and Alternating Current II	3	9	6
DFT	110C	Introduction to Drafting	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Spring Quarter

ELN	1101C	Troubleshooting Concepts	4	0	4
ELN	1123C	Amplifier Systems	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>

Summer Quarter

ELN	1125	Radio Receiver Servicing	3	9	6
MAT	1110C	Electrication Mathematics	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Fall Quarter

ELN	1126C	Transistor Theory and Circuits	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

ELN	1127C	TV Receiver Circuits and Servicing	3	9	6
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Spring Quarter

ELN	1128C	Color TV Receiver Servicing	3	9	6
PSY	1101	Human Relations	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Summer Quarter

ELN	1130C	Two-Way Mobile Maintenance	2	6	4
BUS	287C	Small Business Management	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Total hours required for graduation = 72

FOOD SERVICE SPECIALIST (V-053)

This curriculum is designed for training students in the art and science of quantity food preparation with particular emphasis on institutional food service. Using a career ladder concept, it is an open-ended curriculum which will allow the student more flexibility in his/her training. In addition to development of knowledge and skills in the art and science of food preparation, the student must develop an understanding and/or appreciation of food and equipment purchasing, financial control, recordkeeping, basic nutrition and menu planning, and supervision.

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

COURSE AND HOUR REQUIREMENTS

Fall Quarter		Title	Class	Hours Shop	Credit
FSO	1102	Food Preparation and Baking I	2	6	4
MAT	1101C	Vocational Basic Arithmetic	4	0	4
FSO	1103	Sanitation-Safety and Equipment	4	0	4
FSO	1302C	Food Preparation and Baking II	2	6	4
			12	12	16
Winter Quarter					
FSO	1112	Food Preparation and Baking III	2	6	4
FSO	1105	Purchasing	2	0	2
FSO	1109	Production Management	2	0	2
MAT	1102C	Food Service Math	4	0	4
FSO	1312C	Food Preparation and Baking IV	2	6	4
			12	12	16
Spring Quarter					
FSO	1122	Food Preparation V	2	6	4
FSO	1106	Menu Planning	3	0	3
ENG	1102	Communication Skills	4	0	4
NUT	101C	Nutrition and Diet Therapy	3	0	3
FSO	1322C	Food Preparation VI	2	6	4
			14	12	18
Summer Quarter					
FSO	1116	Baking V	2	6	4
FSO	1108	Personnel Management-Food Service	2	0	2
ENG	1101	Reading Improvement	4	0	4
PSY	1101	Human Relations	4	0	4
FSO	1316C	Baking VI	2	6	4
			14	12	18

Total hours required for graduation = 68

INDUSTRIAL MAINTENANCE (V-028)

The Industrial Maintenance curriculum is designed to be taught at a vocational level with emphasis on the hands-on operation. It is structured to provide special job skills at several points within the one-year program.

Possible job opportunities upon completion of each quarter are as follows: First quarter - production machine operator, tool room attendant and machinist helper; second quarter - maintenance mechanic helper, welding machine operator and electrical apprentice; third quarter - equipment installation mechanic helper, motor and control mechanic helper and industrial electronic service apprentice; fourth quarter - maintenance mechanic, maintenance machine repairer, factory/mill maintenance repairer helper and equipment installation mechanic,

Content has been arranged to provide experiences appropriate for entry to these jobs. Courses in math, blueprint reading, communication and other related subjects are recommended in specific quarters of the curriculum to support the development of skills at the performance levels identified.

COURSE AND HOUR REQUIREMENTS DAY SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
MEC	1101	Machine Shop Theory and Practice I	2	6	4
MEC	1301C	Machine Shop Theory and Practices II	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
			12	12	16
Winter Quarter					
ELC	1113	AC/DC Machines and Controls I	2	6	4
ELC	1313C	AC/DC Machines and Controls II	2	6	4
PHY	1101	Applied Physics I	4	0	4
DFT	1104	Blueprint Reading: Mechanical	4	0	4
ENV	1105	Hydraulics-Fundamentals	4	0	4
			16	12	20
Spring Quarter					
AHR	1121	Principles of Refrigeration	2	6	4
AHR	1115	Fundamentals of Heating	2	6	4
ENG	1102	Communication Skills	4	0	4
ISC	1101C	General Industrial Survey	4	0	4
		Elective	4	0	4
			16	12	20
Summer Quarter					
WLD	1122	Commercial and Industrial Practices I	2	6	4
WLD	1322C	Commercial and Industrial Practices II	3	9	6
PSY	1101	Human Relations	4	0	4
BUS	287C	Small Business Management	4	0	4
			13	15	18

Total hours required for graduation = 74

NIGHT SEQUENCE

Fall Quarter			Class	Hours Shop	Credit
MEC	1101	Machine Shop Theory and Practices I	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Winter Quarter					
MEC	1301C	Machine Shop Theory and Practices II	2	6	4
DFT	110C	Introduction to Drafting	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Spring Quarter					
ELC	1113	AC/DC Machines and Controls I	2	6	4
PHY	1101	Applied Physics I	4	0	4
ENV	1105	Hydraulics-Fundamentals	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>
Summer Quarter					
ELC	1313C	AC/DC Machines and Controls II	2	6	4
DFT	1104	Blueprint Reading: Mechanical	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>
Fall Quarter					
AHR	1121	Principles of Refrigeration	2	6	4
ISC	1101C	General Industrial Survey Elective	4	0	4
			<u>4</u>	<u>0</u>	<u>4</u>
			10	6	12
Winter Quarter					
AHR	1115	Fundamentals of Heating	2	6	4
ENG	1102	Communication Skills	4	0	4
			<u>4</u>	<u>0</u>	<u>4</u>
			6	6	8
Spring Quarter					
WLD	1122	Commercial and Industrial Practices I	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>4</u>	<u>0</u>	<u>4</u>
			6	6	8
Summer Quarter					
WLD	1322C	Commercial and Industrial Practices II	3	9	6
BUS	287C	Small Business Management	4	0	4
			<u>4</u>	<u>0</u>	<u>4</u>
			7	9	10

Total hours required from graduation = 74

Electives can be chosen from other curriculum course offerings in the catalog (subject to Department Head's approval).

LIGHT CONSTRUCTION (V-029)

This curriculum is designed to prepare the individual to enter the construction industry with a background in both shop skills and related techniques. A knowledge of mathematics, blueprint reading, methods of construction and the utility of various building materials is essential.

Graduates may work on new construction as well as the maintenance and repair of residential and/or commercial structures. They will be able to figure lumber, speak the language of the contractor, interpret the laymens request, estimate materials and cost, and prepare detailed drawings for cabinet work and alterations.

COURSE AND HOUR REQUIREMENTS

Fall Quarter		Title	Class	Hours Shop	Credit
CAR	1101	Carpentry I	2	6	4
CAR	1301C	Carpentry II	2	6	4
DFT	1110	Blueprint Reading: Building Trades	4	0	4
MAT	1101C	Vocational Basic Arithmetic	4	0	4
			<u>12</u>	<u>12</u>	<u>16</u>
Winter Quarter					
CAR	1102	Carpentry III	2	6	4
CAR	1302C	Carpentry IV	2	6	4
MAT	1112C	Construction Estimating	4	0	4
CAR	1106	Introduction to Woodworking	4	0	4
			<u>12</u>	<u>12</u>	<u>16</u>
Spring Quarter					
CAR	1103	Carpentry V	2	6	4
CAR	1303C	Carpentry VI	2	6	4
ENG	1102	Communication Skills	4	0	4
MEC	1135	Mechanical Installation	4	0	4
BUS	287C	Small Business Management	4	0	4
			<u>16</u>	<u>12</u>	<u>20</u>
Summer Quarter					
CAR	1104	Carpentry VII	2	6	4
CAR	1304C	Carpentry VIII	2	6	4
CAR	1305C	Building Code	4	0	4
PSY	1101	Human Relations	4	0	4
CAR	1106	Construction Seminar	4	0	4
			<u>16</u>	<u>12</u>	<u>20</u>

Total hours required from graduation = 72

MACHINIST (V-032)

Surveys recently completed in North Carolina show that many of the existing industries lack time and facilities to train enough machinists to meet present and planned needs. Expanding industries already located in our state and new industries under development invariably express the need for skilled craftsmen who have the background knowledge and potential to advance into higher skilled positions.

This curriculum is designed to prepare the individual, through theory and practice of various machining operations and related courses, to obtain paid employment in the metal machining occupations.

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. The training and experience enables one 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. A machinist is able to select the proper tools and material required for each job and to plan the cutting and finishing operations in their proper order so that the finished work can be according to blueprint or written specifications. Standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining are learned. The machinist often uses precision measuring instruments such as micrometers and gages to measure the accuracy of work to thousandths of an inch.

This skilled worker must be able to set up and operate most types of machine tools. The machinist also must know the composition of metals in order to heat and quench cutting tools and parts to improve machinability. With this wide knowledge a block of metal can be turned into an intricate, precise part.

The machinist may start in one or more of the following areas: machine operator, machine setup operator, machinist, tool/die/mold maker apprentice, maintenance helper, machine tool technician, machine and tool sales, and quality control technician. Advanced jobs in the field would include: production foreman, tool/die/mold maker, general machinist, maintenance machinist, tape control programmer or self-employment in one of the above fields.

COURSE AND HOUR REQUIREMENTS**DAY SEQUENCE**

Fall Quarter		Title	Class	Hours Shop	Credit
MEC	1101	Machine Shop Theory and Practices I	2	6	4
MEC	1301C	Machine Shop Theory and Practices II	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
WLD	1330C	Machine Shop Welding	1	3	2
DFT	1305C	Blueprint Reading for Machinists	4	0	4
			<u>13</u>	<u>15</u>	<u>18</u>

Winter Quarter

MEC	1102	Machine Shop Theory and Practices III	2	6	4
MEC	1302C	Machine Shop Theory and Practices IV	2	6	4
MAT	1103C	Applied Math: Geometry	4	0	4
PHY	1101	Applied Physics I	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
			<u>16</u>	<u>12</u>	<u>20</u>

Spring Quarter

MEC	1103	Machine Shop Theory and Practices V	2	6	4
MEC	1303C	Machine Shop Theory and Practices VI	2	6	4
MAT	1104C	Applied Math: Trigonometry	4	0	4
ENG	1102	Communication Skills	4	0	4
MEC	1105C	Introduction to CNC Lathe	1	3	2
			<u>13</u>	<u>15</u>	<u>18</u>

Summer Quarter

MEC	1104	Machine Shop Theory and Practices VII	2	6	4
MEC	1304C	Machine Shop Theory and Practices VIII	2	6	4
PSY	1101	Human Relations	4	0	4
MEC	1106C	Programming for CNC Lathe	1	3	2
BUS	287C	Small Business Management	4	0	4
			<u>13</u>	<u>15</u>	<u>18</u>

Total hours required for graduation = 74

NIGHT SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
MEC	1101	Machine Shop Theory and Practices I	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	1305C	Blueprint Reading for Machinists	4	0	4
			<u>10</u>	<u>6</u>	<u>12</u>

Winter Quarter

MEC	1301C	Machine Shop Theory and Practices II	2	6	4
DFT	110C	Introduction to Drafting	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Spring Quarter

MEC	1102	Machine Shop Theory and Practices III	2	6	4
MAT	1103C	Applied Math: Geometry	4	0	4
WLD	1330C	Machine Shop Welding	1	3	2
			<u>7</u>	<u>9</u>	<u>10</u>

Summer Quarter

MEC	1304C	Machine Shop Theory and Practices IV	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Fall Quarter

MEC	1103	Machine Shop Theory and Practices V	2	6	4
MAT	1104C	Applied Math: Trigonometry	4	0	4
MEC	1105C	Introduction to CNC Lathe	1	3	2
			<u>7</u>	<u>9</u>	<u>10</u>

Winter Quarter

MEC	13303C	Machine Shop Theory and Practices VI	2	6	4
ENG	2203	Communication Skills	4	0	4
MEC	1106C	Programming the CNC Lathe	1	3	2
			<u>7</u>	<u>9</u>	<u>10</u>

Spring Quarter

MEC	1104	Machine Shop Theory and Practices VII	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Summer Quarter

MEC	1304C	Machine Shop Theory and Practices VIII	2	6	4
BUS	287C	Small Business Management	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Total hours required for graduation = 74

PLUMBING AND PIPEFITTING (V-037)

This curriculum in plumbing and pipefitting is designed to train individuals to enter this occupation with the knowledge and basic skills to perform effectively. Courses in plumbing and pipefitting practices and heating are included to practical experience as well as the theoretical information that one must know to advance and keep up-to-date with the new innovations. Other courses in communication skills, physics, human relations and business operations to assist the individual in occupation growth are offered the student.

COURSE AND HOUR REQUIREMENTS

Fall Quarter		Title	Class	Hours Shop	Credit
PLU	1110	Plumbing Pipework	4	12	8
DFT	1115	Blueprint - Plumbing	4	0	4
MAT	1101C	Vocational Basic Arithmetic	4	0	4
ENG	1102	Communication Skills	4	0	4
			<hr/>	<hr/>	<hr/>
			16	12	20
Winter Quarter					
PLU	1112	Installation of Plumbing Fixtures	2	6	4
PLU	1125	Industrial Piping	3	9	6
PHY	1101	Applied Physics I	4	0	4
PSY	1101	Human Relations	4	0	4
			<hr/>	<hr/>	<hr/>
			13	15	18
Spring Quarter					
PLU	1111	Domestic Water Systems	4	9	7
WLD	1101	Basic Gas Welding	1	3	2
PLU	1120	Low Pressure Steam Systems	2	6	4
			<hr/>	<hr/>	<hr/>
			7	18	13
Summer Quarter					
PLY	1123	Hot Water and Panel Heating	3	6	5
BUS	207C	Small Business Management	4	0	4
PLU	1126	Hydraulic Systems Plumbing	3	3	4
PLU	1128C	Plumbing Code	4	0	4
			<hr/>	<hr/>	<hr/>
			14	9	17

Total hours required for graduation = 68

WELDING (V-050)

The content of this curriculum is designed to give students should understanding of the principles, methods, techniques and skills essential for successful employment in the welding field and metals industry.

The field of welding offers a person prestige, security and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipefitting, 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 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. A great deal of manipulative skill is needed with knowledge of jigs,, welding symbols, mathematics, basic metallurgy and blueprint reading.

COURSE AND HOUR REQUIREMENTS

DAY SEQUENCE

Fall Quarter		Title	Class	Hours Shop	Credit
WLD	1120	Oxyacetylene Welding I	2	6	4
WLD	1320C	Oxyacetylene Welding II	3	9	6
MAT	100C	Basic Arithmetic Skills	4	0	4
DFT	110C	Introduction to Drafting	4	0	4
			13	15	18
Winter Quarter					
WLD	1121	Arc Welding I	2	6	4
WLD	1321C	Arc Welding II	3	9	6
PHY	1101	Applied Physics I	4	0	4
DFT	1104	Blueprint Reading: Mechanical	4	0	4
			13	15	18
Spring Quarter					
WLD	1124	Pipe Welding I	2	6	4
WLD	1324C	Pipe Welding II	3	9	6
ENG	1102	Communication Skills	4	0	4
ISC	1101C	General Industrial Survey	4	0	4
			13	15	18

Summer Quarter

WLD	1122	Commercial and Industrial Practices I	2	6	4
WLD	1322C	Commercial and Industrial Practices II	3	9	6
PSY	1101	Human Relations	4	0	4
BUS	287C	Small Business Management	4	0	4
			<u>13</u>	<u>15</u>	<u>18</u>

Total hours required for graduation = 72

NIGHT SEQUENCE

Fall Quarter	Title	Class	Hours Shop	Credit	
WLD	1120	Oxyacetylene Welding I	2	6	4
MAT	100C	Basic Arithmetic Skills	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

WLD	1320C	Oxyacetylene Welding II	3	9	6
DFT	110C	Introduction to Drafting	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Spring Quarter

WLD	1121	Arc Welding I	2	6	4
PHY	1101	Applied Physics I	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Summer Quarter

WLD	1321C	Arc Welding II	3	9	6
DFT	1104	Blueprint Reading: Mechanical	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Fall Quarter

WLD	1124	Pipe Welding I	2	6	4
ISC	1101C	General Industrial Survey	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Winter Quarter

WLD	1324C	Pipe Welding II	3	9	6
ENG	1102	Communication Skills	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Spring Quarter

WLD	1122	Commercial and Industrial Practices I	2	6	4
PSY	1101	Human Relations	4	0	4
			<u>6</u>	<u>6</u>	<u>8</u>

Summer Quarter

WLD	1322C	Commercial and Industrial Practices II	3	9	6
BUS	287C	Small Business Management	4	0	4
			<u>7</u>	<u>9</u>	<u>10</u>

Total hours required for graduation = 72

NURSING DEPARTMENT

VOCATIONAL DIPLOMA

PRACTICAL NURSE EDUCATION (V-038) (DAY SCHEDULE ONLY)

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand a tremendously increased number of well-trained, capable personnel for health service positions. Cleveland Technical College is affiliated with Cleveland Memorial Hospital to provide clinical resources for the practical nursing program.

Classes will be held at the college while actual experience will be obtained at the hospital. The graduate is eligible to take and must pass the Licensure Examination for Practical Nurses administered by the North Carolina State Board of Nursing to become a Licensed Practical Nurse.

The LPN is qualified and prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices and, in some localities, public health facilities. In all situations, the LPN functions under the supervision of registered nurse and/or license physicians.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understanding of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others and readiness to conform to the requirements of nursing ethics and hospital policies.

		Title	Hours Per Week			Credit
			Class	Lab	Clinic	
First Quarter						
NUR	1101	Fundamentals of Nursing	8	6	0	11
SCI	1101	Body Structure and Function	5	0	0	5
NUT	101C	Nutrition and Diet Therapy	3	0	0	3
PSY	101	Introduction to Psychology	4	0	0	4
ENG	101	Grammar and Composition I	4	0	0	4
			<hr/>	<hr/>	<hr/>	<hr/>
			24	6	0	27
Second Quarter						
NUR	1115C	Medical-Surgical Nursing I	3	2	0	4
NUR	1108	Obstetrical Nursing	5	0	0	5
NUR	1104	Basic Pharmacology	3	0	0	3
NUR	1112	Clinical I	0	0	15	5
			<hr/>	<hr/>	<hr/>	<hr/>
			11	2	15	17

Third Quarter

NUR	1109	Pediatric Nursing	6	0	0	6
NUR	1106	Medical-Surgical Nursing II	6	0	0	6
NUR	1113	Clinical II	0	0	18	6
			<u>12</u>	<u>0</u>	<u>18</u>	<u>12</u>

Fourth Quarter

NUR	1107	Medical-Surgical Nursing III	9	0	0	9
NUR	1110	Vocational Adjustments	1	0	0	1
NUR	1111	Pharmacology II	2	0	0	2
NUR	1114	Clinical III	0	0	18	6
			<u>12</u>	<u>0</u>	<u>18</u>	<u>18</u>

Total credit hours required for graduation = 80



VOCATIONAL COURSE DESCRIPTIONS

AHR 1101—Auto Air Conditioning 2 6 4

General introduction to the principles of refrigeration, study of the assembly of the components and connections necessary in the mechanisms, the methods of operation and control; proper handling of refrigerants in charging the system.

AHR 1115—Fundamentals of Heating 2 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 heat distribution systems.

AHR 1121—Principles of Refrigeration 2 6 4

An introduction to the principles of refrigeration, terminology, the use and care of tools and equipment and the identification and function of the components of a system. Other topics to be included will be the basic laws of refrigeration; characteristics and comparison of the various refrigerants; the use and construction of valves, fittings and basic controls. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants.

AHR 1122—Domestic and Commercial Refrigeration 3 9 6

Domestic refrigeration servicing of conventional, hermetic and absorption systems. Cabinet care, controls and system maintenance in domestic refrigerators, freezers and window air conditioning units is stressed. Commercial refrigeration servicing of display cabinets, walk-in cooler and freezer units and mobile refrigeration systems is studied. The use of manufacturer's catalogs in sizing and matching system components and a study of controls, refrigerants, servicing methods is made. The American Standard Safety Code for Refrigeration is studied and its principles practiced. Prerequisite: AHR 1121.

AHR 1123—Principles of Air Conditioning I 2 6 4

Work includes the selection of various heating, cooling and ventilating systems, investigation and control of factors affecting air cleaning, movement, temperature and humidity. Use is made of psychrometric charts in determining needs to produce optimum temperature and humidity control. Commercial air conditioning equipment is assembled and tested. Practical sizing and balancing of ductwork is performed as needed. Prerequisite: AHR 1122.

AHR 1124—Air Conditioning and Refrigeration Servicing 2 6 4

Emphasis is placed on the installation, maintenance and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air conditioned space. Installation of various ducts and lines needed to connect various components is made. Shop work involves burner operation, controls, testing and adjusting of air conditioning and refrigeration equipment failure. Prerequisite: AHR 1323C.

- AHR 1126—All Year Comfort Systems** 3 9 6
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** 2 6 4
Types of automatic controls and their function in air conditioning systems. Included in the course will be electric and pneumatic controls for domestic and commercial cooling and heating; zone controls, unit heater and ventilator controls, commercial fan systems controls, commercial refrigeration controls and radiant panel controls. Prerequisite: AHR 112.
- AHR 1130C—Year Around Duct System Design** 4 0 4
This course will enable the Air Conditioning, Heating and Refrigeration student to design the necessary ductwork for residential and light commercial structures. Students will be able to also evaluate existing duct systems for adequate performance. This course is based on ACCA Manual D and D1 and D2 worksheets thereby assuring a duct system design that will meet all code jurisdictions.
- AHR 1132C—North Carolina Air Conditioning, Heating and Refrigeration Code, Volume III** 4 0 4
In this course, the student will be made familiar with the requirements facing anyone who plans to obtain an 1, 2, or 3 license. This occupational license is required by law for all who would desire to work as contractors in air conditioning, heating and refrigeration.
- AUT 1111—Auto Body Repair I** 2 6 4
Basic principles of automobile construction, design and manufacturing. A thorough study of angles, crown and forming of steel into the complex contour of the present day vehicles. The student applies the basic principles of straightening, aligning and painting of damaged areas.
- AUT 1112—Auto Body Repair III** 2 6 4
A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns and contours of the metal of the body and fenders. Metal working and painting.
- AUT 1113—Metal Finishing and Painting I** 2 6 4
Development of the skill to shrink stretched metal, soldering and leading and preparation of the metal for painting. Straightening of doors, hoods and deck lids; fitting and aligning. Painting fenders and panels, spot repairs and complete vehicle painting; the use and application of power tools.
- AUT 1114—Body Shop Applications I** 2 6 4
General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage and developing the final settlement with the adjustor.

AUT 1123—Brakes	2	6	4
A complete study of various braking systems employed on automobiles and light trucks.			
AUT 1311C—Auto Body Repair II	3	9	6
A continuation of AUT 1111.			
AUT 1312C—Auto Body Repair IV	3	9	6
A continuation of AUT 1112.			
AUT 1313C—Metal, Finishing and Painting II	3	9	6
A continuation of AUT 1113.			
AUT 1314C—Body Shop Applications II	3	9	6
A continuation of AUT 1114.			
BUS 287C—Small Business Management	4	0	4
"How to" introduction to the practices and problems involved in small business operations. For business people who will one day find themselves financially able to start or buy a business; it provides an overview of the major problems they will face and the pitfalls they must avoid if success is to be assured.			
BUS 1103—Small Business Operations	4	0	4
An introduction to the business world, problems of small business operation, 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.			
CAR 1101—Carpentry I	2	6	4
Carpentry I is a course designed to provide the student with the necessary skills to use power and hand tools safely and according to their recommended use. The student will also be able to correctly identify all power and hand tools relating to the field of carpentry. Lecture and shop will provide experience and knowledge in this course.			
CAR 1102—Carpentry III	2	6	4
Carpentry III is a course designed to enable a student to have competency in building floor systems of various types. The student will be able to correctly estimate and determine floor joist size. The student will learn the limitations of construction grade lumber and how to correctly size lumber for skills, girders, headers and floor joists. Lecture and shop will provide experience and knowledge in this course.			
CAR 1103—Carpentry V	2	6	4
Carpentry V is a course designed to enable a student to have competency in building and framing roof structures. The various types of roofs will be covered, and the student will be able to identify each and have a general idea of how each is constructed. How to cut and figure rafters will be covered. Also, truss application will be covered.			
CAR 1104—Carpentry VII	2	6	4
Carpentry VII is a course designed to give a student competency in finished carpentry in the interior of a structure. This course will cover interior wall finish and how to run moldings of various types. It will also include how to install various types of hardware (hinges, locks, hasps, rollers) and how to install cabinets and mechanical devices. Stairs and stairway construction will be a major part covered in this course.			

- CAR 1106—Construction Seminar** 4 0 4
Design to survey current and new techniques in the construction field. This will be done through class research, demonstration, and lecture. Students will participate in all facets of the instructional process. Subject areas will be: innovations in the construction field, site layout, traditional techniques, materials and methods comparison, and approved areas for research such as solar, energy and geothermal applications.
- CAR 1301C—Carpentry II** 2 6 4
Carpentry II is a course designed to enable a student to properly lay-off and stake-out a house. Practice in site work (using a transit and builder's level) will be an important topic of study. Carpentry II is a course designed to provide the student with the skills necessary to lay block and brick, to align and also to construct simple corners and foundation walls. Lecture and laboratory will be coordinated to provide development in this skilled area.
- CAR 1302C—Carpentry IV** 2 6 4
Carpentry IV is a course designed to enable a student to have competency in constructing walls. Corner construction and partition intersection framing will enable the student to assemble all exterior and partitioned walls. The course will cover how to properly locate and frame all window and door openings. Bracing of walls and preparing walls for rafters will also be covered.
- CAR 1303C—Carpentry VI** 2 6 4
Carpentry VI is a course designed to enable a student to have competency in the exterior finish of a structure. Major things covered in this course will be: how to frame and finish overhang gutter work, door and window frames, wall coverings and trim.
- CAR 1304C—Carpentry VIII** 2 6 4
Carpentry VIII is a course designed to give the student general knowledge and experience in cabinet work.
- CAR 1305C—Building Code** 4 0 4
This Building Code course is designed to give a student specific knowledge in residential building construction. *The North Carolina Uniform Residential Building Code* will be studied. Lecture will give the student knowledge and experience on how to use this book.
- CAR 1306C—Introduction to Woodworking** 4 0 4
A beginning course in hand woodworking tools and use. This course covers major hand working tools, their care, maintenance and use; types of wood and their use as related to industrial, commercial and residential use.
- DFT 110C—Introduction to Drafting** 4 0 4
In this course, the student will learn to organize for presentation on prints mechanical, architectural, and geographic information. This information will be presented through use of orthographics, isometrics, sectional drawings, detail drawings, dimensioning, notes and lettering. The course emphasis will be on the general presentation of this information as applied to different areas of drafting and drawing. The student will develop these skills through actual practice with the most common drawing tools.
- DFT 1104—Blueprint Reading: Mechanical** 4 0 4
Mechanical-Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines; views, dimensioning procedures and notes.

DFT 1110—Blueprint Reading: Building Trades	4	0	4
Building Trades-Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.			
DFT 1113—Blueprint Reading: Electrical	4	0	4
Electrical-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 will be a part of this course.			
DFT 1115—Blueprint Reading: Plumbing Trades	4	0	4
Sketching diagrams and schematics, and interpretation of blueprints applicable to the plumbing trades. Emphasis will be on plumbing plans for domestic and commercial buildings. Piping symbols, schematics, diagrams and notes will be studied in detail. Applicable building and plumbing codes will be used for reference.			
DFT 1116—Blueprint Reading: Air Conditioning	4	0	4
A specialized course in drafting for the heating, air conditioning 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.			
DFT 1305C—Blueprint Reading for Machinists	4	0	4
Advanced blueprint reading as related to actual complete detailed drawings found in machine shops. Discussion as to how pieces will be produced and this relationship to the drawing.			
DSL 1101C—Diesel Engines I	2	6	4
This course will introduce the student to the diesel engine. The theory and principle of engine operation will be covered with emphasis on application through disassembly and rebuild.			
DSL 1102C—Diesel Engines II	3	9	6
A continuation of DSL 1101C.			
DSL 1103C—Diesel Electrical, Fuel and Air Conditioning Systems I	2	6	4
This course is designed to study the electrical system as it relates to the engine, air conditioning and auxiliary systems of the tractor. Principles of air conditioning, fuel systems and electrical systems will be covered.			
DSL 1104C—Diesel Electrical, Fuel and Air Conditioning Systems II	3	9	6
A continuation of DSL 1103C.			
DSL 1105C—Diesel Truck Chassis, Suspension and Brakes I	2	6	4
This course will build competency in braking, hydraulic and air systems on the tractor. It also covers the chassis suspension and common job task related to these areas.			

DSL 1106C—Diesel Truck Chassis, Suspension and Brakes II	3	9	6
A continuation of DSL 1105C.			
DSL 1107C—Power Trains I (Transmissions and Rear Centers)	2	6	4
This course is designed to build competency in heavy truck transmissions and differentials in the areas of troubleshooting, servicing, repair and rebuild.			
DSL 1108C—Power Trains II (Transmissions and Rear Centers)	3	9	6
A continuation of DSL 1107C.			
ELC 1102—Basic Electricity for Air Conditioning, Heating, and Refrigeration	4	0	4
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 trouble-shooting of the various electrical devices used in air conditioning, heating and refrigeration equipment. Included will be transformers, various types of motors and starting devices, switches, electrical heating devices and wiring.			
ELC 1111C—Basic Electrical Circuits, Machines, and Transformers I	2	6	4
A student will gain competency in construction and using series and parallel circuits. Single and polyphase rotating machinery. Transformers and transformer connections will also be studied. A large portion of lab time will be used to build competency in understanding and practical application of these circuits and machines.			
ELC 1112—Direct and Alternating Current I	2	6	4
A study of the structure of matter and the electron theory, the relationship between voltage, current and resistance in series, parallel and series-parallel circuits. Analysis of direct current potentials. Fundamental concepts of alternating current flow; a study of reactance, impedance, phase angle, power and resonance and alternating circuit analysis.			
ELC 1113—Alternating Current and Direct Current Machines and Control I	2	6	4
This course is designed to build competency in the area of magnetic motor controls. Basic start-stop-jog circuits and their many variations as well as limiting devices in these circuits will be studied in detail. Large portions of lab time will be spent in developing competency in the use of the circuits as they apply to industry.			
ELC 1114—National Electrical Code	4	0	4
A study of the National Electrical Code in preparation for the licensing examination. Instruction will include the latest code revisions, safety measures and standard practices in the wiring of single and multifamily dwellings, commercial establishments and industrial locations.			
ELC 1124—Residential Wiring I	2	6	4
Provides instruction and application in the fundamentals of blueprint reading, planning, layout and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Codes regulators in actual building mock-ups.			

ELC 1125—Commercial and Industrial Wiring I	2	6	4
Layout, planning and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring conduit preparation and installation of simple systems.			
ELC 1311C—Basic Electrical Circuits, Machines and Transformers II	2	6	4
A continuation of ELC 1111C.			
ELC 1312C—Direct and Alternating Current II	3	9	6
A continuation of ELC 1112.			
ELC 1313C—AC/DC Machines and Controls II	2	6	4
A continuation of ELC 1113.			
ELC 1324C—Residential Wiring II	2	6	4
A continuation of ELC 1124.			
ELC 1325C—Commercial and Industrial Wiring II	2	6	4
A continuation of ELC 1125.			
ELN 1101C—Troubleshooting Concepts	4	0	4
A study of the techniques used in analysis of defective systems by block diagram. Introduction to test equipment used in troubleshooting.			
ELN 1103C—Solid State Devices	3	3	0 4
Most equipment being installed in industry is now controlled by electronic devices made up of transistors and other solid-state components. The student is taught solid state diodes, transistors of several types, silicon controlled rectifiers, triacs, diacs and other specific components with the emphasis on what the device does and how to test it. Basic operation and limitations of solid-state components is emphasized, along with techniques in handling and installing these devices and the voltages and currents encountered. The interpretation of component specifications is also encountered. Some basic circuitry is developed showing the application of each device and its use in industrial control. Lab hours are spent testing and measuring values encountered in solid state circuits and familiarization of handling identification and measurement techniques.			
ELN 1123C—Amplifier Systems	2	6	4
An introduction to commonly used servicing techniques as applied to monophonic and stereophonic high fidelity amplifier systems and auxiliary equipment. The operation and servicing of inter-communication amplifiers and switching circuits will also be taught. Prerequisites: MAT 1110C, ELC 1312C.			
ELN 1125—Radio Receiver Servicing	3	9	6
Principles of radio reception and practice of servicing. Included are block diagrams of radio receivers, servicing techniques of AM and FM receivers by resistance measurements, signal injection, voltage analysis, oscilloscope methods of locating faulty stages and components and the alignment of AM and FM receivers. Prerequisite: ELN 1123C.			
ELN 1126C—Transistor Theory and Circuits	2	6	4
Transistor theory, operation, characteristics and their application to audio and radio frequency amplifier and oscillator circuits. Prerequisite: ELN 1123C.			

- ELN 1127C—TV Receiver Circuits and Servicing** 3 9 6
A study of principles of television receivers, alignment of radio and intermediate frequency amplifiers, adjustment of horizontal and vertical sweep circuits will be taught. Techniques of troubleshooting and repair of TV receivers with the proper use of associated test equipment will be stressed. Additional study of more specialized servicing techniques and oscilloscope waveform analysis will be used in adjustment, troubleshooting and repair of the color television circuits. Prerequisites: ELN 1326C, ELN 1125.
- ELN 1128C—Color TV Receiver Servicing** 3 9 6
A continuation of ELN 1327C with additional study of more specialized servicing techniques and oscilloscope waveform analysis in the adjustment, troubleshooting, and repair of the color television circuits. Prerequisite: ELN 1327C.
- ELN 1130C—Two-Way Mobile Maintenance I** 2 6 4
A course to acquaint the student with the theory and maintenance of fixed station and mobile station transmitters and receivers.
- ENG 101—Grammar and Composition I** 4 0 4
Offers an historical survey of the English language, a review of English grammar, and an opportunity to improve written self-expression through expository essays and both primary and secondary research.
- ENG 1101—Reading Improvement** 4 0 4
Designed to improve overall reading efficiency with special emphasis on purpose, comprehension, word recognition skills, and the study of reading materials related to the student's curriculum.
- ENG 1102—Communication Skills** 4 0 4
Explains topics in oral and written communication including the communication process, listening, oral presentations, nonverbal communication, participation in meetings, writing the letter of application and accompanying resume, and special problems of English grammar and usage.
- ENV 1105—Hydraulics-Fundamentals** 4 0 4
An introduction to basic hydraulic principles including Pascal's Principles of static fluids, Berboulli's theorems of fluids in motion, viscosity, laminar and turbulent flow, Reynold's number, dynamic similitude, velocity gradient, etc.
- FSO 1102—Food Preparation & Baking I** 2 6 4
A study of the scientific principles of baking, food preparation, and cooking procedures; included will be preparation of salads, stocks, sauces, breads, deserts, and beverages.
- FSO 1103—Sanitation-Safety and Equipment** 4 0 4
A study of sanitation standards and safety precaution as related to food storage, preparation, and service. The student will also learn the designs, methods and care of kitchen equipment.
- FSO 1105—Purchasing** 2 0 2
To indicate the functions and administrative operations of the food purchaser's department. Methods and procedures for purchasing foods, standards, grading, and inspecting those items bought. Also, the student will learn how items are to be received, stored, and issued.

FSO 1106—Menu Planning	3	0	3
This course will demonstrate a study of composing a menu. It will reflect the seasonal changes necessary in menu planning, the essential human food requirements and the types of food that produce these requirements.			
FSO 1108—Personnel Management-Food Service	2	0	2
A study of the job responsibilities and duties of the food service worker; his relationship to his associates, with emphasis on understanding human behavior, labor policies and legislation, and the importance of self-development in relation to professional responsibility.			
FSO 1109—Production Management	2	0	2
Use of standardized recipes and portion control, work sheets, score sheets for judging food products, plan of work to improve work methods and further emphasis on motion economy.			
FSO 1112—Food Preparation & Baking III	2	6	4
The course will develop artistic skills related to cooking and baking. The course will introduce more detailed assignments in the practical shop work to achieve increased skills. The student will learn the principles and preparation of egg cookery. All breakfast preparation will be taught.			
FSO 1116—Baking V	2	6	4
A continuation of FSO 1312C - Food Preparation & Baking IV.			
FSO 1122—Food Preparation V	2	6	4
A continuation of FSO 1312C - Food Preparation & Baking IV.			
FSO 1302C— Food Preparation & Baking II	2	6	4
This course is primarily designed to teach the students the different cuts of meats and their respective cooking methods. Fish, seafood, and poultry will also be stressed. The student will also be required to expand his knowledge in breads, cakes, pies, and other desserts.			
FSO 1312C—Food Preparation & Baking IV	2	6	4
A continuation of FSO 1112 - Food Preparation & Baking III.			
FSO 1316C—Baking VI	2	6	4
A continuation of FSO 1116 - Baking V.			
FSO 1322C—Food Preparation VI	2	6	4
A continuation of FSO 1122 - Food Preparation V.			
ISC 1101C—General Industrial Survey	4	0	4
This course will cover a wide variety of industrial processes, from conception to final production. It includes processes in graphics, wood industries, plastic and metal industry.			
MAT 1010—Math for Pharmacology	3	0	3
The course is designed to cover topics specific to Pharmacology in the Nursing program. Topics to include the four basic operations for whole numbers, fractions, decimals. Also percent, ratio and proportion, reading and writing Roman Numerals. Prerequisite: None.			
MAT 1101C—Vocational Basic Arithmetic	4	0	4
A self-paced study of arithmetic skills which may be applied in the vocational areas of study. Topics of study include: whole numbers, decimals, fractions, rations, proportions, percent and measurement.			

- MAT 1103C—Applied Math: Geometry** 4 0 4
This practical course explores the fundamental properties of plane and solid geometric figures encountered in machine shop processes and other trades. Prerequisite: MAT 1101C.
- MAT 1104C—Applied Math: Trigonometry** 3 0 3
Trigonometric ratios; solving problems with right triangles, using tables and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equation. All topics are applied to practical problems. prerequisite: MAT 1101C.
- MAT 1110C—Electrical Mathematics** 4 0 4
A course in algebraic and trigonometric processes involved in theoretical and applied electronics. Topics of study include: factoring roots, use of calculator, electrical equations, electrical units; fractional equations, polynomials, simultaneous equations of two unknowns and trigonometric functions. Prerequisite: MAT 1101 or equivalent.
- MAT 1112C—Construction Estimating** 4 0 4
Construction Estimating is a course designed to give a student specific knowledge in estimating the various phases of a residence or small structure. Quantity takeoff will be taught. Estimating will be a major part of the course. Competency will come with many hours of practice.
- MEC 1101—Machine Shop Theory and Practices I** 2 6 4
An introduction to the machinist trade and the potential it holds for the craftsman. Deals primarily with the identification, care and use of basic hand tools and precision measuring tools.
- MEC 1102—Machine Shop Theory and Practices III** 2 6 4
Advanced operations in layout tools and procedures, surface grinding, milling machine, lathe and planer will be taught in this course. The students will also be doing projects showing proper sets and machine operation.
- MEC 1103—Machine Shop Theory and Practices V** 2 6 4
Advanced work on the engine lathe, turning, boring and threading machine and shaper will be dealt with in this course. The student will be introduced to basic indexing and terminology with additional processing on calculating, cutting and measuring of spur, helical, and worm gears and wheels.
- MEC 1104—Machine Shop Theory and Practices VII** 2 6 4
Development of class projects using previously learned procedures in planning blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc.
- MEC 1105C—Introduction to CNC Lathe** 1 3 2
The student will be oriented to the CNC lathe, the tooling safety and basic programming. The student will be instructed in the math and blueprint needed to program and operate the CNC lathe.
- MEC 1106C—Programming the CNC Lathe** 1 3 2
An advanced programming course for the CNC lathe. As a continuation of MEC 1105C, this course will give students advance training in machine set-up and tooling for CNC. Students will write their own programs, choose tooling, set-up and run the lathe with their programs.

- MEC 1135—Mechanical Installation** 4 0 4
 Mechanical Installation is a course designed to give a student specific knowledge in the related trades involved with residential building. This course will touch on the electrical, plumbing and heating and air conditioning fields. The basics of the vocational fields will be covered.
- MEC 1199C—Automotive Machine Shop** 2 6 4
 This course is designed for the student to gain competency in machine shop processes related to the Automotive Industry. Such processes include use of the brake drum lathe, valve grinding equipment, precision measure and use of the boring bar.
- MEC 1301C—Machine Shop Theory and Practices II** 2 6 4
 Deals with elementary layout procedure and processes of the power cut-off saw, band saw, drill press, milling machine, lathe, and off hand grinding will be introduced both in theory and practice.
- MEC 1302C—Machine Shop Theory and Practices IV** 2 6 4
 The students will be introduced to operations involved in cylindrical, cutter and internal cylindrical grinding. Projects will be selected encompassing proper set-ups and machine operations.
- MEC 1303C—Machine Shop Theory and Practices VI** 2 6 4
 The trainee will use precision tools and measuring instruments such as the vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder.
- MEC 1304—Machine Shop Theory and Practices VIII** 2 6 4
 Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing of good work habits and attitudes acceptable to the industry.
- NUR 1101—Fundamentals of Nursing** 6 4 0 8
 A study of principles which are basic to safe effective nursing care with laboratory practice in basic nursing skills. Introduces student to nursing care planning, care of the patient's environment; care of a dependent patient, observing a patient's condition and reporting pertinent information.
- NUR 1104—Basic Pharmacology** 3 0 0 3
 An introduction to drug therapy. A foundation of general knowledge in sources of drugs, legal control of drugs, computing dosage, classification and action of common drugs, and safety factors the nurse must use in administering drugs. Prerequisite: Completed first quarter of PNE.
- NUR 1106—Medical-Surgical Nursing II** 6 0 0 6
 A continuation of Medical-Surgical Nursing I. This course is a study of the nursing needs of patients with conditions related to various body systems-integumentary, respiratory, cardiovascular, gastrointestinal, and adult communicable diseases. Prerequisite: Completed second quarter of practical nursing. Corequisite: NUR 1113.
- NUR 1107—Medical-Surgical Nursing III** 9 0 0 9
 A continuation of Medical-surgical Nursing II. A study of the nursing needs of patients with conditions related to various body systems. Also includes study of the needs of the psychiatric patient, emergency nursing care, and nursing care of the seriously ill and dying patient. Prerequisite: NUR 1106. Corequisite: NUR 1114.

- NUR 1108—Obstetrical Nursing** 5 0 0 5
An introduction to the needs of the mother during normal pregnancy, labor, delivery, and post partum states. It includes a study of the needs and care of the newborn and an introduction to common complications of obstetrical patients. This background knowledge is essential for planned clinical practice in care of the mother and newborn. Prerequisite: Completed first quarter of PNE. Corequisite: NUR 1112.
- NUR 1109—Pediatric Nursing** 6 0 0 6
Provides an opportunity for the practical nurse student to study the well child, nursing principles and skills that are common in the care of sick children and adapting these to the level of the child. Includes study of common illnesses of children—symptoms, diagnostic procedures, treatment, and nursing interventions. This background study is essential to planned clinical practice in nursing care of children. Prerequisite: Completed second quarter of PNE. Corequisite: NUR 1113.
- NUR 1110—Vocational Adjustments** 1 0 0 1
This course is designed to help the student make the adjustment from the role of a student to that of a graduate practical nurse. Includes a review of legal and ethical aspects, employment, organizations, and continuing education as it relates to the graduate practical nurse. Prerequisite: Enrolled in fourth quarter of PNE.
- NUR 1111—Pharmacology II** 2 0 0 2
A continuation of basic pharmacology with emphasis on the nurse's responsibilities in preparing and giving intradermal, subcutaneous, and intramuscular injections. Includes nursing interventions for patients receiving interavenous administrations. Prerequisite: Enrolled in fourth quarter practical nursing. Corequisite: NUR 1114.
- NUR 1112—Clinical I** 0 0 15 5
Beginning clinical practice in a general hospital with clinical activities planned in assessing, planning, implementing, and evaluating care for assigned medical, surgical, and obstetrical patients. Involves related clinical assignments in obstetrical nursing at local health department. Prerequisite: Completed first quarter of practical nursing. Corequisite: NUR 1108, NUR 1115C.
- NUR 1113—Clinical II** 0 0 18 6
A continuation of Clinical I with planned clinical activities in a general hospital in surgical and pediatric patient care and beginning practice in administration of oral medication under supervision of an instructor. Involves related clinical assignments in pediatric patient care at local health department. Prerequisite: Enrolled in third quarter of practical nursing. Corequisite: NUR 1109, NUR 1106.
- NUR 1114—Clinical III** 0 0 18 6
A continuation of Clinical II with planned clinical experience in a general hospital in medical patient care, patients care in special service areas (ER, CCU), beginning administration of injectable medications under supervision of an instructor, and an increase complexity of patient care assignments. Involves related clinical experience in home health care and extended patient care facilities. Prerequisite: Enrolled in fourth quarter of practical nursing. Corequisite: NUR 1107, NUR 1111.

- NUR 1115C—Medical-Surgical Nursing I** 3 2 0 4
 This course is an introduction to medical-surgical nursing. It is a study of classification, etiology, symptoms, methods of diagnosis, prevention, therapy, and nursing interventions of illnesses. Emphasis is the surgical patient, geriatrics, long-term illnesses, cancer, and allergies. Prerequisite: Completed first quarter of practical nursing. Corequisite: NUR 1112.
- NUT 101C—Nutrition and Diet Therapy** 3 0 3
 The course focuses on the nutritional requirements of growth and the contribution to good health by proper nutrition. The harmful effects of inadequate diet are discussed. Fundamentals of normal nutrition are used to introduce the student to diet changes made necessary by illness. The principles of meal planning and the selection, preparation, and storage of foods are included.
- PHY 1101—Applied Physics** 4 0 4
 An introduction to physical principles and their application in industry. Topics in this course include measurements, properties of solids, liquids, gases and basic electrical principles.
- PLU 1110—Plumbing Pipework** 4 12 8
 This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop, where the student can learn how to handle these materials correctly. The student will perform operations such as threading, cutting, caulking, and sweating of the various kinds of pipe and tubing used in the trade.
- PLU 1111—Domestic Water Systems** 4 9 7
 The installation of water distribution systems, beginning with the source of supply and including the location of pipes, valves and pumps in both single-story and multi-story buildings will be studied. Heating devices, and drainage systems, including their ventilation is a part of this course. Field trips will be taken to study various types of installations.
- PLU 1112—Installation of Plumbing Fixtures** 2 6 4
 The difference in materials and styles of laboratories, bathtubs and sinks, and the many ways that these fixtures can be installed will form the basis of this course. The proper use of traps is included. The student will get actual practice by making installations.
- PLU 1120—Low Pressure Steam Systems** 2 6 4
 The student will become acquainted with types of low pressure steam boilers, the principles of boiler operation. Boiler accessories such as connectors, fittings, and insulation are to be included. Low pressure steam systems, their layout, and component parts will be studied and installed. Equipment used in heat transmission, such as radiators, coils and connectors will be included.
- PLU 1123—Hot Water and Panel Heating** 3 6 5
 The piping and accessory equipment needed to transfer hot water to radiators, heaters, and coils, and the advantages and disadvantages of each of these units will be studied, including apparatus for radiant heating and panel heating. Methods of "sizing" equipment for various installations will be included. Practical application will be provided in installing this equipment.
- PLU 1125—Industrial Piping** 3 9 6
 Piping systems of boilers, turbines, and steam engines especially as they are used in steam power plants and process piping such as is used in the chemical industries will be major emphasis of this course.

PLU 1126—Hydraulic Systems Plumbing	3	3	4
Plumbing application in hydraulic systems. Hydraulic principles, circuits, control valves, acutators, pumps, fluids and various accessories that complete hydraulic systems will be studied. Installation and servicing methods of these systems will be undertaken.			
PLU 1128C—North Carolina Plumbing Code	4	0	4
A study of the North Carolina plumbing code, in preparation for the licensing examination. Instruction will include the latest code revisions, safety measures and standard practices in the plumbing of single and multi-family dwellings, commercial establishments and industrial locations.			
PME 1101—Internal Combustion Engines I	5	3	6
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 operating of components of internal combustion engines. Testing of engine performance, servicing and maintaining of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems, proper lubrication and methods of testing, diagnosing, and repairing.			
PME 1102—Engine Electrical Systems	5	3	6
A thorough study of the electrical systems in the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring.			
PME 1103C—Automotive Analyzing Equipment	5	3	6
Development of a thorough knowledge of and ability to use engine analyzing equipment. The testing of the ignition systems, fuel system, exhaust, and emissions system.			
PME 1130C—Practical Auto Maintenance for Beginners	1	3	2
A survey of auto maintenance tasks for the auto owner. Course content will include maintenance tasks that can be done with standard tools by the owner.			
PME 1221—Front Alignment	2	6	4
Theory of operation, correct disassembly and mounting of all front suspension parts on various types of frames (car and light truck). A thorough understanding of the function and repair of steering gears (power and standard), shock absorbers, springs, wheels and tires, pumps, rams and other steering parts and accessories is gained. Theory and application of steering geometry, correct diagnosis of problems and use of the alignment and balancing machines; analysis and correction of tire wearing problems, vibrations, hard steering, pulling and other problems that are experienced.			
PME 1227C—Power Accessories	1	3	2
This course will teach the student the principles and operations of the power accessories of the modern automobile. The student will study and repair the power accessory units such as power steering, power windows, power seats, power antennas, power headlights, power tailgates, windshield wipers, and windshield washers.			
PME 1301C—Internal Combustion Engines II	2	6	4
A continuation of PME 1101.			
PME 1302C—Fuel Systems	5	3	6
A thorough study of the fuel systems in the automobile, fuel pump carburetors and fuel injectors. The characteristics of fuel, type of fuel system, special tools, and testing equipment.			

PSY 1101—Human Relations	4	0	4
A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationship within the work situation.			
SCI 1101—Body Structure and Function	5	0	5
The aim of this course is to describe and explain the fundamental facts and principles of human structure and function. Emphasis will be placed on a thorough exploration of the systems of the body. The dissection of a preserved cat will accompany the lectures.			
WLD 1101—Basic Gas Welding	1	3	2
Welding demonstrations by the instructor and practice by the students in the welding shop. Safe and correct methods of assembly 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 1120—Oxyacetylene Welding I	2	6	4
This course is designed to acquaint the student with the safety rules of welding, identification, set-up and operation of oxyacetylene welding equipment. The student will be able to carry a puddle without filler rods, weld in the vertical, horizontal and overhead positions, weld heavy steel plates, identify, weld and braze cast iron, and operate a cutting torch efficiently. The student will be introduced to welding symbols and metallurgy as it relates to oxyacetylene welding.			
WLD 1121—Arc Welding I	2	6	4
The student will learn the safety rules of welding, understand the operation and use of the arc welding machine, identify and know the importance of personal protective equipment, identify welding tools and types of electrodes, strike and arc and run a bead, and bond two pieces of metal together. The student will be introduced to welding symbols and metallurgy as it applies to arc welding. The student will also become acquainted with blueprints and how they relate to arc welding.			
WLD 1122—Commercial and Industrial Practices I	2	6	4
This course is designed to instruct the student in the proper procedure for repairing broken equipment, to fabricate and build parts from new stock of steel. The student will learn the inert gas welding process, practice and become proficient in flat-plate welding and also become familiar with the welding codes, specifications, and certification of the American Welding Society.			
WLD 1124—Pipe Welding I	2	6	4
This course is designed to give the student knowledge in the operation of pipe welding equipment and accessories, specific welding operations, preparing a welding joint, welding in specified positions, obtaining knowledge of designing and fabrication of pipe and duct ways. The student will be introduced to welding symbols and metallurgy as it applies to pipe welding.			
WLD 1320C—Oxyacetylene Welding II	3	9	6
A continuation of WLD 1120.			
WLD 1321C—Arc Welding II	3	9	6
A continuation of WLD 1121.			

WLD 1322C—Commercial and Industrial Practices II

3 9 6

A continuation of WLD 1122.

WLD 1324C—Pipe Welding II

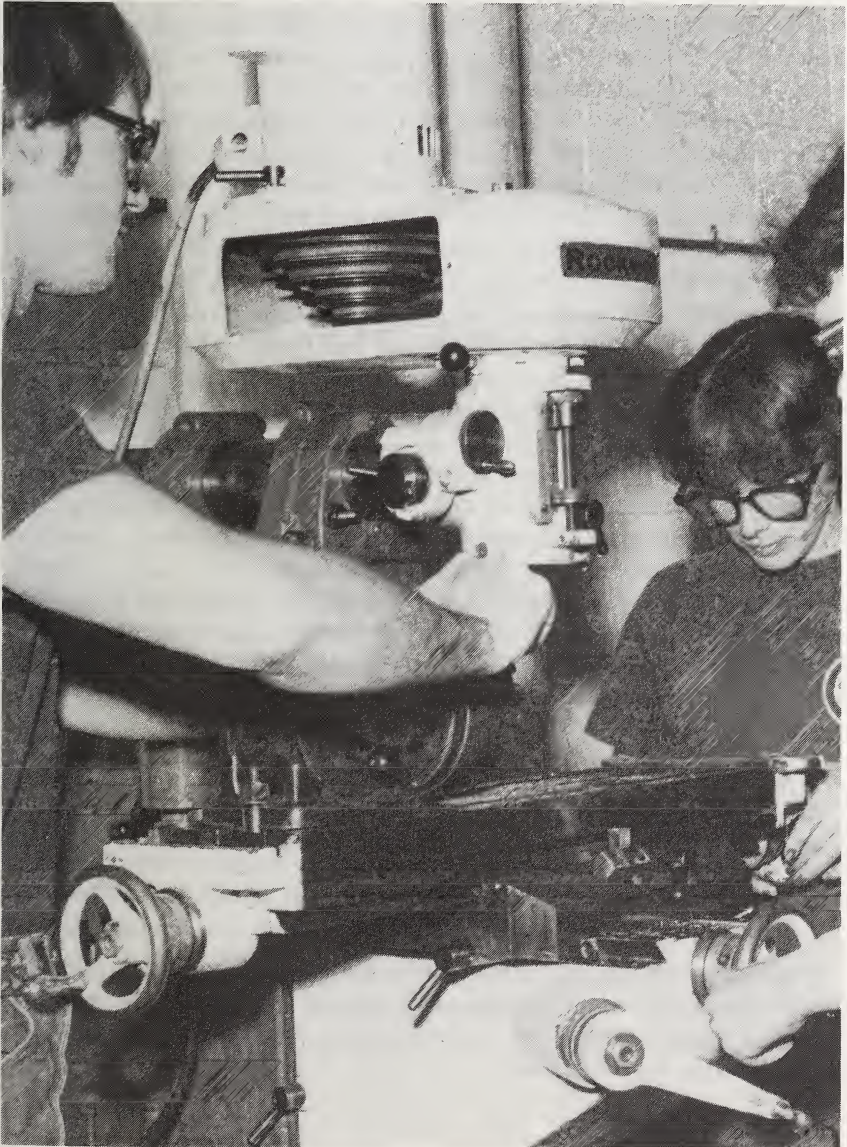
3 9 6

A continuation of WLD 1124.

WLD 1330C—Machine Shop Welding

1 3 2

Arc welding demonstrations by the instructor and practice by the students. The operation of AC&DC arc welding machines. Studies are made of welding heats, polarities and electrodes. Practice will be given for making groove and fillet type welds. Also deals with the physical and chemical behavior of the metals during shaping, welding, and treating operations.



INDUSTRY AND COMMUNITY SERVICE

CONTINUING EDUCATION PROGRAMS

Adult or Continuing Education as defined in this catalog includes activities designed to meet the needs of people beyond compulsory school age whose major occupation is not that of a full time student. It is the purpose of Cleveland Technical College to afford this opportunity to each individual to develop to the fullest potential in vocational, intellectual or cultural areas. It is also the aim of the College to be of service to area industries, businesses and public agencies by providing training and upgrading for employees. In order to meet these aims the Extension and Adult Education Division of the College will help make continuing education available by offering a variety of courses and programs.

The extent of different programs and courses is based upon the interest shown by the community, availability of component instructors and the limitations of available equipment, space and funds. Whenever possible, courses are scheduled as community needs or interests are indicated. Some classes, constantly in demand, are offered on a continuing basis. Others are started at the requests of individuals or organizations. The College welcomes such requests and suggestions for additional courses.

Continuing education classes conducted by Cleveland Technical College have four separate classifications: occupational, academic, practical skills, and avocational. The classes are non-curriculum, vary in length, conducted both day and evening, and are taught by qualified instructors selected by the College. A schedule of some classes being offered is announced by the College prior to each quarter and other classes are announced during the quarter, as they are arranged.

ADMISSION

Any adult 18 years of age or older, who is not enrolled in public school is eligible to enroll.

REGISTRATION

Registration will be held at the first meeting unless specified otherwise. In some instances when enrollment is limited, adults should notify the College by phone, letter, or personal visit to place their names on the pre-registration list for classes.

EXPENSES

Continuing Education classes classified as Occupational and Academic have a \$10.00 registration fee while those classified as Practical Skills are \$15.00 and Avocational are charged \$19.00. The only exception to the tuition charge is in Fire Service and Law Enforcement Training programs including Civil Preparedness courses and programs for Rescue Squad personnel. Also, tuition fees are waived for persons 65 years of age or older in all courses. A charge may be necessary in some courses for class supplies. Books and supplies are available through the College Bookstore for both campus and off-campus classes.

CLASS LOCATIONS

Many of the continuing education classes are held on the campus at Cleveland Technical College. Others are conducted throughout Cleveland County in local public schools, community centers, churches, industries, business or wherever a suitable meeting place can be arranged. Classes are organized in any community whenever a sufficient number of prospective class members indicate an interest.

ATTENDANCE

A minimum enrollment of 15 persons is needed to conduct a class. Adults are expected to attend class regularly. Attendance records are maintained by the instructors. Insufficient enrollment or attendance may result in cancellation of the class.

CERTIFICATES

Certificates are awarded in certain classes to students successfully completing course requirements. Also, a certificate of High School Equivalency (GED) is awarded to adults who successfully complete the high school equivalency tests.

INSTRUCTORS

Qualified instructors, as determined by the Extension and Adult Education Divisions, will be employed for continuing education classes. Leaders from the community in civic, cultural, educational, industrial and business fields as well as persons skilled or knowledgeable in particular areas of interest are available as instructors.

OCCUPATIONAL EXTENSION EDUCATION PROGRAMS

Extension classes are designed to meet the needs of industry, business and other areas of occupational endeavor. Specifically, classes may be organized when there is a need for:

1. Upgrading for those within a specific occupation.
2. Retraining classes for those wishing to change their vocation.
3. Preparation of individuals for initial employment.

All classes are organized where a demand for certain skills is required, based upon the needs of the firm or group as represented. The classes may be arranged on a short or long-range schedule as needed. Flexibility is the key asset in the Occupational Extension Program.

The following is a partial list of the many broad areas of instruction in which training is available:

Fire Service Training
Hospitality Education
Law Enforcement Training
Industrial Training
Woodworking Occupations
Building Trades
Agricultural Business and Production
Equipment Maintenance and Repair

NEW INDUSTRY TRAINING

One of the primary functions of Cleveland Technical College is to stimulate the creation of more challenging and rewarding jobs for the people of our area by providing a type of training geared to the needs of new and/or expanding industries. With some limitations, this institution, in cooperation with the Industrial Services Division of the State Department of Community Colleges, will design and administer special programs for training the production manpower required by any new or expanding industry which results in creating new job opportunities for North Carolina.

In addition to helping any new or expanding industry meet its immediate manpower needs, the program seeks to encourage each industry to develop a long-range training program of its own to satisfy its continuing replacement and retraining needs.

For further information on the New or Expanding Industry program, please contact the Department of Continuing Education, Cleveland Technical College, or the Director, Industrial Services Division, North Carolina Department of Community Colleges, Raleigh, North Carolina.

GENERAL ADULT EDUCATION

General Adult and Community Service classes and programs are offered through the Extension Division of Cleveland Technical College to enable individuals to gain personal satisfaction and knowledge through self-advancement. These programs include opportunities for intellectual growth, the development of creative skills or talents, the learning of hobby or leisure time activities, and the opportunity of gaining civic and cultural awareness.

A class can be organized when fifteen interested persons are available and because of the organizational flexibility of these programs a wide variety of classes, lectures, seminars and workshops are conducted both on campus and in other locations within the service areas of the College.

TEACHERS' CERTIFICATE RENEWAL

Teachers' certificate renewal courses and workshops are provided by Cleveland Technical College in cooperation with the local public school systems within the county.

The courses and workshops are initiated by the College or the public school systems based on interests and needs expressed by school teachers and officials. In the past, these have included such courses as Great Decisions, Psychology, Guitar, Drawing & Sketching, Anthropology, and media workshops.

When a need for a particular course has been determined, Cleveland Tech, working cooperatively with the public schools in-service directors, plans and organizes the class, scheduling it for a time convenient to the participants.

Teachers receive one (1) C.E.U. toward certificate renewal for each 10 hours of successfully completed work.

CONTINUING EDUCATION

ACADEMIC COURSE DESCRIPTIONS

Algebra: A course designed to teach the basic fundamental concepts and operations of algebraic computations including grouping, factoring, ratio and proportion, and quadratic equations. Application to practical problems will be stressed. 33 hours.

Anthropology: The Ascent of Man, a series of 13 outstanding films that dramatically portray the interrelationship of science and the humanities throughout history is used as a basis for this course. The main interest is on the cultural evolution of man from pre-historic times up to our present time. 20 hours.

Business Mathematics: A study of mathematical solutions to business problems including graphical representation of business data and the concept of various functions as tools for analyzing pertinent business data. 24 hours.

Great Decisions: A yearly study and discussion of the eight most important issues facing our nation at the current time. 20 hours.

Income Tax Preparation: Instructions are offered in basic fundamentals of individual income tax preparation. Topics considered are gross income, deductions and exemptions, joint and separate returns, tax computations, and methods of reporting income. Both state and federal forms are covered in this class. 30 hours.

Metric System: A basic course in the use of the Metric System. Conversion tables are used in the class in order that students may become familiar with metrical computations as compared to conventional methods. 24 hours.

Music Theory: the course is designed for pianists, organists, and other musicians with no formal training in music theory. Course includes major and minor scales; major, minor and dominant seventh chords; elementary harmony; simple modulation, transposition of simple pieces; sight singing; and an investigation of rhythm are included. 20 hours.

Psychology: The basic principles of psychology are explored and how they may be applied to practical problems of every day life. The aim of the course is to help people get along better in school, jobs and human relations. 33 hours.

Sign Language: Instruction is designed for the parents of deaf children and those who come in contact with deaf people. classes begin with finger spelling and continue through the more difficult signs. 33 hours.

Sociology: A course designed to create a knowledge and awareness of the problems in society today and to fit the students for involvement in those problems that affect their personal lives. Information from other fields in the social sciences having a bearing on major social problems will be incorporated in the course. 33 hours.

Effective Speaking: Theory and practice in the art of effective speaking. Instruction will center around methods of planning and presenting the talk. Class reactions will be used as a method of evaluation and emphasis placed on the dynamics of public speaking. Self-confidence, poise, creative thinking, personality development, and effective communications with others will be stressed. 20 hours.

Securities and Investments: Stocks, bonds, and mutual funds will be the central area of focus in this course. Discussions will include the operation of the stock exchanges, buying and selling procedures, analysis of stocks and bonds for investment purposes, and when to buy and sell. 33 hours.

Short Story Writing: This course will provide the beginning writer with an understanding of the basic concepts of the elements and structure of the short story. Content will include characterization, mood, perspective, plot and use of symbolism. 24 hours.

Speed Reading: A program designed for the average adult reader who needs to improve overall reading efficiency including speed, comprehension and flexibility. This course welcomes the supervisors and others in management positions who have much paper work and whose jobs require much paper work and whose jobs require much reading. 24 hours.

CONTINUING EDUCATION

OCCUPATIONAL COURSE DESCRIPTIONS

Amateur Radio Operations: A course which deals with basic electronics and a working knowledge of Morse Code. Successful completion of the course prepares students for taking the FCC Amateur Radio Licensing examination. 45 hours.

Basic Horticulture: A course designed to familiarize participants with the fundamentals of soil fertility, the principles of attractive home landscaping, the characteristics of various ornamental plants suitable for home landscaping, vegetable gardening, plant maintenance, and small greenhouse structures. 20 hours.

Bookkeeping: A course dealing with methods of recording and reporting business records. Practical work is done involving business and individual and family bookkeeping. 30 hours.

Cardio-Pulmonary Resuscitation: A special class dealing with the various techniques of cardio-pulmonary resuscitation and the role of the nurse in this situation. 10 hours.

Driver Education: (48 hours, \$19.00) This class is designed for those students 18 years of age or over who wish to prepare for the State License Examination. The instructions lay the foundation for proper use of motor vehicle by developing mature driving attitudes, knowledge, skills and habits which are so important in today's complex traffic. The course consists of 30 hours of classroom instruction, 12 hours in the car as an observer, and 6 hours of actual driving practice. 54 hours.

Emergency Medical Technician (EMT): A more detailed course with emphasis on the development of skill in recognition of systems of illness and injuries and proper procedures of emergency care. Much stress will be given in demonstration and practice as a teaching method. Ten hours of in-hospital observation is included. 81 hours.

Emergency Medical Technician (EMT) Refresher: A course in skills training and retraining for Emergency Medical Technicians required once every two years. A minimum of 24 hours.

First Aid: This course is taught by an approved American Red Cross instructor and is open to anyone interested in learning how to care for the victims of an accident or illness. Topics covered include bandage application, use of tourniquets and temporary splints, care of eye and burn injuries, artificial respiration and safe use and storage of medicines. Students completing the course are certified by the American Red Cross. 15 hours.

Funeral Service Training: An annual variety of topics relating to funeral service personnel to meet continuing education requirements of the North Carolina State Board of Mortuary Science. Each topic is of three hours duration.

Home-Sitter Nursing: Instruction in the basic nursing skills that would aid students in caring for children, older people, and even themselves. Nursing skills such as bedmaking, baths, back-rubs, positioning, diet therapy, basic first aid, and a limited amount of basic psychology needed to relate productivity with those who are sick are taught in this course. 50 hours.

Intensive Coronary Care: The role of the nurse in caring for the acutely ill cardiac patient is taught in this class. New techniques in diagnosis and treatment are used, including monitoring, resuscitation and other special procedures. Various audio-visual media and special professional personnel are utilized in the class. 30-120 hours.

Medical Terminology: A course designed to build a workable medical vocabulary for office and hospital clerical personnel. Terminology commonly used in the medical setting will be presented. Hours of course flexible to needs.

Motorcycle Mechanics: This course is especially designed for those people interested in servicing their own motorcycle and other small engines. Students who complete this course will be able to service and repair their own motorcycle. 36 hours.

Multimedia First Aid: A course covering the same topics but using American Red Cross films for demonstration followed by actual practice of the techniques by the students. 8 contact hours.

National Electric Code: This course is provided for those who wish to study the National Electric Code in preparation for the licensing examination. Instruction will include the latest code revisions, safety measures and standard practices in the wiring of single and multi-family dwellings, commercial establishments and industrial locations. 80 hours.

Nurse's Aide: A program designed to give instruction and practice in basic bedside care of the sick, especially the hospitalized patient. Basic procedures such as bathing, bedmaking, taking vital signs, collecting specimens, feeding the patient, moving, lifting and positioning the patient are included. The class consists of lectures and laboratory work in addition to some clinical practice in a local hospital. 120 hours.

Office Practice: A course for all clerical personnel stressing techniques of letter writing, correct spelling, communication skills both oral and written, and proper telephone usage. Hours adjusted to needs of students.

Outboard Motor Repair: A practical course in the theory and fundamentals of outboard engines. Actual practice in servicing and repairing engines and motors will enable the student to correct existing problems and minimize expenses on repairs. 30 hours.

Pharmacology: A course designed to assist students in acquiring understanding and skills basic to safe and intelligent administration of drugs. Emphasizes the need of the nurse to prepare and administer drugs safely, to observe intelligently, and to report and record accurately, a review of specific drugs. Hours are flexible according to needs.

Pottery Design and Production: Instruction in producing ceramic, pottery, and porcelain products. Designed to train individuals to enter the trade with basic skills to perform effectively on the job or to begin their own shop. Methods, projects, and kiln operation are covered. 33 hours.

Practical Welding: Students will be given basic practice in all types of welding procedures and flame-cutting methods which are associated with mechanical and farm repair work. Safety procedures are stressed throughout the course in the use of tools and equipment. 33 hours.

Real Estate: This class is designed for prospective salesmen and others who desire to know the fundamental aspects of real estate. The course includes instruction in real property laws, appraising, brokerage, finance and the mechanics of closing. 99 hours.

Real Estate Appraisal: A course designed to follow or run concurrently with Real Estate sales dealing more specifically with the appraisal of property. Practical experience is given in appraising various types of property. 33 hours.

Recreational Therapy: A course using modifications and adaptations in recreation and physical education activities for nursing home and handi-capped persons. A combination of physical activities and arts and crafts is used in order to bring about a well-rounded adjustment. Class hours flexible according to need.

Small Engine Repair: Instruction in the techniques of two and four cycle engine repair including reconditioning, tune-ups, replacement of parts and detection of engine trouble. 33 hours.

Textile Quality Control: Emphasis will be placed on principles and techniques of quality control and cost saving in textile manufacturing functions, responsibilities, structure, costs, reports, records, personnel, and customer relations will be stressed. 27 hours.

Transportation and Traffic Management: Participants are acquainted with the important phases of Transportation and Traffic Management including classification of freight, principles of freight rates and tariffs, shipping documents and their application, special freight services, freight claims, construction and filing of tariffs, switching, routing, warehousing and distribution, materials handling, technical tariff interpretations, import and export traffic, construction and application of the Interstate Commerce Act and practice and procedure before the Interstate Commerce commission. 48 hours.

Upholstery: Instruction includes the techniques of general furniture upholstery including webbing, springing, stuffing, trimming, sewing, restoring, repairing, mounting and tying springs. Equipment is furnished but students supply their own materials and may work on their own furniture with direction and assistance from the instructor. 60 hours.

Waiter-Waitress Training: A new class designed for those persons interested in this expanding occupation. The class offers excellent opportunities to learn restaurant operation and management while serving the public in a courteous and efficient manner. The class includes on-the-job training. 38 hours.

CONTINUING EDUCATION

PRACTICAL SKILLS COURSE DESCRIPTIONS

Auto Tune-up: General troubleshooting of the automobile engine electrical system and fuel system including replacement of spark plugs, ignition points, condenser, rotor, distributor cap, coil, ignition, cables and wires. Setting up of engine with instruments such as a dwell meter, timing light, volt and amp meter, vacuum gauge and general carburetor repair such as fuel filter replacement and adjustment of automatic choke is also included. 33 hours.

Bricklaying: Instruction will be geared to practical work in how to mix and spread mortar, lay bricks, and proper use of the masonry rule. Simple construction projects will constitute a large part of the course. 88 hours.

Cake Decorating I: An ideal course for the homemaker who would like to learn the art and technique of decorating cakes for all occasions. Instructions will include preparation and application of various icings, borders, writing, drawing and making flowers for cakes. 33 hours.

Cake Decorating II: Instructions will center around the more difficult forms of cake decorating, including cakes for birthdays, anniversaries, weddings, and special occasions. Students should have completed the basic cake decorating course or have the equivalent skill before entering this course. 33 hours.

Candy Making: Instruction in how to make professional looking candies will be stressed. Recipes, correct cooking procedures, and use of candy thermometer will be covered. 33 hours.

Clothing Construction I: Designed for the new sewer or anyone who wishes to brush up on basic sewing techniques. Time will be devoted to learning the necessary equipment for successful sewing, proper selection and fitting of pattern and materials; step by step construction of one or more garments; lectures, demonstrations, practical applications of sewing procedures; individual instruction in use of machines during class time. 33 hours.

Clothing Construction II: More detailed instructions for more complicated assembling of garments such as underlining, different sleeves, collars, pockets, trims, buttonholes, and other items. Fashion and styling will also receive attention in this class. 33 hours.

Crewel Embroidery: The class will learn a variety of stitches with different types of threads; needlepoint and cross stitching. Students are encouraged to create their own designs. 33 hours.

Crochet: A course in the basic principles and art of crocheting, including the actual construction of articles and designs from simple to complex. Students furnish their own materials. 33 hours.

Custom Sewing: An advanced course for those students who wish to progress beyond dressmaking. Students will make suits, coats, men's and ladies' sportswear and other projects as desired by individual members of the class. 60 hours.

Floral Design: A practical course related to actual arrangements of live and artificial flowers. Students learn uses of flowers, containers and accessories, design principles, color and texture, and arrangements for special occasions. 33 hours.

Food Buying: Instruction in the efficient use of the food dollar for best nutrition. Menu planning, grocery shopping, selection of specific foods, use of leftovers, convenient foods, and non-grocery items are included. 24 hours.

Ground School Training: Designed for those students who wish to become a private pilot. Instructions include the theory of flight and airplane performance, traffic rules and general operation, flight planning, interpretation of weather and radio communication procedures. The purpose of this class is to prepare students to take the FAA examination. 40 hours.

Home Gardening: A practical course in the planting and raising of vegetables for home use. Plots are given to each participant to plant as they choose. Instructions and assistance are rendered by the school's agronomist. Spring.

Interior Decorating: Primary attention will be given to art and practice of decorating. Emphasis will be given to the choice and arrangement of furniture; color and how to use it; flooring surfaces and floor covering; window treatment with draperies and curtains. 33 hours.

Jewelry Making: Instruction will be given in the basics of good design and creativity in various types of jewelry making. The use of jewelry tools in sawing, filing, soldering, setting, etc., will be stressed. Students will be responsible for their own supplies and materials. 33 hours.

Knitting: Instructions will be given in the basic stitches: knitting language—its terms, definitions, symbols and abbreviations; pattern reading; knit tips. Each student is asked to complete a small project during the course. 20 hours.

Microwave Cooking: Basic instruction will be offered in the many functions of a microwave oven. The cooking of all types of foods including vegetables, meats, and desserts will be covered. Proper utensils for microwave cooking will also be stressed. 33 hours.

Natural Childbirth: This class prepares the prospective mother emotionally, intellectually, psychologically, and physically for childbirth. Together, both prospective parents are actively involved in the birth of their child. Instruction includes techniques of body building exercises, stretching and breathing exercises, and neuro-muscular control (relaxation). 21 hours.

Needlepoint: The student learns to do background stitches: a variety of novelty stitches; transfer of graphs and charts to blank needlepoint canvas, and from that step to transfer on mesh canvas. Finally the student has learned to create a design to be worked in needlepoint for whatever purpose the student intends—upholstery material, draperies, framing, wall hanging, etc. 33 hours.

Nutrition and Weight Control: Training in selection of proper diet for best health, avoiding obesity and related disease, determining one's proper weight, how to achieve and maintain it. 18 hours.

Taxidermy: A basic course in the fundamental principles of taxidermy. Step-by-step methods are used beginning with birds and fish. Advanced classes progress to larger and more complex animals. A practical course. 33 hours.

Woodworking: This course is designed to help the woodworking enthusiast in the use, care and safe practice of basic hand and power tools. Considerable time will be spent in the shop in practical use of skills learned. Woodworking projects completed by the student may be retained for personal use. 45 hours.

CONTINUING EDUCATION

AVOCATIONAL COURSE DESCRIPTIONS

Bargello: This type of embroidery, Florentine canvas embroidery, dates back to the 13th century and is found in many museums. It is excellent in making pillows, cushions, all types of upholstery, plus eyeglass cases, nests, belts, jewelry cases and many other articles. 20 hours.

Ceramics: A popular class where students learn of the formation, finishing and firing of creative pottery. Finishing processes will include pouring, cleaning the greenware, decorating, glazing and firing for the finished product. 22 hours.

China Painting: A course in which various types of designs and flowers are applied to Chinaware and tiles. Practice in painting and firing is included in the course. 33 hours.

Community Chorus: A mixed voice musical organization open to all adult members of the community service area with audition. Two or three major concerts featuring a variety of music are given by participants each year. Each rehearsal contains vocal techniques and instructions in music reading. 32 hours.

Copper Tooling: A fascinating craft class where students make beautiful and useful objects for the home. Simple tools are used for various patterns on copper and brass which are then used to make picture, plaques, waste baskets, flower urns, etc. 30 hours.

Decoupage and Repousse: An interesting and inexpensive leisure time activity involving painting, sanding and finishing items such as table tops, ash trays, picture frames and other similar items which can be used for decorative purposes in the home. 24 hours.

Drawing: The course includes on-minute gesture drawings, contour drawings, modelled drawings and quick form studies. Media used are pencil, pen and ink, ink wash, crayon and water colors. Perspective and drapery studies are included. 33 hours.

Holiday Decorations: (Arts and Crafts). An exciting class with emphasis on handicrafts and hobbies for home decoration and other occasions. Students will learn to make useful items from such things as bottles, boxes, cards and numerous other scrap materials. 33 hours.

Macrame: A popular and fascinating craft class using various knot-tying materials to make hanging basket holders and other useful objects and designs for the home. 33 hours.

Painting with Acrylics: Same as for oils with more emphasis on modern techniques in the use of the versatile material which is easy to handle, fast drying, water proof, and easy to mix for different colors. Instruction will involve use with mixed media and use with various painting medicine. 33 hours.

Painting with Oils: Classes are organized for both beginners and the more advanced students. Techniques used include brush and palette knife painting, color mixing, composition and design, canvas stretching. Types of painting include academic impressionistic, expressionistic, abstract and modern. 33 hours.

Photography: Introduces the student to fundamental factors influencing the quality of image captured in the photograph. Students may study lighting, the primary subject, the field of view, color and camera a techniques in this class. 33 hours.

Piano I: Designed for adults with no experience in piano playing. Course covers the preparatory level of piano playing which includes learning the keyboard, learning to read the musical staff, learning note values and simple piano pieces. 32 hours.

Piano II: This course is a continuation of Piano I with emphasis on playing hands together. 32 hours.

Sketching: An interesting and basic class for the art student who wishes to learn more about drawing simple shapes, one and two-point perspective drawing, and shadowing. Practice exercises with various drawing materials will be used. 33 hours.

Stained Glass: The course is designed to teach all techniques in cutting and fitting stained glass in the making of lamps, planters, decorative ornaments, jewel boxes, pictures, etc. 33 hours.

Tole Painting: An interesting technique rather than talent where patterns of decorative design are painted on tin, wood, glass and metal. Designs are stenciled on material and painted in acrylics or oils. The art of Tole Painting is the way the brush is held and the turning to make details. 24 hours.

Water Colors: In this class art students will work with various materials and equipment, color mixing, using wet and dry paper, composition and design. Other techniques will include watercolor tricks, inks and calligraphy. 33 hours.

SCHOOL FOOD SERVICE

These courses are developed by and offered in cooperation with the School Food Service Division of the North Carolina State Department of Public Instruction.

Overview of School Food Service: A basic orientation course presenting the history of school feeding, characteristics of a good program, personnel and human relations, nutrition and menu planning, organization and management, purchasing, storing, preparation and serving of food, sanitation and safety. 45 contact hours.

Procurement: A new School Food Service course designed to give school food service personnel instructions and helpful suggestions in the procurement of foods. 30 contact hours.

Nutrition and Menu Planning: This course offers in depth the role in nutrition of protein, fats, carbohydrates, minerals and vitamins; factors in developing good food habits; dietary needs of children and youth; advanced work in planning and evaluating menus. 45 contact hours.

Care and Use of Equipment: This course stresses the general care and safety in the use of equipment, specific use and care of large and small pieces of food service equipment, and inventory and maintenance records. 45 contact hours.

Quantity Food Production Management: Designed for food service personnel with experience in methods of quantity food preparation which retain nutritive values; use of standardized recipes; use of weights and measures; use and care of equipment; timing, selection, preparation and service of foods for the school lunch. 45 contact hours.

HOTEL-MOTEL MANAGEMENT

These courses are offered in cooperation with the Educational Institute of the American Hotel-Motel Association.

Front Office Procedure: This is a basic course pointing up the need for close relationship between front office and management. It emphasizes the crucial human and public relations responsibilities of the front office staff. 24 contact hours.

Hotel-Motel Accounting: This course is designed to review the basic arithmetic skills needed and to develop an ease in their use; explain the accounting terminology and practices commonly used; provide practice in preparing a complete set of accounts and a simplified balance sheet and profit and loss statement. 24 contact hours.

Hotel-Motel Law: To illustrate the consequences of lack of foresight in the innkeeper's managerial functions and to create an awareness of the many responsibilities which the law imposes upon the innkeeper. 24 contact hours.

Introduction to Hotel-Motel Management: Traces of growth and development of the lodging industry from early inns to modern skyscraper hotels and highway motels. Also stressed are the importance of the "hospitality attitude" and the role of the hotel-motel as a competitive business in the free enterprise system. 24 contact hours.

Maintenance and Engineering: This course examines the organization of the engineering department and provides the technical information needed to establish effective preventive maintenance procedures. 24 contact hours.

Communications: This course has been designed as an overview of the uses and techniques of communication with particular reference to the innkeeping industry. It can be beneficial to employees at any level of the organization, but should be especially helpful to those having managerial responsibility. 20 contact hours.

HOSPITAL TRAINING

Hospital Human Relations: Designed to acquaint hospital personnel with the importance of good human relations. Case studies illustrate many ways in which employees and patients react to each other. Much stress is placed on the importance of developing proper attitudes toward the patient and toward fellow employees. 20 contact hours.

Hospital Housekeeping: The basic problems of hospital housekeeping are covered with a good breakdown of what should be done daily and what can be done only periodically. There is much information on techniques for doing the job more effectively and with maximum efficiency. 40 contact hours.

Food Service Supervision for Hospital Personnel: This course consists of classroom instructions and supervised experience in a hospital kitchen. It provides a standardized program for food service supervisors which will qualify them to assume the responsibilities delegated to them by the dietitian and prepare them to meet the performance level of the current concept of supervisory leadership in their respective areas. 40 contact hours.

Custodial Training: This course attempts to teach basic procedures in cleaning different types of surfaces, health and sanitation procedures, how to get along with patients, and how to fit in with the full hospital program. 40 contact hours.

Modified Diets: This course deals with the many types of diets, the food intake, and the caloric count. It also goes into the various diseases that are associated with the human body and what role the actual diet contributes to the recovery of the patient. 20 contact hours.

Additional courses listed under the headings indicated, may be available.

FIRE SERVICE TRAINING

Arson Detection

Civil Disorder

Firefighting Procedures

Hose and Ladder Practices

Forcible Entry

Rescue Practices

Salvage and Overhaul Practices

Ventilation

Hospital Fire Safety

Fire Apparatus Practices

Protection Breathing Equipment

LAW ENFORCEMENT TRAINING

Accident Investigation

Civil Law Procedure

Criminal Investigation

Crowd and Riot Control

Defensive Tactics

Introduction to Police Science

Jail and Detention Service Training

Narcotics Investigation

Supervision for Law Enforcement

Police Firearms Training

For further information on these courses or any other courses, please contact the Department of Continuing Education, Cleveland Technical College.

SKILLS DEVELOPMENT CENTER

The Skills Development Center provides a variety of educational experiences for adults by guiding them in the development of individual strategies to improve the necessary skills for coping with change in today's complex society.

Striving to meet the spectrum of needs of the College and the community, the staff of the Skills Development Center provides flexibility within each program. The goal of the Center is to assist participants as they strive to become independent learners and productive citizens.

Educational, cultural, economic and social needs are considered when students apply for the various programs.

Following are the programs and services available through the Skills Development Center.

Basic Education Programs

Adult Basic Education Program

Adult High School Program

G.E.D. Preparatory Program and Examination

Learning Lab Programs

Human Resources Development Program

Cooperative Skills Training Program

Comprehensive Education Project

Adults, eighteen years of age or older, desiring to make application for any of the Skills Development Center programs should contact the appropriate departments for additional information.

ADULT BASIC EDUCATION PROGRAM

Adults who have less than a high school education may enroll in the Adult Basic Education Program. The program includes instruction in reading, writing, mathematics, social studies, science, and health education. In each of these areas, instruction is designed to assist students in meeting adult responsibilities by improving fundamental skills. Learning opportunities include instruction for those who have received no formal education to those who have received as much as eight years of instruction.

Classes are organized into two groups. The first group is for those who need individual instructional guidance in basic reading and writing skills. In the second group, a higher level of instruction is offered in reading and writing at a more advanced level than that of group one. The second group also receives instruction in basic science and social studies.

With successful completion of the subject matter taught in group two, the student may then advance into the high school program.

Students may enter ABE classes at any time. However, the staff recommends that individuals enroll during the registration period at the beginning of each quarter. In order to take advantage of the complete program being offered, the College encourages students to maintain attendance in these classes over a period of several school quarters.

There is no registration fee for ABE classes. Classes are held on campus and at various locations throughout the country.

ADULT HIGH SCHOOL PROGRAMS

The Adult High School Program is available to Cleveland County adults who have passed the eighth grade or the Eighth Grade Equivalent Test and wish to complete the high school program. The successful completion of twenty units and a passing score on the North Carolina Competency Test are required for graduation from the Adult High School Program. Any previously earned high school units are usually accepted toward the total requirements. The program is free, although there may be a small fee for textbooks. A graduation fee is charged to each student completing the high school requirements. The graduate will be issued a diploma or certificate from the school district in which he or she lives.

Adult High School students may arrange a schedule to complete high school through the Learning Lab program or the classroom program on campus, or at various locations throughout the county. Interested persons may enroll in the Adult High School Program at any time.

Requirements for graduation include the following:

English.....	4 units
Social Studies	3 units
Mathematics	3 units
Science.....	3 units
Electives	7 units
N.C. Competency Test	

Upon completion of the Adult High School Program, graduates may enroll in one of the curriculum programs at Cleveland Technical College or another college of their choice.

GENERAL EDUCATIONAL DEVELOPMENT (GED) PREPARATORY/EXAMINATION

The GED (high school equivalency) Preparatory Program is designed for adults preparing to take the GED examination. The preparatory program is recommended but not required. Each student's academic skills are evaluated to determine specific instructional need. The student primarily studies in the areas of English, reading and math. After achieving specific skills and knowledge, the student is prepared to take the GED examination.

The examination tests knowledge and understanding of correct writing skills, social studies interpretation, natural science interpretation, literature interpretation, and mathematics. Upon successful completion of the examination, the adult will be issued a Certificate of High School Equivalency by the North Carolina State Board of Education, and in turn, qualify for admission to the College or, in general, for admission to more advanced educational opportunities.

The GED examination is scheduled monthly at Cleveland Technical College. A one day session is required in order to complete the test. There is a \$5.00 charge for the testing service. Application to be tested or re-tested may be made by any North Carolina adult.

LEARNING LAB PROGRAM

The Learning Lab, located on Tech's campus, includes the high school programs in addition to the General Interest Programs. General Interest Programs are available for adults who have already completed high school or college work but who want to continue their educational development in a non-structured curriculum. Wherever there is a need, the staff will seek to provide a non-credit program, offering whatever assistance possible with the available materials.

For their own self-improvement and personal interest, many community residents choose self-instructional courses such as reading improvement, math or English.

Because there are no organized classes in the Learning Lab, the staff will assist the student in arranging a study schedule to meet his or her needs. The student may attend the hours and days which are most convenient for him or her. The Learning Lab is open from 8:00 AM to 10:00 PM, Monday through Thursday and from 8:00 AM to 4:00 PM on Friday.

HUMAN RESOURCES DEVELOPMENT PROGRAM

The Human Resources Development Program provides pre-vocational training and counseling for unemployed and underemployed adults. Upon graduation, participants receive assistance with job placement or opportunities for skills training.

The goal of the Human Resources Development Program is to prepare persons for successful performance in the work force. The primary objective of the program is to reduce unemployment and underemployment by making it possible for the participants to become and remain productive employees.

Students in the Human Resources Development Program enroll for approximately seven weeks of instruction. The curriculum includes an orientation to the workplace, and instruction in reading, writing and arithmetic skills, and instruction in human relations, which are essential to securing and maintaining employment.

Some participants may qualify for financial assistance for educational expenses and living costs.

Classes are held on campus from 8:30 AM to 3:30 PM, Monday through Friday.

COOPERATIVE SKILLS TRAINING PROGRAM

The primary goal of the program is to provide a comprehensive training program capable of meeting the expressed training needs of the industries of Cleveland County. The College works jointly with industrial representatives to assess their needs and provide appropriate training to upgrade their employees' skill levels.

Working cooperatively with industry, the staff selects course content, decides on the length, time and location for the course to be offered. Instructional personnel is selected for training courses on the basis of competence in the specific subject area to be taught.

The training is conducted on a competency based instructional mode. External and internal evaluation of trainee progress by the program staff and the trainee's employer is a cooperative venture.

COMPREHENSIVE EDUCATION PROJECT

The Comprehensive Education Project which is located at the correctional institute is structured toward meeting the academic, vocational, and social needs of selected medium custody inmates who plan to reside in the South Piedmont area when paroled.

Upon completion of the program, the inmates receive a certificate in the vocational areas of Electrical Installation and Maintenance (9 months), Welding (6 months), Carpentry (9 months), Plumbing (6 months), Food Service Management or Cooking and Baking (6 months). The inmates attend classes 30 hours a week.

Related subjects are required in the areas of reading, math, and human relations. Preparation for the GED examination is also available with the test being administered bi-yearly.

It is anticipated that each inmate who completes the Comprehensive Education Project will acquire the necessary vocational skills to obtain permanent employment under the work-release program and retain this employment upon his release.

LEARNING RESOURCES CENTER

Hours: 8:00 a.m.-10:00 p.m. Monday - Thursday
8:00 a.m.-4:00 p.m. Friday

The Learning Resources Center (LRC) is a multimedia facility designed to support the total educational program of Cleveland Technical College. The LRC includes: Library Services and Audiovisual Services. The merger of these components provides a broad range of services to meet the instructional and individual needs of students, staff, and the community members. The LRC staff offers both professional and technical assistance to meet the total institutional and community needs.

LIBRARY SERVICES

The Library has a growing collection of approximately 25,500 volumes, most of which are related to the Degree and Diploma programs. The selection of materials, both book and non-book, is done in consultation with faculty, students, and administration. The Library has a collection of local history materials that is used in conjunction with Continuing Education courses on local history for anyone who wishes to research local history and genealogy. The open shelf concept is used to encourage browsing and study. The library subscribes to approximately 200 periodicals. The audio-visual collection is inter-shelved with the books for better accessibility.

AUDIO-VISUAL SERVICES

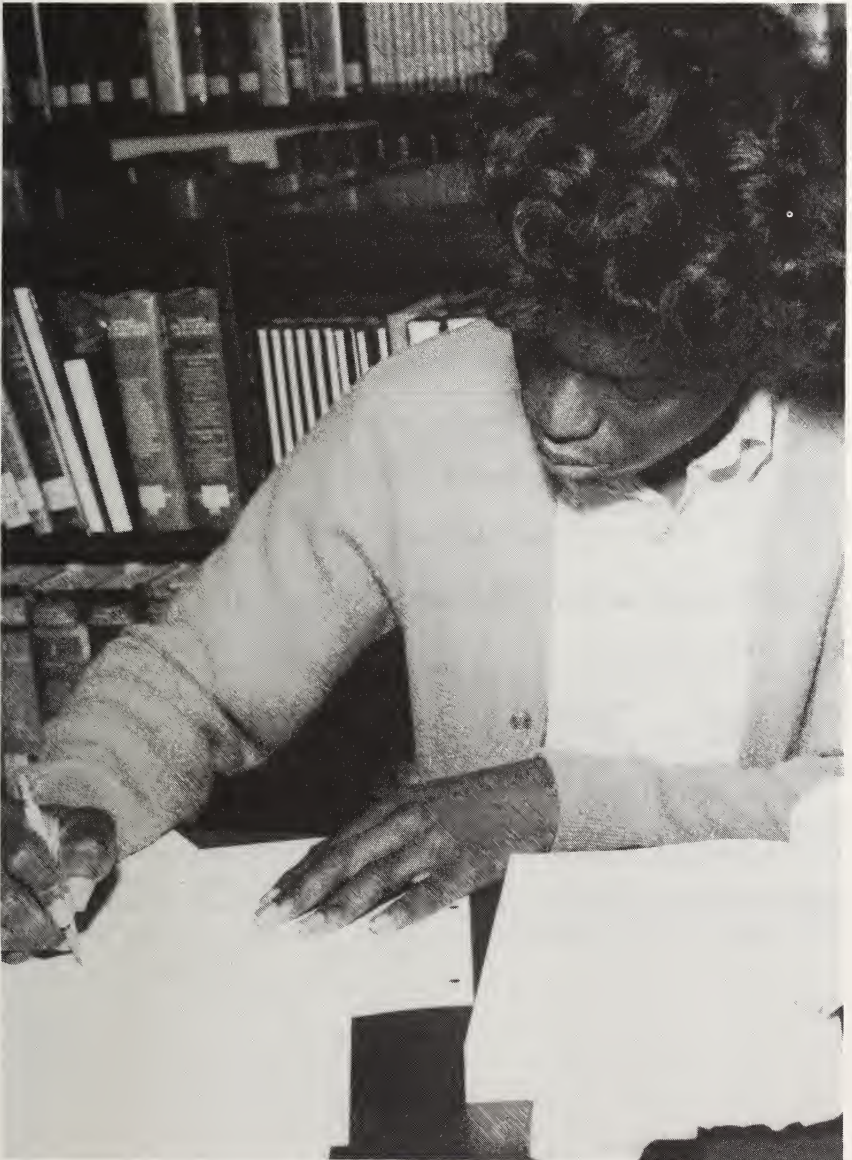
Functions of the audiovisual services section of the Learning Resources Center include the coordination of AV instructional materials and equipment and media productions.

There are over 4,500 AV acquisitions in the collection including films, cassette tapes, slides, records, filmstrips, film loops, transparencies, video tapes, etc. The department maintains the most up-to-date equipment for all software.

This includes portable equipment which is used in the classroom as well as the closed circuit TV system that is available in sixty classrooms, the Learning Resources Center, and various offices and lobbies as well. In addition, the Multipurpose Teaching Lab is an integral part of the Audiovisual Services Department.

Most of the AV materials may be checked out by students for use in the Learning Resources Center, in the classroom, or at home.

The Audiovisual Department is responsible for the operation of the College's community cable access Channel 22, which began broadcasting September, 1982. The community cable channel provides capabilities for delivery of educational, cultural, and public service programming to approximately 7,500 cable subscribers. This includes Shelby, Boiling Springs, Polkville, Patterson Springs, Fallston, Lawndale and surrounding areas.



PERSONNEL

BOARD OF TRUSTEES

APPOINTED BY THE CLEVELAND COUNTY COMMISSIONERS

- David S. Banks, Vice Chairman1989
837 North Morgan Street, Shelby, North Carolina
- Brooks Piercy, Sr1989
P. O. Box 751, Boiling Springs, North Carolina
- Grady K. Howard1987
406 Edgemont Drive, Kings Mountain, North Carolina
- John F. Schenck, III, Chairman.....1991
Cleveland Mills, Lawndale, North Carolina

APPOINTED BY THE SCHOOL BOARDS OF CLEVELAND COUNTY

- Mrs. Mary Lou Barrier1987
Route 3, Lawndale, North Carolina
- David H. Atkinson.....1989
P. O. Box 262, Lattimore, North Carolina
- Dr. Robert B. Litton.....1989
P. O. Box 1346, Shelby, North Carolina
- Robert Howard Bryant.....1991
703 Crescent Circle, Kings Mountain, North Carolina

APPOINTED BY THE GOVERNOR OF NORTH CAROLINA:

- Dean Westmoreland.....1987
Route 1, Box 1160, Grover, North Carolina
- Mrs. Deborah H. McCartney.....1989
47 Appian Way, Shelby, North Carolina
- Frank V. Beam.....1989
700 Branton Drive, Shelby, North Carolina
- Stuart LeGrand.....1991
P. O. Box 850, Shelby, North Carolina

Current President, Student Government Association, Cleveland Technical College (Ex-Officio Member)

PERSONNEL OF THE INSTITUTE (FULL-TIME)

OFFICE OF THE PRESIDENT

President James B. Petty
 B.S., Vocational Education, Clemson University
 M.A., Administration, Appalachian State University
 Ed.D., Nova University

GENERAL ADMINISTRATION

Executive Vice President Noel R. Lykins
 B.A., University of Louisville
 B.D., Th.M., Southeastern Baptist Theological Seminary
 Ed.D., North Carolina State University

Director of College Foundation Albert Patton Hamner
 B.A., University of Alabama
 M.A.Ed., Western Carolina University
 University of Alabama Law School

Director of Public Relations and Development Dorothy Roark
 B.S., M.A., Michigan State University
 Ed.S., Appalachian State University
 CAGS, Ed.D. Candidate, Virginia Polytechnic Institute and State University

Printshop Supervisor Alan Price
 B.S., Western Carolina University
 Appalachian State University

DIVISION OF BUSINESS AFFAIRS

Vice President of Business Affairs James E. Greene
 A.A., Gardner-Webb College
 B.S., Limestone College
 M.A., Appalachian State University

Bookkeeper Jane Webb
 Southern Business College
 Cleveland Technical College

Assistant Bookkeeper Carolyn Queen
 Gardner-Webb College

Security Officer Glenn Poston
 22 years experience with Cleveland County Sheriff's Department

Purchasing Officer Kay Allen
 A.A.S., Cleveland Technical College
 B.S., Limestone College

Bookstore Manager Louise Hamrick
 A.A., Gardner-Webb College

Food Service Supervisor (Part-time) J. L. Sarratt
 Howard's Business College

DIVISION OF INDUSTRY AND COMMUNITY SERVICE

- Vice-President of Industry and Community Service** Joe M. Hamrick
 B.S., North Carolina State University
 M.A., Appalachian State University
 Doctoral Studies, North Carolina State University
- Director of Continuing Education**..... John Kilby
 B.S., M.A., Appalachian State University
 Ed.S., Western Carolina State University
 North Carolina State University
- Director of Industry and Occupational Extension**..... David M. (Pete) Stamey
 B.S., North Carolina State University
 M.A.Ed., Western Carolina University
 Ed.S., Western Carolina University
- Director of Instruction (ICS)** Rebecca K. Cook
 A.A., Gardner-Webb College
 B.A., Appalachian State University
 M.Ed., University of North Carolina at Charlotte
- Director of Prison Program** Donald Smith
 B.S., Clemson University
 M.A., Appalachian State University
 Ed.S., Western Carolina University
- Coordinator of Basic Programs** W. Cobern Pruitt
 B.S., M.A.Ed., Ed.S., Western Carolina University
- Coordinator of Learning Lab Programs**..... M. Eugene Eskridge
 B.S., M.A., Appalachian State University
- Coordinator of Individual Referral Program** Nancy N. Hopper
 A.A.S., Cleveland Technical College
 B.S., Gardner-Webb College
 Western Carolina University
 Appalachian State University

DIVISION OF INSTRUCTION

- Vice-President of Instruction** C. Edwin White
 A.A., Gardner-Webb College
 B.S., North Carolina State University
 M.A. Appalachian State University
- Dean of Allied Services**..... Gene C. Cox
 B.S., Western Carolina University
 M.A., Gardner-Webb College
- Dean of Arts, Sciences, and Public Services**..... Dorothy P. McIntyre
 A.A., Gardner-Webb College
 B.A., Limestone College
 M.A., University of North Carolina at Charlotte
 Ed.S., Appalachian State University
 CAGS, Ed.D., Virginia Polytechnic Institute and State University

- Dean of Business Programs**.....Madge Wray
 B.S., North Carolina A and T University
 M.A., Winthrop College
- Dean of Learning Resources**Haley C. Dedmond
 A.A., Gardner-Webb College
 B.A., Limestone College
 M.A.L.S., Appalachian State University
 University of North Carolina at Chapel Hill
- Director of Audiovisual Services**.....Melvin Campos
 B.A., Gardner-Webb College
 M.A.Ed., Western Carolina University

DIVISION OF STUDENT SERVICES

- Vice-President of Student Services** Sandra W. Hardin
 B.B.A., University of Houston
 M.A.Ed., Western Carolina University
- Registrar and Director of Admissions**LouAnn Bridges
 A.A.S., Cleveland Technical College
 B.S., Gardner-Webb College
 University of South Carolina at Spartanburg
- Director of Financial Aid and Veterans Affairs** Thomas C. Poston
 A.A., Gardner-Webb College
 B.A., Limestone College
 M.A., Appalachian State University
 Ed.S., Western Carolina University
- Director of Recruiting and Counseling**Jean Francis
 A.A.S., Cleveland Technical College
 B.S., Limestone College
 University of South Carolina at Spartanburg
- Director of Student Activities and Career Information**.....Adrian Wyrick
 B.A., M.A., North Carolina Central University

SECRETARIAL STAFF

- Secretary, Learning Resources Center**Pat Anderson
 Appalachian State University
 Cleveland Technical College
 University of South Carolina
- Secretary, Instruction** Lee Bryant
 A.A.S., A.G.E., Cleveland Technical College
- Secretary, Continuing Education**..... Nancy W. Carpenter
 Jr. Secretarial Degree, Kings College
- Secretary, Continuing Education**.....Phyllis Haynes
 A.A.S., Cleveland Technical College
- Secretary, Basic Programs**.....Joyce Hosch
 A.A.S., Cleveland Technical College
- Secretary, Receptionist** Billie Jenks
 Shelby Business College
 A.A.S., Cleveland Technical College
 Gardner-Webb College

Secretary, Student Services	Sandra Mabery
B.A., Winthrop College	
A.A.S., Cleveland Technical College	
Secretary, President's Office	Frances Morgan
A.A.S., Cleveland Technical College	
Western Carolina University	
Secretary, Student Services	Joyce Crumpton
A.A.S., Cleveland Technical College	
Western Carolina University	
Secretary, Human Resources Development	Karen Patterson
A.A.S., Cleveland Technical College	
Secretary, Student Services	Carolyn Petty
A.A.S., Cleveland Technical College	
North Carolina A and T University, Limestone College	
Secretary, Public Relations	Beverly Ponder
Gardner-Webb College	
A.S., Kings College	
Secretary, Student Services	Shirley K. Rodriguez
A.A.S., Cleveland Technical College	
B.S., Limestone College	
Secretary, Learning Resources Center	Carolyn Smith
A.A.S., Cleveland Technical College	
Gardner-Webb College	

MAINTENANCE STAFF

Maintenance-Supervisor	Marvin R. Philbeck
Custodian	Forest Littlejohn
Custodian	Jesse J. Lott
Custodian	Carroll Hamrick
Housekeeping-Supervisor	Columbus Church
Housekeeper	Ruby Easter
Housekeeper	Patricia Oglesby
Housekeeper	Dorothy Surratt
Housekeeper	Dorothy Linda Black
Housekeeper	Jessie Eskridge
Housekeeper	Emma Robbs

FACULTY

- Alex Alexander Instructor-Food Service & Mgmt, Prison Program
 Johns Hopkins University
 Johnson and Wales Culinary Arts College
 UNC-Greensboro
 A.A.S., Cleveland Technical College
 Western Carolina University
- Renee Allison..... Instructor-Business Computer Programming
 B.S., Appalachian State University
 University of North Carolina at Charlotte
- Henry P. (Hal) Bryant, Jr..... Instructor-General Education
 B.A., Gardner-Webb College
- Ray Fisher Instructor-Allied Services
 A.S., Gaston College
 Western Carolina University
- James Walter Fite..... Instructor-Math and Science
 B.S., M.A., Appalachian State University
 Additional study, Indiana State University, University of South Carolina,
 University of North Colorado
- Woodrow GlennInstructor-Business, Accounting, Mgmt.
 B.S., Gardner-Webb College
 Western Carolina University
 Appalachian State University
- Tommy GreeneInstructor-Business, Accounting, Mgmt.
 A.A.S., Cleveland Technical College
 B.S., Limestone College
- Richard Heaven Instructor-Allied Services
 Virginia Mechanics Institute
 University of Richmond
 Central Piedmont Community College
 Western Carolina University
 45 years of experience in Air Conditioning, Heating, and Refrigeration
- Everett Hollifield (Part-time)..... Instructor-Allied Services
 General Motors Training School
 Dupont Training Center
 35 years of experience in Auto Body Repair
- Allen HooperInstructor-Carpentry, Prison Program
 Isothermal Community College
 B.T., Appalachian State University
- Rosalyn Hunt..... Instructor-Related Subjects, Prison Program
 B.S., Fayetteville State University
 Western Carolina University
 Appalachian State University
- Bo Jones..... Instructor-Allied Services
 16 years of experience in Automotive Mechanics
 B.S., Western Carolina University
- Kay Jones.....Instructor-Nursing
 A.A., Gardner-Webb College
 R.N., Rex Hospital School of Nursing
 B.S.N., North Carolina Wesleyan College

- Rebecca E. Kiser Instructor-Director of Co-op Education
 A.A.S., Cleveland Technical College
 B.T., M.A., Appalachian State University
- Charles E. Mack, Jr Instructor-Business, Accounting, Mgmt.
 A.A., Gardner-Webb College
 B.A., Catawba College
- Wilson Mann Instructor-Allied Services
 U. S. Army Mechanics Training
 Dealer Training
 15 years experience in motor management
- John B. Martin Instructor-Business, Accounting, Mgmt.
 A.A., Gardner-Webb College
 B.S., M.A., Appalachian State University
 North Carolina State University
- Louise H. Martin Instructor-Record Maintenance, HRD
 B.A., Meredith College
 M.A.Ed., Western Carolina University
- C. W. Mauney Instructor-Welding, Prison Program
 A.A.S., Cleveland Technical college
 Diplomas/(Auto Mechanics and Welding), Cleveland Technical College
 B.S., Western Carolina University
- Wilbur R. McBride Instructor-General Education
 B.A., Wofford College
 M.A.Ed., University of North Carolina at Chapel Hill
 Advanced study, University of Arkansas, University of Michigan, University of
 Kansas, New Mexico State University, University of North Carolina at
 Chapel Hill
- Roberta McCluney Instructor-Recruiter, HRD
 B.S., North Carolina Central University
 Western Carolina University
 Appalachian State University
- Fred McFarland Instructor-Business, Accounting, Mgmt.
 A.A., Gardner-Webb College
 B.A., Carson-Newman College
 M.A., Appalachian State University
- William B. McGinnis Instructor-General Education
 Mars Hill Junior College
 B.A., Furman University
 S.T.B., Harvard University
 S.T.M., Andover-Newton Theological Seminary
 M.A., Boston University
 Boston University
- Harry McKeithan Instructor-Plumbing, Prison Program
 Gardner-Webb College
 NC Shipbuilding School of Engineering
 Certified Pipe Welder
 Various trade schools (company sponsored)
 B.S., Western Carolina University
- Michael McSwain Instructor-Allied Services
 A.A.S., United Electronics Institute
 Western Carolina University

- Joyce Meade..... Department Head-Secretarial & Fashion Sciences
 B.S., University of North Carolina at Greensboro
 M.A., Winthrop College
- Myra Morrison..... Instructor-Fashion
 American Business and Fashion Institute at Charlotte
 Lees McRae College
 Cleveland Technical College
 Specialized in Fashion Coordination, Free Lance Wardrobe and Consultant,
 10 years experience in Retailing
- Bobby Poston..... Instructor-General Education
 A.A., Gardner-Webb College
 B.A., University of North Carolina
 M.A., Appalachian State University
 Appalachian State University
- Franklin Pullen..... Instructor-Math and Science
 B.S., North Carolina A and T University
 M.S., University of Rhode Island
 Rhode Island College
 Appalachian State University
- Robert Putnam..... Instructor-Electrical, Prison Program
 North Carolina Vocational Textile School
 22 years of electrical experience
- Roger Randall..... Instructor-Allied Services
 National Institute Automotive Service Excellence Certification
 Experience
 Western Carolina University
- Kay Rast..... Instructor-Business Computer Programming
 University of Georgia
 Georgia State University
 Gardner-Webb College
- Charles D. H. Reynolds..... Instructor-Communications
 B.A., Williams College
 M.A., University of Chicago
 Ph.D., University of Nebraska
 Northwestern University
 University of California at Berkeley
 University of Southern California
 Rhode Island School of Design
- Maxine Romney..... Instructor-Business, Accounting, Mgmt.
 B.B.A., City College of New York
 M.Ed., Northeastern University
 Vermont State Hospital
- Linda Ross..... Instructor-Business, Accounting, Mgmt.
 LPN Diploma, A.A.S., Cleveland Technical College
 B.A., Limestone College
 M.S., North Carolina A and T University
 North Carolina State University
- Wylie Sanders (Part-time)..... Instructor-Allied Services
 Armed Forces and Electronics Training Schools
 40 years experience in Radio and TV Servicing
- JoAnn Schilling..... Department Head-Radiologic Technology
 R.T., Lewis-Gale Hospital School of Radiologic Technology
 B.G.S., University of South Carolina
 M.A.Ed., Western Carolina University
 Appalachian State University

Exit

1-803-598-8353

168 / Personnel

- University Campus

Lebanon
Route
176

Right
before
Hering
circle

Ramada
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USCS
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left -
Jones

road
curves
to
right

stoplight

Springfield
pld. v.
right

go past
elementary
school

second
right
Woodmont St.

- Michael Schwartz Department Head-Criminal Justice
B.S., The Citadel
- Jerome Scott.....Instructor-Business, Accounting, Mgmt.
A.A., Morristown Junior College
B.S., Carson-Newman College
Appalachian State University
- Danny Scruggs..... Instructor-Business Computer Programming
B.S., M.A., Appalachian State University
Cleveland Technical College
- Anne Smevog..... Department Head-Business, Accounting, Mgmt.
B.A., Lenoir-Rhyne College
M.A.Ed., Western Carolina University
A.A.S., Cleveland Technical College
Doctoral Studies, University of North Carolina at Chapel Hill
Doctoral Studies, North Carolina State University
- Joseph M. Southards Department Head-Math and Science
B.S., Gardner-Webb College
M.A., Appalachian State University
- Ruth Stamey..... Department Head-Nursing
A.A., Lenoir-Rhyne College
R.N., Shelby School of Nursing
B.A., Limestone College
- Elwin Stilwell Media Technician-Teachers Aide
Brevard College
- John Swofford..... Instructor-Allied Services
U. S. Army Welding Schools
22 years experience in Commercial Welding
B.S., Western Carolina University
- Barbara Taylor Instructor-General Education
B.S., Mississippi State University
M.A., Appalachian State University
- Lawrence Kenneth Vassy Instructor-Allied Services
Diploma-RCA Institute
Cleveland Technical College
B.S., Western Carolina University
- Hugh L. Walker, Jr.....Department Head-Business Computer Programming
A.A.S., Cleveland Technical College
B.S., North Carolina State University
M.A.Ed., Western Carolina University
- Bob G. Wells..... Instructor-Allied Services
Military Training School
26 years experience in Machinist
B.S., Western Carolina University
- Anita Wilkie..... Instructor-General Education
Brevard Junior College
Gardner-Webb College
B.A., Limestone College
M.A., Appalachian State University
Appalachian State University
- Ronald Wright.....Department Head-General Education and
Communications Technology
A.A., B.A., Gardner-Webb College
M.A., Western Carolina University
Ed.S., Appalachian State University
Ph.D., University of South Carolina

no first left
turn
2nd
have
right



↑
TO
MORGANTON

NC 180 N

TO SHELBY

US 74 BUS.



CLEVELAND
COUNTY
FAIR

S. POST ROAD



CLEVELAND
TECHNICAL
COLLEGE

US 74 BYPASS

TO SHELBY

TO
KINGS
MOUNTAIN →

NC 180 S

TO GAFFNEY



Cleveland Technical College
137 South Post Road
Shelby, North Carolina 28150