



A UNIT OF THE
NORTH CAROLINA
DEPARTMENT OF
COMMUNITY COLLEGES

GENERAL CATALOG
1973-74 1974-75
SHELBY, N. C.

NOTE

Cleveland County Technical Institute 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 Institute 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 Education, the Department of Community Colleges, or by local conditions may make some alterations in curriculums, fees, etc., necessary.

VISITORS

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

MEMBER OF

American Association of Community and Junior Colleges
Southern Association of Junior Colleges
North Carolina Department of Community Colleges
(Correspondent Status) Southern Association of Colleges and
Schools

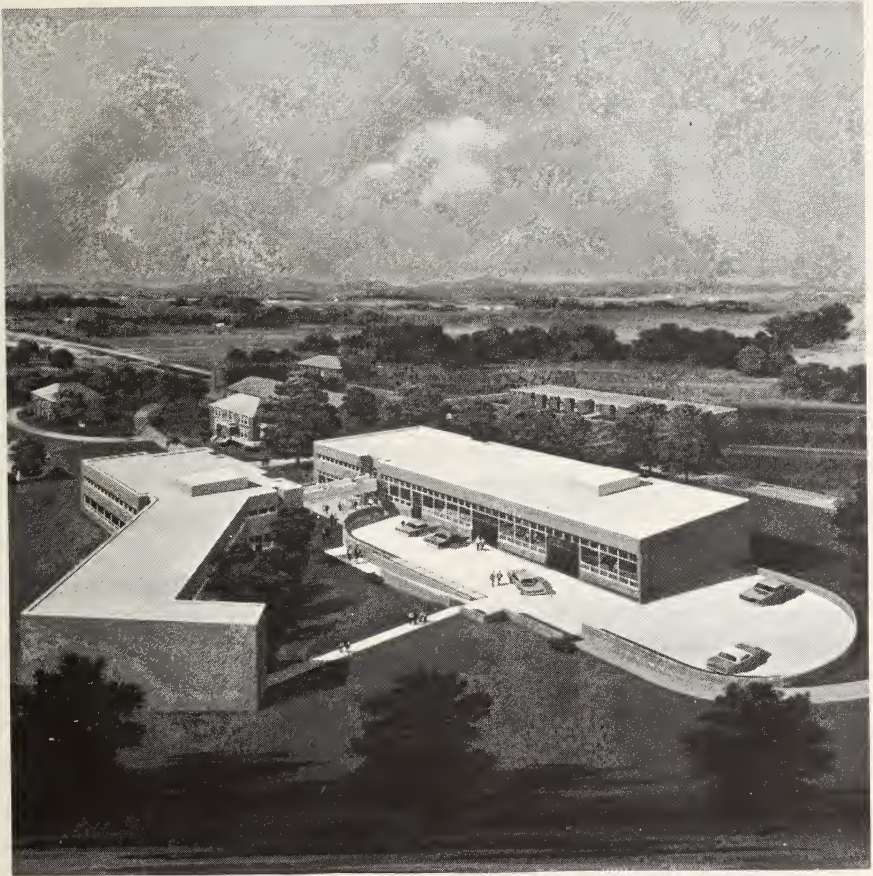
APPROVED BY

North Carolina State Board of Education
North Carolina Board of Nursing

GENERAL CATALOG

1973-74

1974-75



137 South Post Road
Shelby, North Carolina

Telephone: 482-4378

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DIRECTORY OF CORRESPONDENCE

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

Academic Affairs	Dean of Instruction
Administrative Affairs	The President
Admission	Director of Admissions
Adult Basic Education	Assistant Director, General Adult Education
Entrance Procedures	Director of Admissions
Evaluation of Credits	Director of Admissions
Financial and Business Affairs	Business Manager
Gifts and Bequests	The President
High School Program	Director of Admissions
Job Placement Service	Director of Student Placement
Non-Credit Courses	Director of General Adult Education
Registration	Registrar
Student Financial Aid	Director of Financial Aid
Student Affairs	Dean of Student Services
Transcripts	Registrar
Veteran's Affairs	Dean of Student Services



CALENDAR OF EVENTS

1973-74

FALL QUARTER

13/09

September 10-11	Monday, Tuesday	Orientation and Registration
September 12	Wednesday	First Day of Classes
September 19	Wednesday	Last Day for late Registration
November 22-23	Thursday, Friday	Thanksgiving Holidays
November 29	Thursday	Fall Quarter Ends

WINTER QUARTER

13/12

<p>✓ December 4</p> <p>December 5</p> <p>December 12</p> <p>December 18</p> <p>January 2</p> <p>March 5</p>	<p>Tuesday</p> <p>Wednesday</p> <p>Wednesday</p> <p>Tuesday</p> <p>Wednesday</p> <p>Tuesday</p>	<p>Registration (Orientation for New Students)</p> <p>First Day of Classes</p> <p>Last Day for Late Registration</p> <p>Christmas Holidays begin after last class</p> <p>Classes Resume</p> <p>Winter Quarter Ends</p>
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SPRING QUARTER

14/03

<p>✓ March 11</p> <p>March 12</p> <p>March 19</p> <p>April 12-15</p> <p>April 16</p> <p>May 29</p> <p>May 29</p> <p>May 30</p>	<p>Monday</p> <p>Tuesday</p> <p>Tuesday</p> <p>Friday, Monday</p> <p>Tuesday</p> <p>Wednesday</p> <p>Wednesday</p> <p>Thursday</p>	<p>Registration (Orientation for New Students)</p> <p>First Day of Classes</p> <p>Last Day for Late Registration</p> <p>Easter Holidays</p> <p>Classes Resume</p> <p>Spring Quarter Ends</p> <p>Graduation Rehearsal</p> <p>Spring Graduation Exercises</p>
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SUMMER QUARTER

74/06

<p>✓ June 6</p> <p>June 7</p> <p>June 14</p> <p>June 28</p> <p>July 8</p> <p>August 29</p> <p>August 29</p> <p>August 30</p>	<p>Thursday</p> <p>Friday</p> <p>Friday</p> <p>Friday</p> <p>Monday</p> <p>Thursday</p> <p>Thursday</p> <p>Friday</p>	<p>Registration (Orientation for New Students)</p> <p>First Day of Classes</p> <p>Last Day for Late Registration</p> <p>Summer Holidays Begin after last class</p> <p>Classes Resume</p> <p>Summer Quarter Ends</p> <p>Graduation Rehearsal</p> <p>Summer Graduation Exercises</p>
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CALENDAR OF EVENTS

1974-75

FALL QUARTER

74109

<p>✓ September 9-10 September 11 September 18 November 26</p>	<p>Monday, Tuesday Orientation and Registration Wednesday First Day of Classes Wednesday Last Day for Late Registration Tuesday Fall Quarter Ends</p>
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WINTER QUARTER

7412

<p>✓ December 3 December 4 December 11 December 18 January 2 March 4</p>	<p>Tuesday Registration (Orientation for New Students) Wednesday First Day of Classes Wednesday Last Day for Late Registration Wednesday Christmas Holidays begin after last class Thursday Classes Resume Tuesday Winter Quarter Ends</p>
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SPRING QUARTER

75103

<p>✓ March 10 March 11 March 18 March 28-31 April 1 May 28 May 28 May 29</p>	<p>Monday Registration (Orientation for New Students) Tuesday First Day of Classes Tuesday Last Day for Late Registration Friday, Monday Easter Holidays Tuesday Classes Resume Wednesday Spring Quarter Ends Wednesday Graduation Rehearsal Thursday Spring Graduation Exercises</p>
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SUMMER QUARTER

75106

<p>✓ June 5 June 6 June 13 June 27 July 7 August 28 August 29</p>	<p>Thursday Registration (Orientation for New Students) Friday First Day of Classes Friday Last Day for Late Registration Friday Summer Holidays begin after last class Monday Classes Resume Thursday Summer Quarter Ends; Graduation Rehearsal Friday Summer Graduation Exercises</p>
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BOARD OF TRUSTEES

APPOINTED BY THE CLEVELAND COUNTY COMMISSIONERS:

James Cornwell	1981
Lattimore, North Carolina	
Spurgeon Hewitt	1979
Route 1, Lawndale, N. C.	
C.G. Poston	1977
Metcalf Road, Shelby, N. C.	
John Schenck, III, Vice Chairman	1975
Cleveland Mills, Lawndale, N.C.	

APPOINTED BY THE SCHOOL BOARDS OF CLEVELAND COUNTY:

Mrs. Mary Lou Barrier	1979
Route 3, Lawndale, N.C.	
Carl J. Dockery, Jr.	1977
509 Crawford Street, Shelby, N.C.	
Cecil Gilliatt, Chairman	1981
East Marion Street, Shelby, N.C.	
J. E. Herndon, Jr.	1975
119 N. Piedmont Avenue, Kings Mountain, N.C.	

APPOINTED BY THE GOVERNOR OF NORTH CAROLINA:

Mrs. Robert O. Burns	1973
600 Peach Street, Shelby, N.C.	
Ralph W. Dixon	1977
Fallston, North Carolina	
H. Eugene LeGrand	1979
1000 W. Blanton Avenue, Shelby, N.C.	
Carl F. Mauney	1975
809 E. King Street, Kings Mountain, N.C.	

ADMINISTRATION

President James B. Petty
B. S., Vocational Education, Clemson University
M. A., Administration, Appalachian State University
Advanced study, University of North Carolina,
North Carolina State University

DEPARTMENT OF INSTRUCTION

Dean of Instruction Alvin M. Sherlin
B. S., Western Carolina University
M. A., Appalachian State University
Advanced study, North Carolina State University

Director of Occupational Education Harry M. Matthews
A. B., High Point College
M. A., Appalachian State University
Advanced study, North Carolina State University

Director of General Adult Education Dan T. Camp
A. A. Gardner-Webb College
B. S., Appalachian State University
M.Ed., University of North Carolina
Advanced study, Appalachian State University

Assistant Director, General Adult Education Donald E. Smith
B. S., Clemson University
M. A., Appalachian State University

Supervisor, Extension (Part-time) John Carroll Bridges
B.S., Appalachian State University
M.Ed., University of North Carolina at Charlotte

Supervisor, Extension (Part-time) William Frank McDaniel
B. S., Appalachian State University
M.Ed., University of North Carolina at Charlotte

DEPARTMENT OF STUDENT SERVICES

Dean of Student Services; Registrar Noel R. Lykins
B. A., University of Louisville
B. D., Th. M., Southeastern Baptist Theological Seminary
Ed.D. Candidate, North Carolina State University

Counselor; Financial Aid; Placement Bobby L. Poston
A. A., Gardner-Webb College
B. A., University of North Carolina
M. A., Appalachian State University
Advanced study, Appalachian State University

Counselor; Testing Director; Student Activities Franklin J. Pullen
B. S., North Carolina A & T University
M. S., University of Rhode Island
Advanced study, Rhode Island College

BUSINESS OFFICE

- Business Manager James E. Greene
A. A., Gardner-Webb College
B. S., Limestone College
Advanced study, University of North Carolina
Appalachian State University
- Night Administrative Assistant (Part-time) E. R. Wallace
A. A., Gardner-Webb College
B. S., Appalachian State University
Advanced study, North Carolina State University, High Point College
University of North Carolina at Charlotte
- Night Administrative Assistant (Part-time) Kenneth R. Grayson
B. A., M. A., Appalachian State University
- Bookkeeper Mrs. Jane B. Webb
Southern Business College
Cleveland County Technical Institute
- Bookstore Manager. Mrs. Daphne Ware
Southern Business College
A. A. S., Cleveland County Technical Institute
Diploma, National Association of College Stores
Additional study, Appalachian State University

LEARNING RESOURCES CENTER

- Director; Librarian Haley C. Dedmond
B. A., Limestone College
Advanced study, University of North Carolina
Appalachian State University
- Media Coordinator (Self-study materials) Mrs. Rebecca K. Cook
A. A., Gardner-Webb College
B. A., Appalachian State University
M. Ed., University of North Carolina at Charlotte
- Media Coordinator (Audiovisual Materials) Mrs. Dorothy Roark
B. S., M. A., Michigan State University
Advanced study, Michigan State University
Appalachian State University
- Media Coordinator (Print Materials) Mrs. Alice F. Tigner
B. A., Montclair State College



SECRETARIAL STAFF

- Secretary-Receptionist Mrs. Frances Morgan
 A. A. S., Cleveland County Technical Institute
- Secretary-Business Office Mrs. Sandra Melton
 Southern Business College
 Cleveland County Technical Institute

- Secretary-Extension Mrs. Anna L. Rankin
University of North Carolina at Greensboro
Carolina Commercial College
- Secretary-Student Services Mrs. Jolane B. McCain
A. A. S., Cleveland County Technical Institute
- Secretary-Instruction Mrs. Jean H. Francis
A. A. S., Cleveland County Technical Institute
- Secretary-Learning Resources. Mrs. Rebecca E. Kiser
A. A. S., Cleveland County Technical Institute

FACULTY

- Gerald Z. Allen (Night) Related Subjects
B. A., University of North Carolina at Chapel Hill
M. A., Appalachian State University
- Joseph T. Allen Jr. (Night) Drafting
A. A. S., York County Technical Education Center
- Cline Beam (Night) Masonry
Industrial Education, North Carolina State University
12 years experience in Masonry
- Ronald Keith Blanton (Night) Related Subjects
B. S. Ed., Georgia-Southern College
- Gerald L. Bumbaugh (Night) Radio & TV
B. S., M. A., Appalachian State University
- Mrs. Lallage Carouthers Practical Nursing
R. N., Good Samaritan Hospital School of Nursing
- Max Carroll (Night) Air Conditioning and Refrigeration
B. S., M. E., Georgia Institute of Technology
35 years experience
- Ted Cash. Electrical; Industrial Management
B. S., North Carolina State University
- Mrs. Muriel Caveny Practical Nursing
R. N., Gordon Crowell Memorial Hospital School of Nursing
- Gene C. Cox Electrical; Industrial Management
B.S., Western Carolina University
- William J. Clifton (Night) Industrial Management
B. S., Mechanical Engineering, University of Cincinnati
- William R. Dixon. (Night) Radio & TV
National Radio Institute
28 years experience

- C. Joe Ellis (Night) Related Subjects
B. A., Limestone College
- Maurice Eugene Eskridge Business Administration
B. S., M. A., Appalachian State University
Advanced study, Appalachian State University
- Mrs. Mabel Greene. Practical Nursing
R. N., Charlotte Memorial Hospital School of Nursing
Additional study, Jersey City Medical Center
- Edgar T. Guy (Night) Radio & Tv
B. S., Appalachian State University
- Mrs. Dorothy Hamrick (Night) Related Subjects
B. A., Limestone College
Advanced study, University of North Carolina at Charlotte
- James Oliver Hamrick Welding Trade
U. S. Army Welding School
26 years experience in commercial welding
- Mrs. Sandra Hardin Secretarial Programs
B. B. A., University of Houston
- Everett Hollifield Auto Body Repair
General Motors Training School
DuPont Training Center
35 years experience in Auto Body Repair
- E. Eugene Hollifield (Night) Auto Body Repair
13 years experience in Auto Body Repair
- Bobby Hoover Related Subjects
A. A., Gardner-Webb College
B. A. Ed., University of North Carolina
M. A. Ed., University of North Carolina at Charlotte
- Fred Jack Hoyle (Night) Plumbing
Licensed Plumber
- David N. James. Auto Mechanics
General Motors Training School
U. S. Army Mechanics School
Several Company sponsored schools
35 years experience in Automotive Mechanics
- Richard S. Jenkins (Night) Accounting
A. A. S., Western Piedmont Community College
- Mrs. Wilma Johnson Secretarial Programs
B. S., Winthrop College
Advanced study, Winthrop College

- William S. Jones (Night) Auto Mechanics
15 years experience in Automotive Mechanics
- Herbert Richard Lail (Night) Electrical
University of North Carolina; University of Florida
20 years experience in Electrical Installation
- Mrs. Beth Martin Instructor's Aide
B. A., Auburn University
- Randy Mayfield (Night) Business Administration
B. B. A., University of Georgia
- Mrs. Nancy F. McBrayer (Night) Related Subjects
B. S., Western Carolina University
- Phillip Davis McBrayer (Night) Industrial Management
B. S., Economics, Western Carolina University
- Fred McFarland Economics
A. A., Gardner-Webb College
B. A., Carson Newman College
Advanced study, Carson Newman College, Lenoir Rhyne College
- Rev. Fred McGhee (Night) Related Subjects
B. A., Baylor University
B. D., M. R. E., Th. M., Southwestern Baptist Theological Seminary
D. Min. Candidate, Southeastern Baptist Theological Seminary
- Mrs. Dorothy McIntyre English
A. A., Gardner-Webb College
B. A., Limestone College
M. A., University of North Carolina at Charlotte
Advanced study, Appalachian State University
- Larry J. McKay (Night) Related Subjects
B. S., East Tennessee State University
- Mrs. Joyce Meade (Night) Secretarial Programs
B. S. S. A., University of North Carolina at Greensboro
Advanced study, University of North Carolina at Greensboro
University of North Carolina at Chapel Hill
- Mrs. Joanne W. Newman (Night) Key punch
16 Years experience in Data Processing
- Jerry Noftsger (Night) Industrial Management
B. S., Electrical Engineering, University of Cincinnati
M. B. A., Bowling Green State University
- Graham Phifer (Night) Related Subjects
B. S., North Carolina State University
M. Ed, University of North Carolina at Charlotte
Advanced Educational Media Study, East Carolina University

Wylie Sanders Radio & TV
 Armed Forces and Electronics Industries training schools
 40 years experience in Radio and TV Servicing

Charles Shapiro (Night) Industrial Management
 B. B. A., Clackson College of Technology

Mrs. Lois J. Shapiro (Night) Related Subjects
 B. S., M. Ed., University of Pittsburgh

Lloyd Shivers (Night) Related Subjects
 B. A., Barber-Scotia College
 M. A., Appalachian State University

Mrs. Ruth Stamey Practical Nursing
 A. A., Lenoir Rhyne College
 R. N., Shelby School of Nursing

John K. Swofford (Night) Welding Trade
 18 years experience in Welding Trade

Donnie E. Tharrington (Night) Business Administration
 B. S., East Carolina University

Evan Thompson Business Administration
 B. A., Warren Wilson College
 M. A., Appalachian State University

Charles Vanstone (Night) Electrical
 B. S., University of New Brunswick

C. Edwin White Related Subjects
 B. S., North Carolina State University
 M. A., Appalachian State University

Bob Wiggins (Night) Industrial Management
 B. S., North Carolina State University

Michael Winburn Industrial Management
 B. A., Clemson University
 M. A., Appalachian State University

Mrs. Magdalene Wray Secretarial Programs
 B. S., North Carolina A & T University

Mrs. Pauline C. Willis Related Subjects
 A. A., Lenoir-Rhyne College
 Advanced Study, Appalachian State University

Curriculum Programs of Study

ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAMS:

- *ACCOUNTING
- *BUSINESS ADMINISTRATION
- ELECTRONICS ENGINEERING TECHNOLOGY (TO BE OFFERED FALL 1975)
- *EXECUTIVE SECRETARIAL SCIENCE
- *GENERAL EDUCATION
- *GENERAL OFFICE TECHNOLOGY
- *INDUSTRIAL MANAGEMENT TECHNOLOGY
- *MEDICAL SECRETARIAL SCIENCE

DIPLOMA PROGRAMS:

- AIR CONDITIONING AND REFRIGERATION (NIGHT SCHEDULE ONLY)
- *AUTO BODY REPAIR
- *AUTO MECHANICS
- *ELECTRICAL INSTALLATION AND MAINTENANCE
- PLUMBING AND HEATING (NIGHT SCHEDULE ONLY)
- PRACTICAL NURSING EDUCATION (DAY SCHEDULE ONLY)
- *ELECTRONICS SERVICING
- *WELDING TRADE

CERTIFICATE PROGRAM:

MASONRY TRADE (NIGHT SCHEDULE ONLY)

*CURRICULUMS OFFERED IN BOTH DAY AND NIGHT SCHEDULES.

ENROLLMENT IN ANY CURRICULUM WILL DETERMINE WHETHER THE CURRICULUM WILL BE OFFERED OR CONTINUED.

GENERAL INFORMATION

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. Groundbreaking for the new buildings is expected by mid-1973.

PURPOSE

Cleveland County Technical Institute is a learning institution where persons of all educational levels, abilities, and interests have an opportunity to further their education. The Institute will offer low cost educational programs which will provide opportunities for growth in knowledge and development of skills to enable individuals to become

gainfully employed, enhance their personal growth and exercise the privileges and responsibilities of citizenship. The ultimate goal is to assist persons to experience the fullest possible meaning in human life in a changing world of challenge and responsibility.

To fulfill this purpose the Institute will provide:

1. Educational programs at the technical and vocational trade levels for initial employment qualifications or for upgrading and improving their skills in their present employment through curriculum credit courses and continuing education non-credit courses.
2. Numerous programs and courses providing adults opportunities to continue their education through adult basic and adult high school levels as well as courses for avocational interest and personal growth.
3. Counseling and other guidance services to enable persons to identify programs suited to their abilities, interest, experience and goals and to perform effectively in the areas selected.

ACCREDITATION

Cleveland County Technical Institute is one of the institutions in the Department of Community Colleges of North Carolina and is accredited by the North Carolina State Board of Education. The Institute has correspondent status with the Southern Association of Colleges and Schools and is presently working toward full accreditation at the earliest possible time. All curriculum programs of the Institute have been approved for veteran benefits under the "G. I. Bill", or under legislation covering war orphans and children of totally disabled veterans. The Institute is approved for the training and education of personnel who qualify under the provisions of the North Carolina Division of Vocational Rehabilitation, Department of Human Resources.

NOTICE OF INSTITUTE REGULATIONS

The Institute has a genuine interest and concern for the integrity of all students; therefore all regulations found in this catalog, the student handbook, or 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.

CLASS ATTENDANCE POLICY

Absences are a serious deterrent to good scholarship; it is impossible to receive instruction, obtain knowledge or gain skill when absent.

A day student who, during a quarter, incurs in any course one unexcused absence in excess of the number of times a class meets per week may be dropped from the course (without credit).

Absences may be excused when caused by personal illness, death in the immediate family, or unexpected emergencies (considered on individual basis). If an instructor has a question whether an absence falls within these categories he may refer it to a Faculty Committee on Attendance.

It is the responsibility of the student to be aware of his attendance status and to confer with his instructor concerning any questionable absence from class. Failure to do so will result in an unexcused absence.

A day student who, during a quarter, incurs one absence, excused and-or unexcused in excess of twice the number of times a class meets per week may be dropped (without credit) from the course.

A night student who, during a quarter, incurs one unexcused absence in excess of twice the number of times a course meets per week may be dropped from the course (without credit). A night student who, during a quarter, incurs one absence, excused and-or unexcused, in excess of three times the number of times a course meets per week may be dropped from the course (without credit).

Absences caused by rotating shift work will be handled by the individual instructors with individual schedules. Each rotating shift student should provide each instructor at the beginning of a quarter a written schedule indicating what dates will be absences caused by his work schedule.

Tardiness — 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 a decision on absence or tardiness to a Faculty Committee on Attendance if he feels his case merits special consideration.

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 Institute.

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

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 maintained in effect by the Institute. The cost of the insurance is approximately \$4.00 per student. Students who are taking seven or more credit hours in a quarter will pay the student activity fee which cover the insurance cost. Students enrolled for less than seven credit hours may pay the \$4.00 insurance fee the first quarter they are in attendance during the school year and be covered by the policy.

ADMISSIONS INFORMATION

POLICY AND PROCEDURE

The Cleveland County Technical Institute 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, diagnostic tests are given for guidance purposes, transcripts of previous education are required, and a personal interview is held with each student prior to his placement in a program of instruction.

Application for admission forms and detailed information on programs of instruction offered may be secured by writing to: Dean of Student Services, Cleveland County Technical Institute, 137 South Post Road, Shelby, North Carolina.

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, he is considered to have met the minimum age requirement.

The applicant's general level of education should be sufficient for him to make reasonable progress in the program he desires to pursue. Placement in certain occupational programs requires a high school education or equivalent; however, in certain other programs a high school education is not required for admission. Adult education and Learning Laboratory courses are offered for students who need to strengthen their general education or eliminate deficiencies.

A person is expected to be in an acceptable condition of physical and mental health to be admitted. A general medical examination may be required for some programs.

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

Specific procedures for admission to technical degree programs, vocational diploma programs, or continuing educational programs will be found under those sections of this catalog.

STUDENT PERSONNEL SERVICES

COUNSELING SERVICES

The Student Services Department includes counseling services provided by trained personnel. These services are available to all students from pre-admission through graduation, including transfer or placement.

A student may come to the counselor's office at any time when a personal problem arises which could affect his program in school. All students are encouraged to use this service if needed.

Like other students, you may feel that you "Can't trust anyone" — try a counselor. They are bound by a code of ethical principles and responsibilities which include the confidentiality of the student-counselor relationship. All conversations are kept confidential.

No one has all the answers and counselors are no exception. Their aim is to help you learn to solve your own problems and not rely on someone's decision. You want to decide for yourself what is best for you and to develop self-understanding and self-acceptance so you can face and accept the realities of your life. Counselors are here to help you develop yourself to the fullest.

There are other times in your college experience when you will want to rap or just talk to someone—try a counselor.

The entire counselors staff invites you to visit anytime and requests you let them help you any way they can.

FACULTY ADVISORS

The advisor is usually the major instructor or department head in the area of instruction in which the student is enrolled. The administration realizes that each student may find that he can relate more easily to some other instructor and therefore encourages students to feel free to call upon any staff member for assistance.

The relationship of the advisor and student will be that of relating information from the administration to the student. Also, the faculty advisor will arrange field trips, outside speakers, films, and other information programs for his group.

The student should always feel free to discuss any aspect of the instructional program, personal problems, and other areas of interest

with his advisor. The advisor will refer the student to the proper administrative official if the problem needs additional information.

DIAGNOSTIC SKILL TESTING

A series of diagnostic skill tests will be given to all students enrolling for the first time in curriculum programs at the Institute. The results of these tests are used during the pre-registration period to assist students in planning their programs of study.

STUDENT ORIENTATION

All new students are required to participate in the orientation program. The purpose of the program is to acquaint the students with the administrative officers and faculty. The rules, policies and privileges are discussed and individual conferences between the student and his major advisor are held to further orient the student.

STUDENT FINANCIAL AID

Cleveland County Technical Institute coordinates a financial aid program which assists students in meeting their school expenses. The student aid program is divided into three areas: Revolving Loan Funds, Work-Study Programs, and Special Financial Aid Programs.

Revolving Loan Funds

Civitan Revolving Loan Fund — The Civitan Club of Shelby donates funds each year to loan students so they can meet their tuition and book fees at Cleveland Tech.

General Revolving Loan Fund — Private individuals, civic clubs, and industries contribute to this fund to help students meet their school expenses.

Work-Study Programs

College Work-Study — Students from low-income families who need a part-time job to help pay their college expenses are eligible for employment at the technical institute under the federal work-study program. A student must be at least a half-time student to participate in this program.

Vocational Work-Study — Students who need help in meeting school expenses may participate in the State's vocational work-study program. The student must be at least eighteen years of age and less than twenty-one years of age at the date employment commences.

Institutional Work-Study — A limited number of other work-study positions are available on the Cleveland Tech campus. Students who are not eligible for employment in the college or vocational work-study programs may be considered for part-time employment in the institutional work-study program.

Special Financial Aid Programs

G.I. Bill — Veterans who were discharged from military service under conditions other than dishonorable and who were on active duty for a continuous period of 181 days or more are eligible for educational benefits. Information about eligibility may be obtained from the Student Services Office at Cleveland County Technical Institute.

Survivor's Benefits — Applicants who are children of deceased or disabled veterans may be eligible for financial aid. Information about eligibility may be obtained from the Veterans Services Office, 15 South Washington Street, Shelby, North Carolina.

The contact hours shown in the catalog are minimal. It is a policy of this institute to permit students to enroll in additional subjects and laboratory work beyond those shown in the catalog in order to broaden their training.

When in any quarter the total weekly contact hours listed are fewer than twenty-five hours in a technical curriculum and fewer than thirty hours in a vocational trade curriculum, a student may enroll on request for additional hours deemed by the institution to be consistent with the program and appropriate to the student to make up twenty-five hours per week in a technical curriculum or sufficient hours of attendance to make up thirty hours per week in a vocational trade curriculum.

Vocational Rehabilitation — The state of North Carolina provides financial assistance for residents who have permanent handicaps. Information about eligibility may be obtained from the Vocational Rehabilitation Counselor, 821 West Warren Street, Shelby, North Carolina.

Nurses' Auxiliary Scholarships — The Nurses' Auxiliary of Cleveland Memorial Hospital provides several scholarships each year for nursing students. Any student entering the Practical Nursing Program may obtain information about the scholarships in the Student Services Office.

APPLICATION FOR FINANCIAL AID

Any student who wants to apply for financial aid should contact the Financial Aid Officer and request the proper application forms. The Institute uses two forms for applying for the college work-study program.

Procedures:

1. The applicant must apply and be accepted for enrollment for the term in which he seeks financial aid.
2. The applicant must submit a Parent's Confidential Statement to the financial aid office.
3. After the Financial Aid Committee reviews the applicant's PCS, he will be notified of its decision of approval or disapproval.
4. If the applicant is approved for financial aid, he will be asked to complete a Financial Aid Questionnaire to determine the amount of aid he will receive.
5. As soon as the FAQ is evaluated the applicant will be notified of the amount of aid he will receive.



JOB PLACEMENT

Cleveland County Technical Institute maintains a placement service to help interested students and alumni find employment. The job placement office tries to help students find part-time employment while in school and full-time employment after graduation.

FINANCIAL INFORMATION

The Cleveland Technical Institute 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. Every effort is made to keep the student's expense at a minimum. Tuition cost is set by the State Board of Education and is subject to change.

TUITION

Current rates for all technical or vocational curriculum students:

NORTH CAROLINA STUDENTS:

Full-time (12 or more credit hours)	\$32.00 per quarter
Part-time (less than 12 credit hours)	\$2.50 per quarter hour credit

OUT-OF-STATE STUDENTS:

Full-time (12 or more credit hours)	\$137.50 per quarter
Part-time (less than 12 credit hours)	\$11.45 per quarter hour credit

RESIDENCE STATUS FOR TUITION PAYMENT

1. ***General:***The tuition charge for legal residents of North Carolina is less than for nonresidents. To qualify for in-state tuition, a legal resident must have maintained his domicile in North Carolina for at least the twelve months next preceding the date of first enrollment of re-enrollment in an institution of higher education in this state. Student status in an institution of higher education in this state shall not constitute eligibility for residence to qualify said student for in-state tuition.

2. ***Minors:*** A minor is any person who has not reached the age of eighteen years. The legal residence of a person under eighteen years of age at the time of his first enrollment in an institution of higher

education in this state is that of his parents, surviving parent, or legal guardian. In cases where parents are divorced or legally separated, the legal residence of the father will control unless custody of the minor has been awarded by court to the mother or to a legal guardian other than a parent. No claim of residence in North Carolina based upon residence of a guardian in North Carolina will be considered if either parent is living unless the action of the court appointing the guardian antedates the student's first enrollment in a North Carolina institution of higher education by at least twelve months.

3. **Adults:** An adult is any person who has reached the age of eighteen years. Persons eighteen or more years of age at the time of first enrollment in an institution of higher education, are responsible for establishing their own domicile. Persons reaching the age of eighteen, whose parents are and have been domiciled in North Carolina for at least the preceding twelve months, retain North Carolina residence for tuition payment purposes until domicile in North Carolina is abandoned. If North Carolina residence is abandoned by an adult, maintenance of North Carolina domicile for twelve months as a non-resident is required to regain in-state tuition payment purposes.

4. **Married Students:** The legal residence of a wife follows that of her husband, except that a woman currently enrolled as an in-state student in an institution of higher education may continue as a resident even though she marries a nonresident. If the husband is a nonresident and separation or divorce occurs, the woman may qualify for in-state after establishing her domicile in North Carolina for at least twelve months as a nonstudent.

5. **Military Personnel:** No person shall lose his in-state resident status by serving in the Armed Forces outside of the state of North Carolina. A member of the Armed Forces may obtain in-state residence for himself, his spouse, or his children, after maintaining his domicile in North Carolina for at least the twelve months next preceding his or her enrollment or re-enrollment in an institution of higher education in this state.

6. **Aliens:** Aliens lawfully admitted to the United States for permanent residence may establish North Carolina residence in the same manner as any other nonresident.

7. **Property and Taxes:** Ownership of property in or payment of taxes to the State of North Carolina apart from legal residence will not qualify one for the in-state tuition rate.

8. ***Change of Status:*** The residence status of any student is determined as of the time of his first enrollment in an institution of higher education in North Carolina except:

(a)) In the case of a nonresident student at the time of first enrollment who has subsequently maintained domicile as a non-student for at least twelve consecutive months, and

(b) In the case of a resident who abandons his legal residence in North Carolina

In either case, the appropriate tuition rate will become effective at the beginning of the first subsequent term enrolled.

9. ***Responsibility of Students:*** Any student or prospective student in doubt concerning his residence status must bear the responsibility for securing a ruling by stating his case in writing to the Business Manager. The student, who, due to subsequent events, becomes eligible for a change in classification, whether from out-of-state to in-state or the reverse, has the responsibility of immediately informing the business Manager of his circumstance in writing. Failure to give complete and correct information regarding residence constitutes grounds for disciplinary action.

ACTIVITY FEE

All students enrolled for seven or more credit hours are required to pay a student activity fee of \$7.00 each quarter. The fee covers the cost of a school annual and various student activities which will be arranged in consultation with student representatives.

GRADUATION FEE

All students eligible to graduate from a curriculum program will be required to pay a graduation fee (approximately \$15.00) 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).

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; accident insurance fees; activity fees; or graduation fees. Full refund will be made should the Institute cancel a class or program. Those students who are veterans or war orphans receiving benefits under U. S. Code, Title 38, Chapter 33 and 35 may be refunded the pro rata portion of the tuition fee not used at the time of withdrawal of such students.

TUITION DEPOSIT WITH APPLICATION:

Each curriculum application is to be accompanied by a \$15.00 deposit on tuition before a space is held for the applicant. The \$15.00 is effective *only* for the quarter the student has applied to enter. When he or she registers for that quarter the \$15.00 is subtracted from the tuition due for that quarter. If entry is not made in that particular quarter the deposit is not refunded nor applied to any later quarter. This deposit is refunded only if the student is denied admission or if the program applied for is canceled.

BOOKS

All students will purchase the prescribed textbooks for each course in which they are enrolled.

STUDENT HOUSING

The Institute does not have dormitory accommodations available. Any student who needs to locate housing in Shelby should contact the Student Services Office for assistance.

ACADEMIC REGULATIONS

SCHEDULE CHANGES

At the beginning of every quarter there is a period for students to change schedules and to drop and add courses. The time limit for such changes is two weeks from the first day of classes. No student is to make a schedule change without first being cleared through his Faculty Advisor and the Dean of Student Services.

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 Per Quarter Hour
A	93-100	Excellent	4
B	85-92	Good	3
C	77-84	Average	2
D	70-76	Below Average	1
NC	Below 70 or Work Incomplete	(No Credit) Non- Completion of course requirements by end of quarter	0
W		Official Withdrawal	0
CE		Credit by Examination	0
AU		Audit	0

Any student who receives a no credit (NC) may request to negotiate a written contract with the instructor involved, or he may choose to let the no credit (NC) remain on his record. 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 the no credit (NC) will remain on the record. Upon completion of the contract in the specified time the instructor will notify the registrar to change the NC to a letter grade. The contract completion date must be within the quarter following receipt of the NC.

A person withdrawing from a course before the end of the quarter will receive a no credit (NC) for the course unless he withdraws officially through the Office of Student Services, in which case he will receive a (W) for the course.

A student who receives a NC in a course which is pre-requisite to another course, has the responsibility of obtaining a written permission of the instructor of the course in which the NC was received and the instructor of the course in which the student desires to enroll before registering for the desired course.

QUALITY POINT AVERAGE

The QPA (quality point average) is a general message to the quality of a student's work. The QPA is determined by dividing the total number of quality points earned by the total number of quarter hours completed (Excluding NC, W, CE, and Au grades).

HONORS

Students who receive a 3.0 QPA at the end of a quarter will be on the Honors List for the quarter. To be eligible for the Honors List a student must be enrolled for at least 12 quarter hours credit (if a day student) or all the courses in his program (if a night student) and receive no grade lower than C on any course.

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 any grade lower than a C in courses presented for graduation.

Outstanding Student Awards — Outstanding Student Awards are made to students who have distinguished themselves by being most outstanding in terms of scholastic achievement, performance and maturity of purpose during their program of instruction at the Institute. One student may be recognized for each one-year vocational program and each two-year technical program.

ACADEMIC PROBATION

A student must achieve a cumulative quality point average of at least 2.0 in order to graduate. Failure to achieve a 2.0 cumulative quality point average at the end of any quarter will result in the student being placed on academic probation. The student will be notified of his probationary status and may be required to schedule periodic con-

ferences with a counselor or advisor. Students whose quality point average for the quarter is less than 2.0 but whose cumulative QPA remains 2.0 or above will receive written notice of possible academic difficulty.

A student on probation may remain in his program as long as his subsequent quarter's QPA meets a minimum of 1.5. If the subsequent quarter's work should fail to meet this minimum, the student may be required by his faculty advisor to drop certain courses or change curriculum, and-or take developmental work in the Learning Center. After all possible alternatives are exhausted and it becomes evident that the student is unable to maintain progress, the advisor may recommend to the President that the student be dismissed from the school.

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

The privilege of appeal is provided the dismissed student. The student is required to write a letter to the Administrative Council explaining his appeal and must appear before this Council in person should the Council so desire. The appeal may be carried to the Board of Trustees at the Student's request.

CREDIT HOURS AND CONTACT HOURS

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 the supervisor or the course instructor per week for the quarter.

Usually one (1) quarter hours 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.

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 at CCTI for credit toward the Bachelor's Degree. Most of these colleges consider each applicant and his record individually and the course 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. A few colleges give full credit for the Associate in Applied Science Degree toward a Bachelor of Arts, Bachelor of Science or Bachelor of Technology.

For those few students who do desire to continue their education after graduation from CCTI there are expanding opportunities to do so. If you are one of these, you should see a counselor at CCTI for further details or write the college being considered.

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 his Faculty Advisor to see if he qualifies for these provisions and to be informed of the procedure to follow.

A grade symbol of CE (credit by 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.

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.

COURSE REPEAT REGULATIONS

A student who does not complete any required course in his major curriculum must repeat the course until he does complete it to be 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.

READMISSION

Any student who officially withdraws from the Institute 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 he can work out an appropriate course schedule.

A former student will not be readmitted until he has met all former and current expenses obligations to any program or activity under the administrative jurisdiction of the Institute

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



WITHDRAWAL

Students desiring to withdraw from the Institute should contact the Office of Student Services to obtain the necessary forms and procedures for official withdrawal. A student who fails to withdraw officially will receive a grade of "NC" for each course in which he is enrolled.

SPECIAL STUDENTS

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 pre-requisites for the course or to demonstrate a necessary level of competence. Students enrolled on this basis must do so through arrangement with the Student Services Office.

SCHEDULE OF CURRICULUM CLASSES

Shortly before registration each quarter, the Institute will announce a master schedule of courses to be offered. This will generally include those courses required for a student to complete the work as outlined in the catalog for his curriculum. In some instances, however, it will be necessary for the Institute to rearrange this sequence of course offerings. Every effort will be made to enable a student to complete his program in the minimum possible time. Whenever practical, make-up classes and special courses will be offered to those needing them. Using this master schedule of courses, each student should consult with his advisor prior to registration to arrange a class schedule to meet his own particular requirements.

COURSE LOAD

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. The recommended course load varies from one curriculum to another as outlined within this catalog. The length of time indicated to complete any program is based on the recommended course load. Any deviation from the proposed schedule will extend the time required to graduate.

Course load for veterans benefits are as follows: (1) For diploma vocational program — full-time attendance equals 30 ***Clock*** hours per week; ½ time attendance equals 15-21 ***clockclock*** hours per week; (2) For degree technical programs — full-time attendance equals 12 or

more *credit* hours per quarter; $\frac{3}{4}$ time attendance equals 9-11 credit hours per quarter; $\frac{1}{2}$ time attendance equals 6-8 *credit* hours per quarter. (For less than $\frac{1}{2}$ time attendance in any program the VA does not pay a monthly allowance but will only pay the actual cost of tuition and books.)

TRANSFER CREDIT

Cleveland County Technical Institute 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 Institute. Each application for transfer of credit will be evaluated according to the individual situation. Transfer courses will transfer at the grade level received in the other institution.

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



TECHNICAL DIVISION



TECHNICAL EDUCATION

Technical Education has recently assumed new importance in North Carolina and throughout the United States. Acute shortage of trained manpower has developed in many areas despite a surplus of persons who seemingly possess ability and interest in preparing themselves for technical occupations if opportunities were available.

Broadly defined, technical occupations are those which usually require a high degree of specialized knowledge, a broad understanding of operational procedures, and the ability to supervise the work of others. The Cleveland County Technical Institute prepares students for a number of basic positions in a particular field, and not for one specific job.

Technical programs of study are designed to prepare students to earn a living as technical personnel in business or industry.

Technical programs are not intended for transfer to a four-year college or university; however, some schools are now accepting these programs for transfer on a bachelor's degree. The ultimate objective is employment and further growth through occupational experience. The Associate in Applied Science degree is conferred on those students successfully completing a technical education program.

High school graduation or the equivalent is required for admission to all two-year programs. No special high school courses are required but the individual should have potentialities for a career in their chosen field of study.

PROGRAMS OF STUDY OFFERED

ACCOUNTING

BUSINESS ADMINISTRATION

ELECTRONICS ENGINEERING TECHNOLOGY (TO BEGIN FALL 75)

EXECUTIVE SECRETARIAL SCIENCE

GENERAL OFFICE TECHNOLOGY (RECEPTIONIST OR CLERK-TYPIST)

INDUSTRIAL MANAGEMENT

MEDICAL SECRETARIAL SCIENCE

ADMISSION REQUIREMENTS

1. Be at least eighteen years of age, or the applicant's high school class must have graduated.
2. Be a high school graduate or equivalent.*
3. Take diagnostic skill test battery. These tests are used to assist the applicant in the selection of a program of study suited to both his interest and general capabilities.
4. Be in acceptable condition of physical and mental health.
5. Have a personal interview in the Student Services office.

ADMISSION PROCEDURE

1. Submit completed application and medical history form.
2. Have transcripts of all previous education mailed to the Institute.
3. Have counseling interview after taking the diagnostic test battery.
4. Receive a letter of acceptance from the Dean of Student Services.

*See page 119 in Continuing Education Section of this catalog for details about the high school equivalency certificate.

REQUIREMENTS FOR GRADUATION

The following are established as minimum requirements for the Associate in Applied Science degree:

1. Complete all course requirements as outlined by curricula, and earn at least a 2.0 QPA in courses presented for graduation.
2. Complete not less than 108 credit hours. In most programs of study the program outlined will consist of more than this minimum credit hour total.
3. Application for graduation must be submitted to the Dean of Student Services during the quarter prior to completion of course requirements. A \$15.00 graduation fee is required at that time.
4. Fulfill all financial obligations to the Institute. Library clearance is also required.
5. Prospective graduates must be recommended by the chairman of the department in which a student completes his or her major work.
6. Be present for graduation exercises which are held at the end of the spring and summer quarters each year. Exceptions to this requirement, in case of unavoidable absence, may only be granted by the President of the Institute.
7. All prospective graduates must complete one full quarter of work at this Institute before graduation.



ACCOUNTING

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 businesses. Accountants are found in such forms of business operation 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 financial statements, making special reports and analyses, preparing cost data and summarizing tax information. The degree Associate in Applied Science in Accounting will be awarded upon successful completion of this curriculum.

ACCOUNTING

Suggested Curriculum By Quarters — Day Program

(108 Quarter hours required for graduation — average of 18 hours per quarter)

<i>Course Title</i>		<i>Hours Per Week</i>		<i>Credit</i>
		<i>Class</i>	<i>Lab</i>	<i>Hours</i>
FIRST QUARTER (Fall)				
ENG	104 Reading Dynamics	4	0	4
BUS	102 Typewriting (or elective)	2	4	4
BUS	101 Introduction to Business*	4	0	4
BUS	109 Business Mathematics*	4	0	4
ECO	102 Economics*	4	0	4
		—	—	—
		18	4	20
SECOND QUARTER (Winter)				
ENG	101 Grammar*	4	0	4
BUS	110 Office Machines*	2	2	3
ECO	104 Economics*	4	0	4
BUS	115 Business Law*	4	0	4
BUS	123 Business Finance*	4	0	4
		—	—	—
		18	2	19
THIRD QUARTER (Spring)				
ENG	102 Composition	4	0	4
BUS	124 Business Finance*	4	0	4
BUS	120 Accounting*	4	4	6
BUS	116 Business Law*	4	0	4
PSY	206 Applied Psychology	4	0	4
		—	—	—
		20	4	22

FOURTH QUARTER (Fall)

ENG 204	Oral Communication	4	0	4
EDP 104	Introduction to Data Processing	4	0	4
BUS 121	Accounting*	4	4	6
BUS 232	Sales Development	4	0	4
BUS 319	Credit Procedures and Problems*	4	0	4
		—	—	—
		20	4	22

FIFTH QUARTER (Winter)

ENG 206	Business Communication*	4	0	4
BUS 235	Business Management*	4	0	4
BUS 222	Accounting*	4	4	6
BUS 272	Principles of Supervision	4	0	4
BUS 225	Cost Accounting*	2	2	3
		—	—	—
		18	6	21

SIXTH QUARTER (Spring)

BUS 229	Taxes*	4	0	4
BUS 269	Auditing*	2	2	3
BUS 271	Office Management	4	0	4
BUS 233	Personnel Management*	4	0	4
BUS 223	Accounting*	4	4	6
		—	—	—
		18	6	21

*Required for graduation. Any substitution must be approved by the Registrar.

ACCOUNTING

Suggested Curriculum By Quarters—Night Schedule

(108 Quarter hours required for graduation—average of 11 hours per quarter)

<i>Course Title</i>		<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
		<i>Class</i>	<i>Lab</i>	<i>Hours</i>
FIRST QUARTER — (Fall 1973)				
BUS 271	Office Management (Acc 1)	4	0	4
ENG 204	Oral Communication (Acc 1, 2)	4	0	4
BUS 222	Accounting* (Acc 2)	4	4	6
BUS 272	Principles of Supervision (Acc 1)	4	0	4
SECOND QUARTER — (Winter 1973-74)				
BUS 101	Introduction to Business* (Acc 1)	4	0	4
BUS 235	Business Management* (Acc 1)	4	0	4
ENG 206	Business Communication* (Acc 1)	4	0	4
BUS 223	Accounting* (Acc 2)	4	4	6
BUS 229	Taxes* (Acc 2)	4	0	4
THIRD QUARTER — (Spring 1974)				
BUS 233	Personnel Management* (Acc 1, 2)	4	0	4
BUS 123	Business Finance* (Acc 1, 2)	4	0	4
EDP 104	Introduction to Data Processing (Acc 1)	4	0	4
BUS 219	Credit Procedures and Problems* (Acc 2)	4	0	4

FOURTH QUARTER — (Summer 1974)

ENG 101	Grammar* (Acc. 1,2)	4	0
BUS 124	Business Finance* (Acc 1,2)	4	0
BUS 232	Sales Development (Acc 1,2)	4	0
BUS 225	Cost Accounting* (Acc 2)	2	2

FIFTH QUARTER — (Fall 1974)

BUS 269	Auditing* (Acc 3)	2	2
BUS 109	Business Mathematics* (Acc 1,2)	4	0
BUS 115	Business Law* (Acc 1, 2, 3)	4	0
ENG 102	Composition (Acc 3)	4	0
BUS 110	Office Machines* (Acc 1, 2)	2	2

SIXTH QUARTER — (Winter 1974-75)

ENG 206	Business Communications* (Acc 3)	4	0
BUS 116	Business Law* (Acc 1, 2, 3)	4	0
PSY 206	Applied Psychology (Acc 3)	4	0
BUS 120	Accounting* (Acc 1, 2)	4	4

SEVENTH QUARTER — (Spring 1975)

BUS 121	Accounting* (Acc 1, 2)	4	4
ENG 104	Reading Dynamics (Acc 1,2)	4	0

EIGHTH QUARTER — (Summer 1975)

BUS 222	Accounting* (Acc 1, 2)	4	4
BUS 229	Taxes* (Acc 1, 2)	4	0

NINTH QUARTER — (Fall 1975)	BUS 223	Accounting ¹ (Acc 2, 3)	4	4
ECO 102	Economics* (Acc 1, 2, 3)	4	0	
BUS 101	Introduction to Business* (Acc 1)	4	0	
ENG 204	Oral Communication (Acc 1)	4	0	

TENTH QUARTER — (Winter 1975-76)

BUS 225	Cost Accounting* (Acc 2, 3)	2	2
BUS 269	Auditing* (Acc 2, 3)	2	2
BUS 2/2	Principles of Supervision (Acc 1)	4	0
BUS 271	Office Management (Acc 1)	4	0
BUS 219	Credit Procedures and Problems (Acc. 2,3)	4	0
ECO 104	Economics* (Acc 1)	4	0

¹Required for graduation. Any substitution must be approved by the Registrar.

BUSINESS ADMINISTRATION

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 operations 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 and responsibilities of this graduate vary in different firms. These 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.

BUSINESS ADMINISTRATION

Suggested Curriculum by Quarters — Day Schedule

(108 Quarter hours required for graduation — average of 18 hours per quarter)

<i>Course Title</i>			<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
			<i>Class</i>	<i>Lab</i>	<i>Hours</i>
<i>FIRST QUARTER (Fall)</i>					
ENG	104	Reading Dynamics	4	0	4
BUS	102	Typewriting (or elective)	2	4	4
BUS	101	Introduction to Business*	4	0	4
BUS	109	Business Mathematics*	4	0	4
ECO	102	Economics*	4	0	4
			—	—	—
			18	4	20
<i>SECOND QUARTER (Winter)</i>					
ENG	101	Grammar*	4	0	4
BUS	110	Office Machines*	2	2	3
ECO	104	Economics*	4	0	4
BUS	115	Business Law*	4	0	4
BUS	123	Business Finance*	4	0	4
			—	—	—
			40	18	19

THIRD QUARTER (Spring)

ENG 102	Composition	4	0	4
BUS 124	Business Finance*	4	0	4
BUS 120	Accounting*	4	4	6
BUS 116	Business Law*	4	0	4
PSY 206	Applied Psychology	4	0	4
		—	—	—
		20	4	22

FOURTH QUARTER (Fall)

ENG 204	Oral Communication	4	0	4
EDP 101	Introduction to Data Processing	4	0	4
BUS 121	Accounting*	4	4	6
BUS 232	Sales Development	4	0	4
BUS 239	Marketing*	4	0	4
		—	—	—
		20	4	22

FIFTH QUARTER (Winter)

ENG 206	Business Communication*	4	0	4
BUS 285	Real Estate	4	0	4
BUS 235	Business Management*	4	0	4
BUS 247	Business Insurance	4	0	4
BUS 222	Accounting*	4	4	6
		—	—	—
		20	4	22

SIXTH QUARTER (Spring)

BUS 229	Taxes*	4	0	4
BUS 243	Advertising	4	0	4
BUS 267	Money and Banking	4	0	4
BUS 233	Personnel Management*	4	0	4
BUS 219	Credit Procedures and Problems	4	0	4
		—	—	—
		20	0	20

*Required for graduation. Any substitutions must be approved by the Registrar.

BUSINESS ADMINISTRATION

Suggested Curriculum By Quarters — Night Schedule

(108 Quarter hours required for graduation — average of 11 hours per quarter)

Course Title		Hours Per Week		Credit
		Class	Lab	Hours
FIRST QUARTER — (Fall 1973)				
BUS 222	Accounting* (BA 2, 3)	4	4	6
ENG 204	Oral Communication (BA 1, 2, 3)	4	0	4
BUS 101	Introduction to Business* (BA 1)	4	0	4
BUS 243	Advertising (BA 1)	4	0	4
SECOND QUARTER — (Winter 1973-74)				
BUS 229	Taxes* (BA 2, 3)	4	0	4
BUS 235	Business Management* (BA 1, 2, 3)	4	0	4
ENG 206	Business Communication* (BA 1, 2, 3)	4	0	4
BUS 267	Money and Banking (BA 1)	4	0	4

THIRD QUARTER — (Spring 1974)

BUS 233	Personnel Management* (BA 1, 2)	4	0	4
BUS 123	Business Finance* (BA 1, 2)	4	0	4
EDP 104	Introduction to Data Processing (BA 1, 2)	4	0	4

FOURTH QUARTER — (Summer 1974)

ENG 101	Grammar* (BA 1, 2)	4	0	4
BUS 124	Business Finance (BA 1, 2)	4	0	4
BUS 232	Sales Development (BA 1, 2)	4	0	4

FIFTH QUARTER — (Fall 1974)

BUS 247	Business Insurance (BA 1, 2, 3)	4	0	4
BUS 115	Business Law* (BA 1, 2, 3)	4	0	4
ENG 102	Composition (BA 1, 2, 3)	4	0	4

SIXTH QUARTER — (Winter 1974-75)

BUS 116	Business Law* (BA 1, 2, 3)	4	0	4
BUS 285	Real Estate (BA 1, 2, 3)	4	0	4
PSY 206	Applied Psychology (BA 1, 2, 3)	4	0	4

SEVENTH QUARTER — (Spring 1975)

BUS 109	Business Mathematics* (BA 1, 2)	4	0	4
BUS 110	Office Machines* (BA 1, 2)	2	2	3
ENG 104	Reading Dynamics (BA 1, 2)	4	0	4

EIGHTH QUARTER — (Summer 1975)

BUS 120	Accounting ¹ (BA 1, 2)	4	4	6
BUS 239	Marketing ² (BA 1, 2)	4	0	4

NINTH QUARTER — (Fall 1975)

BUS 121	Accounting* (BA 2, 3)	4	4	6
ECO 102	Economics* (BA 1, 2, 3)	4	0	4
BUS 101	Introduction to Business* (BA 1)	4	0	4
ENG 204	Oral Communication (BA 1)	4	0	4

TENTH QUARTER — (Winter 1975-76)

BUS 222	Accounting* (BA 2, 3)	4	4	6
ECO 104	Economics* (BA 1, 2, 3)	4	0	4
BUS 243	Advertising (BA 1)	4	0	4
ENG 206	Business Communication* (BA 1)	4	0	4

*Required for graduation. Any substitutions must be approved by the Registrar.

ELECTRONICS ENGINEERING TECHNOLOGY

(To Be Offered Fall 1975)

The field of electronics has developed at a rapid pace since the turn of the century. For many years the major concern of electronics was in the area of communications. Developments during World War II and in the period since have revolutionized production techniques. New industries have been established to supplement the need and demand for electronics equipment.

Many opportunities exist for men and women with a technical background in electronic education in electronics. This 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 take their place as an assistant to the engineer, or as a liaison between the engineer and the skilled craftsman.

The electronics technician may start in one or more of the following areas: research, design, development, production, maintenance or sales. He may be an assistant to an engineer, an engineering aide, laboratory technician, supervisor or equipment specialist. His training is similar to that of an engineer, but in less depth and more practical in application. He can function as a liaison between an engineer and the skilled craftsman.

(To Be Offered Fall 1975)

ELECTRONICS ENGINEERING TECHNOLOGY

Suggested Curriculum By Quarters — Day Schedule

(108 Quarter hours required for graduation — average of 18 hours per quarter)

<i>Course Title</i>			<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Fall)</i>			<i>Class</i>	<i>Lab</i>	<i>Hours</i>
ENG	101	Grammar *	4	0	4
MAT	101	Technical Mathematics*	4	0	4
PHY	101	Physics: Properties of Matter*	3	3	4
DFT	101	Technical Drafting*	0	6	2
ELC	101	Fundamentals of Electricity*	4	4	6
			—	—	—
			15	13	20
<i>SECOND QUARTER (Winter)</i>			<i>Class</i>	<i>Lab</i>	<i>Hours</i>
ENG	102	Composition	4	0	4
MAT	102	Technical Mathematics*	4	0	4
PHY	102	Physics: Work, Energy, Power*	3	3	4
DFT	102	Technical Drafting*	0	6	2
ELC	102	Fundamentals of Electricity*	4	4	6
			—	—	—
			15	13	20

THIRD QUARTER (Spring)

ENG 103	Report Writing*	4	0	4
MAT 103	Technical Mathematics*	4	0	4
ELN 101	Electronic Instruments and Measurements*	1	5	3
ELN 105	Control Devices*	4	6	6
		—	—	—
		13	11	17

FOURTH QUARTER (Fall)

ENG 204	Oral Communication	4	0	4
MAT 201	Technical Mathematics*	4	0	4
PHY 104	Physics: Light and Sound*	3	3	4
ELN 205	Applications of Vacuum Tubes and Transistors*	6	6	8
		—	—	—
		17	9	20

FIFTH QUARTER (Winter)

-----	Social Science Elective	4	0	4
ELN 210	Semiconductor Circuit Analysis*	6	2	7
ELN 214	Wave Shaping and Pulse Circuits	2	2	3
ELN 235	Industrial Instrumentation*	4	6	7
		—	—	—
		16	10	21

SIXTH QUARTER (Spring)

-----	Social Science Elective	4	0	4
ELN 215	Wave Shaping and Pulse Circuits*	2	2	3
ELN 220	Electronic Systems*	6	6	8
ELN 240	Digital Computers*	4	0	4
		—	—	—
		16	8	19

*Required for graduation. Any substitutions must be approved by the Registrar.

EXECUTIVE SECRETARIAL SCIENCE

Almost 11 million people were employed in clerical or some other closely related type of work in 1965. More than 2 million of these were employed in occupations requiring stenographic skills. In fact, more individuals are employed in the clerical fields than in any other category.

A very rapid increase in employment in the late 1960s, and early 1970s is anticipated. Openings may total more than 200,000 annually. Local employment opportunities parallel national trends.

The Executive Secretary graduate may be employed as a stenographer or a secretary as well as in a variety of other clerical occupations. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, handling numerous routine duties, private and confidential records, and a variety of business details on her own initiative. Positions are available in a variety of businesses such as insurance companies, banks, marketing institutions, financial firms, as well as all types of manufacturing firms.

EXECUTIVE SECRETARIAL SCIENCE

Suggested Curriculum By Quarters — Day Schedule

(108 Quarter hours required for graduation — average of 18 hours per quarter)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>Class</i>	<i>Lab</i>	<i>Hours</i>	<i>Hours</i>
<i>FIRST QUARTER (Fall)</i>			
ENG 104 Reading Dynamics	4	0	4
BUS 102 Typewriting*(or elective)	2	4	4
BUS 109 Business Mathematics*	4	0	4
BUS 101 Introduction to Business*	4	0	4
BUS 106 Shorthand*(or elective)	4	2	5
	—	—	—
	18	6	21
<i>SECOND QUARTER (Winter)</i>			
ENG 101 Grammar*	4	0	4
BUS 103 Typewriting*(or elective)	2	4	4
BUS 107 Shorthand*	4	2	5
BUS 110 Office Machines — Calculators*	2	2	3
BUS 115A Business Law for Secretaries	4	0	4
	—	—	—
	16	8	20
<i>THIRD QUARTER (Spring)</i>			
ENG 102 Composition	4	0	4
BUS 104 Typewriting*	2	4	4
BUS 108 Shorthand*	4	2	5
BUS 120A Secretarial Accounting*	4	4	6
	—	—	—
	14	10	19

FOURTH QUARTER (Fall)

ENG 204	Oral Communication	4	0	4
BUS 206E	Dictation and Transcription (Executive)*	2	4	4
BUS 205	Advanced Typing*	2	2	3
BUS 121A	Secretarial Accounting*	4	4	6
EDP 104	Introduction to Data Processing	4	0	4
		—	—	—
		16	10	21

FIFTH QUARTER (Winter)

ENG 206	Business Communication*	4	0	4
BUS 207E	Dictation and Transcription (Executive)*	2	4	4
BUS 214	Secretarial Procedures*	2	2	3
BUS 247	Business Insurance	4	0	4
BUS 112	Filing*	2	2	3
		—	—	—
		14	8	18

SIXTH QUARTER (Spring)

BUS 208E	Dictation and Transcription (Executive)*	2	4	4
BUS 271	Office Management*	4	0	4
PSY 112	Personality Development	2	0	2
BUS 211	Office Machines — Copy -Duplicating*	2	2	3
BUS 229	Taxes*	4	0	4
PSY 206	Applied Psychology	4	0	4
		—	—	—
		18	6	21

* Required for graduation. Any substitutions must be approved by the Registrar.

EXECUTIVE SECRETARIAL SCIENCE

Suggested Curriculum By Quarters — Night Schedule

(108 Quarter hours required for graduation — average of 11 hours per quarter)

<i>Course Title</i>		<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Fall 1973)</i>		<i>Class</i>	<i>Lab</i>	<i>Hours</i>
BUS 102	Typewriting*(ES 1)	2	4	4
BUS 106	Shorthand*(ES1)	2	4	4
ENG 204	Oral Communication (ES 1, 2, 3)	4	0	4
BUS 206E	Dictation and Transcription*(ES 2)	2	4	4
BUS 214	Secretarial Procedures*(ES 2,3)	2	2	3
BUS 271	Office Management*(ES 3)	4	0	4
SECOND QUARTER — (Winter 1973-74)				
BUS 103	Typewriting*(ES 1)	2	4	4
BUS 107	Shorthand*(ES 1)	2	4	4
BUS 207E	Dictation and Transcription*(ES 2)	2	4	4
BUS 229	Taxes*(ES 2,3)	4	0	4
BUS 211	Office Machines*(ES 2, 3)	2	2	3
ENG 206	Business Communication*(ES 1, 3)	4	0	4
THIRD QUARTER — (Spring 1974)				
BUS 104	Typewriting*(ES 1)	2	4	4
BUS 108	Shorthand*(ES 1)	2	4	4
BUS 208E	Dictation and Transcription*(ES 2)	2	4	4
BUS 101	Introduction to Business*	4	0	4
ENG 102	Composition (ES 2, 3)	4	0	4

FOURTH QUARTER — (Summer 1974)

BUS 205	Advance Typewriting*(ES 1)	2	4	4
ENG 101	Grammar*(ES 1, 2, 3)	4	0	4
BUS 115A	Business Law (Secretarial) (ES 1, 2)	4	0	4
PSY 206	Applied Psychology (ES 2)	4	0	4

FIFTH QUARTER — (Fall 1974)

BUS 206E	Dictation and Transcription*(ES 2)	2	4	4
BUS 247	Business Insurance (ES 2, 3)	4	0	4
BUS 102	Typewriting*(ES 1)	2	4	4
BUS 106	Shorthand*(ES 1)	2	4	4
EDP 104	Introduction to Data Processing (ES 2, 3)	4	0	4
ENG 206	Business Communication*(ES 3)	4	0	4
BUS 110	Office Machines*(ES 1)	2	2	3

SIXTH QUARTER — (Winter 1974-75)

BUS 271	Office Management*(ES 3)	4	0	4
BUS 112	Filing*(ES 3)	2	2	3
PSY 112	Personality Development (ES 3)	2	0	2
BUS 207E	Dictation and Transcription* (ES 2)	2	4	4
BUS 109	Business Mathematics*(ES 1, 2)	4	0	4
BUS 103	Typewriting*(ES 1)	2	4	4
BUS 107	Shorthand*(ES 1)	2	4	4

SEVENTH QUARTER — (Spring 1975)

BUS 208E	Dictation and Transcription*(ES 2)	2	4	4
BUS 104	Typewriting*(ES 1)	2	4	4
BUS 108	Shorthand*(ES 1)	2	4	4
BUS 211	Office Machines*(ES 1, 2)	2	2	3
PSY 206	Applied Psychology (ES 2)	4	0	4

EIGHTH QUARTER — (Summer 1975)

BUS 205	Advanced Typing*(ES 1)	2	4	4
BUS 120A	Secretarial Accounting*(ES 1, 2)	4	4	6
ENG 104	Reading Dynamics (ES 2)	4	0	4

NINTH QUARTER — (Fall 1975)

BUS 121A	Secretarial Accounting*(ES 2, 3)	4	4	6
BUS 206E	Dictation and Transcription*(ES 2)	2	4	4
BUS 271	Office Management*(ES 3)	4	0	4
BUS 102	Typewriting*(ES 1)	2	4	4
BUS 106	Shorthand*(ES 1)	2	4	4
BUS 101	Introduction to Business*(ES 1)	4	0	4

TENTH QUARTER — (Winter 1975-76)

BUS 112	Filing*(ES 1, 2, 3)	2	2	3
BUS 214	Secretarial Procedures*(ES 2, 3)	2	2	3
BUS 103	Typewriting*(ES 1)	2	4	4
BUS 107	Shorthand*(ES 1)	2	4	4
BUS 207E	Dictation and Transcription*(ES 2)	2	4	4
BUS 229	Taxes*(ES 3)	4	0	4

*Required for graduation. Any substitutions must be approved by the Registrar.



GENERAL OFFICE TECHNOLOGY

(Receptionist or Clerk-Typist)

More and more people are now employed in clerical occupations than in any other single job category. Automation and increased production will mean that these people will need more technical skills and a greater adaptability for diversified types of jobs.

The General Office Technology curriculum is designed to develop the necessary variety of skills for employment in the business world. Specialized training in skill areas is supplemented by related courses in mathematics, accounting, business law and applied psychology.

The graduate of the General Office Technology curriculum may be employed as an administrative assistant, accounting clerk, assistant office manager, bookkeeper, receptionist, file clerk, machine transcriptionist, or a variety of other clerical-related jobs. Positions are available in almost every type of business, large or small.

GENERAL OFFICE TECHNOLOGY

(Receptionist or Clerk-Typist)

Suggested Curriculum By Quarters — Day Schedule

(108 Quarter hours required for graduation — average of 18 hours per quarter)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Fall)</i>	<i>Class</i>	<i>Lab</i>	<i>Hours</i>
ENG 104 Reading Dynamics	4	0	4
BUS 102 Typewriting *(or elective)	2	4	4
BUS 109 Business Mathematics *	4	0	4
ECO 102 Economics *	4	0	4
BUS 101 Introduction to Business*	4	0	4
	—	—	—
	18	4	20
 <i>SECOND QUARTER (Winter)</i>			
ENG 101 Grammar *	4	0	4
BUS 103 Typewriting *(or elective)	2	4	4
BUS 110 Office Machines — Calculators *	2	2	3
BUS 115A Business Law for Secretaries	4	0	4
ECO 104 Economics *	4	0	4
	—	—	—
	16	6	19
 <i>THIRD QUARTER (Spring)</i>			
ENG 102 Composition	4	0	4
BUS 104 Typewriting *	2	4	4
PSY 206 Applied Psychology	4	0	4
BUS 120A Secretarial Accounting *	4	4	6
	—	—	—
	14	8	18

FOURTH QUARTER (Fall)

ENG 204	Oral Communication	4	0	4
BUS 205	Advanced Typing *	2	2	3
BUS 121A	Secretarial Accounting *	4	4	6
BUS 239	Marketing	4	0	4
BUS 206	Dictation and Transcription (Machine)*	2	4	4
		—	—	—
		16	10	21

FIFTH QUARTER (Winter)

ENG 206	Business Communication *	4	0	4
BUS 214	Secretarial Procedures *	2	2	3
EDP 104	Introduction to Data Processing	4	0	4
BUS 112	Filing*	2	2	3
BUS 247	Business Insurance	4	0	4
		—	—	—
		16	4	18

SIXTH QUARTER (Spring)

BUS 271	Office Management	4	0	4
BUS 229	Taxes	4	0	4
BUS 210	Typing Office Practice*	2	2	3
PSY 112	Personality Development	2	0	2
BUS 221	Office Machines — Copy and Duplicating*	2	2	3
BUS 219	Credit Procedures and Problems	4	0	4
		—	—	—
		18	4	20

*Required for graduation. Any substitutions must be approved by the Registrar.

GENERAL OFFICE TECHNOLOGY

(Receptionist or Clerk-Typist)

Suggested Curriculum By Quarters—Night Schedule

(108 Quarter hours required for graduation — average of 18 hours per quarter)

<i>Course Title</i>		<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER — (Fall 1973)</i>		<i>Class</i>	<i>Lab</i>	<i>Hours</i>
BUS 102	Typewriting*(GOT 1)	2	4	4
BUS 101	Introduction to Business (GOT 1)	4	0	4
ENG 204	Oral Communication (GOT 1)	4	0	4
<i>SECOND QUARTER — (Winter 1973-74)</i>				
BUS 103	Typewriting*(GOT 1)	2	4	4
ENG 206	Business Communication*(GOT1)	4	0	4
BUS 112	Filing*(GOT 1)	2	2	3
<i>THIRD QUARTER — (Spring 1974)</i>				
BUS 104	Typewriting*(GOT 1)	2	4	4
EDP 104	Introduction to Data Processing (GOT 1)	4	0	4
ENG 102	Composition (GOT 1)	4	0	4

FOURTH QUARTER — (Summer 1974)

BUS 205	Advanced Typewriting*(GOT 1)	2	4	4
ENG 101	Grammar*(GOT 1)	4	0	4
BUS 115A	Business Law (Secretaries) (GOT 1)	4	0	4

FIFTH QUARTER — (Fall 1974)

BUS 206G	Dictation and Transcription*(GOT 2)	2	4	4
BUS 102	Typewriting*(GOT 1)	2	4	4
BUS 210	Typing Office Practice*(GOT 2)	2	2	3
BUS 110	Office Machines*(GOT 1, 2)	2	2	3
BUS 247	Business Insurance (GOT 1)	4	0	4

SIXTH QUARTER — (Winter 1974-75)

BUS 103	Typewriting*(GOT 1)	2	4	4
PSY 206	Applied Psychology (GOT 1, 2)	4	0	4
BUS 109	Business Mathematics*(GOT 1, 2)	4	0	4
PSY 112	Personality Development (GOT 2)	2	0	2

SEVENTH QUARTER — (Spring 1975)

BUS 104	Typewriting*(GOT 1)	2	4	4
BUS 211	Office Machines*(GOT 1, 2)	2	2	3
ENG 104	Reading Dynamics (GOT 2)	4	0	4
BUS 271	Office Management (GOT 1, 2)	4	0	4

EIGHTH QUARTER — (Summer 1975)

BUS 205	Advanced Typewriting*(GOT 1)	2	4	4
BUS 120A	Secretarial Accounting*(GOT 1, 2)	4	4	6
BUS 239	Marketing (GOT 2)	4	0	4

NINTH QUARTER — (Fall 1975)

BUS 206G	Dictation and Transcription (Machine)*(GOT 2)	2	4	4
BUS 102	Typewriting*(GOT)	2	4	4
BUS 121A	Secretarial Accounting*(GOT 2, 3)	4	4	6
ECO 102	Economics*(GOT 3)	4	0	4
BUS 101	Introduction to Business*(GOT 1)	4	0	4
PSY 112	Personality Development (GOT 1)	2	0	2

TENTH QUARTER — (Winter 1975-76)

BUS 103	Typewriting*(GOT 1)	2	4	4
BUS 210	Typing Office Practice*(GOT 2)	2	2	3
ECO 104	Economics*(GOT 3)	4	0	4
BUS 229	Taxes*(GOT 2, 3)	4	0	4
BUS 219	Credit Procedures and Problems (GOT 2, 3)	4	0	4
ENG 104	Reading Dynamics (GOT 1)	4	0	4
BUS 211	Office Machines*(GOT 1)	2	2	3

*Required for graduation. Any substitutions must be approved by the Registrar.

INDUSTRIAL MANAGEMENT TECHNOLOGY

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

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 his fellow worker by providing him 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 supervisory and mid-management positions in industry.

The supervisor or foreman coordinates the activities of workers in one or more occupations. His duties may encompass the interpreting of company policies to workers, involvement in planning of production schedules and estimating of man hour requirements to job completion, establishment or adjustment of work procedures, analyzes and resolves work problems, and initiates or suggests plans to motivate workers to achieve work goals.

Suggested Curriculum By Quarters — Day Schedule

(108 Quarter hours required for graduation — average of 18 hours per quarter)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
	<i>Class</i>	<i>Lab</i>	<i>Hours</i>
FIRST QUARTER (Fall)			
ENG 104 Reading Dynamics	4	0	4
BUS 109 Business Mathematics*	4	0	4
BUS 101 Introduction to Business*	4	0	4
ECO 102 Economics*	4	0	4
ISC 120 Principles of Industrial Management*	4	0	4
	—	—	—
	20	0	20
SECOND QUARTER (Winter)			
ENG 101 Grammar*	4	0	4
BUS 123 Business Finance*	4	0	4
BUS 115 Business Law*	4	0	4
ECO 104 Economics*	4	0	4
ISC 102 Industrial Safety*	4	0	4
ISC 210 Job Analysis and Evaluation*	4	0	4
	—	—	—
	24	0	24

THIRD QUARTER (Spring)

ENG 102	Composition	4	0	4
ISC 231	Manufacturing Cycles*	4	0	4
ISC 211	Work Measurement*	4	0	4
ISC 202	Quality Control*	4	0	4
BUS 116	Business Law	4	0	4
		<u>20</u>	<u>0</u>	<u>20</u>

FOURTH QUARTER (Fall)

ENG 204	Oral Communication	4	0	4
ISC 209	Plant Layout*	4	0	4
EDP 104	Introduction to Data Processing	4	0	4
MEC 213	Production Planning*	4	0	4
BUS 239	Marketing	4	0	4
		<u>—</u>	<u>—</u>	<u>—</u>
		20	0	20

FIFTH QUARTER (Winter)

ENG 103	Report Writing*	4	0	4
ISC 207	Foremanship Supervision*	4	0	4
BUS 247	Business Insurance	4	0	4
ECO 201	Labor Economics and Labor Relations*	4	0	4
PHI 203	Contemporary Issues	4	0	4
		<u>—</u>	<u>—</u>	<u>—</u>
		20	0	20

SIXTH QUARTER (Spring)

BUS 233	Personnel Management	4	0	4
ISC 220	Management Problems*	4	0	4
ISC 204	Value Analysis*	4	0	4
PSY 206	Applied Psychology	4	0	4
		<u>—</u>	<u>—</u>	<u>—</u>
		16	0	16

*Required for graduation. Any substitutions must be approved by the Registrar.

INDUSTRIAL MANAGEMENT TECHNOLOGY

Suggested Curriculum By Quarters — Night Schedule

(108 Quarter hours required for graduation — average of 12 hours per quarter)

Course Title**FIRST QUARTER — (Fall 1973)**

ISC 209	Plant Layout*(IM 1, 2, 3)	4	0	4
ECO 210	Labor Economics and Labor Rel.*(IM 1, 2, 3)	4	0	4
EDP 104	Introduction to Data Processing (IM 2, 3)	4	0	4
BUS 247	Business Insurance (IM 1)	4	0	4

SECOND QUARTER — (Winter 1973-74)

ISC 231	Manufacturing Cycles *(IM 1,2)	4	0	4
BUS 123	Business Finance *(IM 1, 2)	4	0	4
ISC 204	Value Analysis *(IM 1, 2)	4	0	4
ISC 207	Foremanship Supervision *(IM 2)	4	0	4
ENG 204	Oral Communication (IM 2)	4	0	4

THIRD QUARTER — (Spring 1974)

ENG 101	Grammar *(IM 1,2)	4	0	4
ISC 120	Principles of Industrial Mgmt.* (IM 1,2)	4	0	4
ENG 104	Reading Dynamics (IM 1, 2)	4	0	4

FOURTH QUARTER — (Summer 1974)

BUS 115	Business Law *(IM 1, 2)	4	0	4
ENG 102	Composition (IM 1, 2)	4	0	4
BUS 101	Introduction to Business (IM 1, 2)	4	0	4

FIFTH QUARTER — (Fall 1974)

ISC 102	Industrial Safety*(IM 1, 2, 3)	4	0	4
ENG 103	Report Writing*(IM 1, 2, 3)	4	0	4
BUS 116	Business Law (IM 2, 3)	4	0	4
PSY 206	Applied Psychology (IM 1)	4	0	4

SIXTH QUARTER — (Winter 1974-75)

BUS 233	Personnel Management (IM 1, 2)	4	0	4
ISC 210	Job Analysis*(IM 1, 2)	4	0	4
ISC 211	Work Measurement (IM 1, 2)	4	0	4

SEVENTH QUARTER (Spring 1975)

BUS 109	Business Mathematics*(IM 1,2)	4	0	4
ISC 202	Quality Control*(IM 1, 2)	4	0	4
BUS 239	Marketing (IM 1, 2)	4	0	4

EIGHTH QUARTER — (Summer 1975)

ECO 102	Economics *(IM 1, 2)	4	0	4
ISC 207	Foremanship Supervision*(IM 1, 2)	4	0	4
ENG 204	Oral Communication (IM 1, 2)	4	0	4

NINTH QUARTER — (Fall 1975)

ECO 104	Economics*(IM 2, 3)	4	0	4
MEC 213	Production Planning*(IM 1, 2, 3)	4	0	4
EDP 104	Introduction to Data Processing (IM 1, 2)	4	0	4
BUS 247	Business Insurance (IM 1)	4	0	4
ISC 220	Management Problems (IM 3)	4	0	4

* Required for graduation. Any substitution must be approved by the Registrar.

MEDICAL SECRETARIAL SCIENCE

The demand for better qualified medical secretaries in our ever-expanding medical profession is becoming more acute. The purpose of this curriculum is to outline a training program that will provide specialized training in the accepted procedures required by the medical profession, and to enable persons to become proficient soon after accepting employment in the medical and health occupations.

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

The graduate of the Medical Secretary Curriculum should have a knowledge of medical terminology, skill in dictation and accurate transcriptions of medical records, reports and letters. The duties of a medical secretary may consist of: taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing and scheduling appointments. The graduate may enter a secretarial position in a variety of offices such as physicians, private and public hospitals, federal and state health programs, and the drug and pharmaceutical industry.

MEDICAL SECRETARIAL SCIENCE

Suggested Curriculum By Quarters — Day Schedule

(108 Quarter hours required by graduation — average of 18 hours per quarter)

Course Title

FIRST QUARTER (Fall)

ENG 104	Reading Dynamics	4	0	4
BUS 102	Typewriting *(or elective)	2	4	4
BUS 109	Business Mathematics*	4	0	4
BUS 101	Introduction to Business*	4	0	4
BUS 106	Shorthand *(or elective)	4	2	5
		—	—	—
		18	6	21

SECOND QUARTER (Winter)

ENG 101	Grammar *	4	0	4
BUS 103	Typewriting *(or elective)	2	4	4
BUS 107	Shorthand*	4	2	5
BUS 110	Office Machines— Calculators*	2	2	3
BUS 115A	Business Law for Secretaries	4	0	4
		—	—	—
		16	8	20

THIRD QUARTER (Spring)

ENG 102	Composition	4	0	4
BUS 104	Typewriting*	2	4	4
BUS 108	Shorthand*	4	2	5
BUS 120A	Secretarial Accounting*	4	4	6
		—	—	—
		14	10	19

FOURTH QUARTER (Fall)

ENG 204	Oral Communication	4	0	4
BUS 206E	Dictation and Transcription (Executive) *	2	4	4
BUS 205	Advanced Typing *	2	2	3
BUS 121A	Secretarial Accounting *	4	4	6
BUS 183M	Terminology and Vocabulary (Medical) *	4	0	4
		—	—	—
		16	10	21

FIFTH QUARTER (Winter)

ENG 206	Business Communication *	4	0	4
BUS 214M	Secretarial Procedures (Medical) *	2	2	3
BUS 112	Filing *	2	2	3
BIO 125	Anatomy and Physiology *	4	0	4
EDP 104	Introduction to Data Processing	4	0	4
BUS 271	Office Management	4	0	4
		—	—	—
		20	4	22

SIXTH QUARTER (Spring)

BUS 229	Taxes *	4	0	4
BUS 284M	Terminology and Vocabulary (Medical) *	4	0	4
BUS 207M	Dictation and Transcription (Machine) *	2	4	4
BUS 211	Office Machines — Copy and Duplicating *	2	2	3
PSY 206	Applied Psychology	4	0	4
PSY 112	Personality Development	2	0	2
		—	—	—
		18	6	21

*Required for graduation. Any substitutions must be approved by the Registrar.

MEDICAL SECRETARIAL SCIENCE

Suggested Curriculum By Quarters—Night Schedule

(108 Quarter hours required for graduation — average of 11 hours per quarter)

Course Title**FIRST QUARTER — Fall 1973)**

BUS 102	Typewriting *(MS 1)	2	4	4
BUS 106	Shorthand *(MS 1)	2	4	4
BUS 206E	Dictation and Transcription (Exec.) *(MS 2)	2	4	4
BUS 183M	Terminology and Vocabulary (Med.) *(MS 1, 2)	4	0	4
BUS 214M	Secretarial Procedures (Med.) *(MS 2, 3)	2	2	3
BUS 229	Taxes *(MS 3)	4	0	4
PSY 112	Personality Development (MS 3)	2	0	2

SECOND QUARTER — (Winter 1973-74)

BUS 103	Typewriting *(MS 1)	2	4	4
BUS 107	Shorthand *(MS 1)	2	4	4
BIO 125	Anatomy and Physiology *(MS 2, 3)	4	0	4
BUS 211	Office Machines *(MS 2, 3)	2	2	3
BUS 112	Filing *(MS 2, 3)	2	2	3

THIRD QUARTER — (Spring 1974)

BUS 104	Typewriting*(MS 1)	2	4	4
BUS 108	Shorthand*(MS 1)	2	4	4
BUS 207M	Dictation and Transcription (Machine)*(MS 2)	2	4	4
BUS 284M	Terminology and Vocabulary (Med.)*(MS 2)	4	0	4
ENG 102	Composition (MS 1, 2)	4	0	4

FOURTH QUARTER — (Summer 1974)

BUS 205	Advanced Typewriting*(MS 1)	2	4	4
ENG 101	Grammar*(MS 1, 2)	4	0	4
BUS 115A	Business Law (Secretaries) (MS 1, 2)	4	0	4
PSY 206	Applied Psychology (MS 2)	4	0	4

FIFTH QUARTER — (Fall 1974)

BUS 206E	Dictation and Transcription (Exec.)*(MS 2)	2	4	4
BUS 102	Typewriting*(MS 1)	2	4	4
BUS 106	Shorthand*(MS 1)	2	4	4
BUS 110	Office Machines*(MS 1, 2)	2	2	3
EDP 104	Introduction to Data Processing (MS 2, 3)	4	0	4
ENG 204	Oral Communication (MS 3)	4	0	4
BUS 229	Taxes*(MS 3)	4	0	4

SIXTH QUARTER — (Winter 1974-75)

BUS 103	Typewriting*(MS 1)	2	4	4
BUS 107	Shorthand*(MS 1)	2	4	4
BUS 109	Business Mathematics*(MS 1, 2)	4	0	4
PSY 112	Personality Development (MS 2, 3)	2	0	2
ENG 206	Business Communication*(MS 2, 3)	4	0	4
BUS 271	Office Management (MS 3)	4	0	4

SEVENTH QUARTER — (Spring 1975)

BUS 207M	Dictation and Transcription (Machine)*(MS 2)	2	4	4
BUS 104	Typewriting*(MS 1)	2	4	4
BUS 108	Shorthand*(MS 1)	2	4	4
BUS 211	Office Machines*(MS 1, 2)	2	2	3
PSY 206	Applied Psychology (MS 2)	4	0	4

EIGHTH QUARTER — (Summer 1975)

BUS 205	Advanced Typewriting*(MS 1)	2	4	4
BUS 120A	Secretarial Accounting*(MS 1, 2)	4	4	6
ENG 104	Reading Dynamics (MS 2)	4	0	4

NINTH QUARTER (Fall 1975)

BUS 121A	Secretarial Accounting*(MS 2, 3)	4	4	6
BUS 206E	Dictation and Transcription (Exec.)*(MS 2)	2	4	4
BUS 271	Office Management (MS 3)	4	0	4
BUS 102	Typewriting*(MS 1)	2	4	4
BUS 106	Shorthand*(MS 1)	2	4	4
BUS 101	Introduction to Business*(MS 1)	4	0	4

TENTH QUARTER — (Winter 1975-76)

BUS 103	Typewriting*(MS 1)	2	4	4
BUS 107	Shorthand*(MS 1)	2	4	4
BUS 214M	Secretarial Procedures (Med.)*(MS 2, 3)	2	2	3
BUS 229	Taxes*(MS 2, 3)	4	0	4
BUS 183M	Terminology and Vocabulary (Med.)*(MS 1, 2)	4	0	4
ENG 204	Oral Communication (MS 3)	4	0	4

* Required for graduation. Any substitutions must be approved by the Registrar.

TECHNICAL COURSE DESCRIPTIONS

BUSINESS

BUS 101 — Introduction to Business: 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.

BUS 102 — Typewriting: Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation and manuscripts

BUS 102T — Typing: Self-instructional tapes which provide the basic knowledge and skills in the operation and use of the typewriter as a writing instrument are available through the Self-Study Learning Center.

BUS 103 — Typewriting: 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 106 — Shorthand: A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms and phrases.

BUS 106T — Shorthand: Self-instructional tapes which refresh previously learned knowledge, skills and attitudes of shorthand are available through the Self-Study Learning Center.

BUS 107 — Shorthand: Continued study of theory with greater emphasis on dictation and elementary transcription. Prerequisite: BUS 106 or equivalent.

BUS 108 — Shorthand: 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 Mathematics: This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission taxes and pertinent uses of mathematics in the field of business.

BUS 110 — Office Machines: A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines and calculator.

BUS 112 — Filing: Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetical, Triple Check, Automatic, Geographic, Subject, Soundex and Dewey Decimal filing.

BUS 115 — Business Law: A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments and agencies.

BUS 115A — Business Law for Secretaries: A course covering the history of law supported by case studies, present up-to-date facts and figures on statutory interest rates, statutes of limitations, mortality tables and so on. Legal rights and duties; bailments, contracts, law of negotiable instruments and the law of sales of goods are discussed in detail.

BUS 116 — Business Law: Includes the study of laws pertaining to bailments, sales risk-bearing, partnership-corporation, mortgages and property rights. Prerequisite: BUS 115

BUS 117 — Law of Contracts: Class Hours: 3. A self-study course which teaches basic concepts of the law of contracts. Offered through the Learning Center.

BUS 120 — Accounting: 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: MAT 110

BUS 121 — Accounting: 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 of management problems. Prerequisite: BUS 120

BUS 123 — Business Finance: 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: 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 183M — Medical Terminology and Vocabulary: 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 she may encounter as a medical secretary.

BUS 205 — Advanced Typewriting: 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 letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents. Prerequisite: BYS 104

BUS 206G — Dictation and Transcription (Machine): Objective of this course is to develop skill in using the transcription machines and to transcribe correctly at the typewriter. The student will thereby, gain a knowledge of many kinds of business correspondence, increase her business vocabulary and develop an understanding of secretarial procedures.

BUS 206E — Dictation and Transcription: Develops the skill of taking dictation and of 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: Covering materials appropriate to the course of study, the student develops the accuracy, speed and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Prerequisite: BUS 206E

BUS 207M — Dictation and Transcription (Machine): This course prepares the student to become a skilled medical transcriptionist using a typewriter, transcribing unit and pre-recorded belts. Belts cover case studies, physical examinations, operation records, medical correspondence, and x-ray or pathological reports. Prerequisites: BUS 183M, BUS 205

BUS 208E—Dictation and Transportation: Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Prerequisite: BUS 297E

BUS 210 — Typing Office Practice: A course designed to familiarize the student with the forms and routines found in a typical business. Emphasis is placed upon correct procedures and adaptability to varying office methods. Prerequisite: BUS 205.

BUS 211 — Office Machines: Instructions in the operation and the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines.

BUS 214 — Secretarial Procedures: Designed to acquaint the student with the responsibilities encountered by a secretary during a work day. These include the following: receptionist duties, handling the mail, telephone techniques, telegrams, office records, travel information, purchasing of supplies, office organization and insurance claims. Suggested prerequisite: BUS 103.

BUS 214M — Secretarial Procedures (Medical): This course introduces the medical secretary to the activities, responsibilities, skills and work habits that she will encounter 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 103.

BUS 215E — Office Application: During a student's final or final two quarters she may receive credit for work in a business, technical or professional office for six hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned. Prerequisites: BUS 214, BUS 205, BUS 207, BUS 211.

BUS 219 — Credit Procedures and Problems: Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included. Prerequisite: BUS 120

BUS 222 — Accounting: 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 — Accounting: Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, long-term liabilities, paid-in capital, retained earnings and special analytical processes. Prerequisite: BUS 222

BUS 225 — Cost Accounting: 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 121

BUS 229 — Taxes: Application of federal and state taxes to various business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise and inheritance. Prerequisite: BUS 121

BUS 232 — Sales Development: 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: Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits and security.

BUS 235 — Business Management: 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 243 — Advertising: 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: 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 247 — Business Insurance: An introduction to insurance, what it is, what it does, and how it can best serve the individual and the business. Included are a brief history of insurance, theories of risk and discussion of all types of modern-day insurance.

BUS 255 — Interpreting Accounting Records: Designed to aid the student in developing a "use understanding" of accounting records, reports and financial statements. Interpretation, analysis and utilization of accounting statements. Prerequisite: BUS 121

BUS 267 — Money and Banking: A course designed to stimulate interest in the commercial banking process used today along with the Federal Reserve System, business cycles and monetary policies, financial institutions and commercial banks. The types of money in use and early theories of the value of money are discussed thoroughly in this study.

BUS 269 — Auditing: 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: Presents the fundamental principles of office management. Emphasis on the role of the office management including its functions, office automation, planning, controlling, organizing and actuating office problems.

BUS 272 — Principles of Supervision: Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed

BUS 284M — Terminology and Vocabulary (Medical): 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 183M

BUS 285 — Real Estate: The course treats the "why" and "how" of real estate as it affects individuals and business firms. It presents the legal framework, the economic significance and the social implications and practices that make up today's real estate market.

BIOLOGY

BIO 125 — Anatomy and Physiology: A study of the normal structures, functions and organ systems of the human body as an integrated unit. Suggested prerequisite: BUS 183M

DRAFTING

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

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

ECONOMICS

ECO 102 — Economics: The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution and consumption both in relation to the individual enterprise and to society at large.

ECO 104 — Economics: 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. Prerequisite: BUS 102

ECO 110 — The Free Enterprise System: Class Hours: 3. A self-study course dealing with economic problems, production deviations and solutions. Offered through the Learning Center.

ECO 111 — The Gross National Product: Class Hours: 3. A self-study course which attempts to explain the nature of this output and its significance for the citizens of the United States.

ECO 112 — Problems of Economic Stability: Class Hours: 3. A self-study course which will demonstrate how modern economic analysis can be used to devise sound policies that can solve the problems of slow growth, unemployment and inflation, while laying the foundation for continued economic progress in a free society.

ECO 113 — The Federal Reserve System: Class Hours: 3. A self-study course which examines the organization and operation of the Federal Reserve System and analyzes the factors governing changes in the supply and expansion of money. Offered through the Learning Center.

ECO 114 — Governmental Finance: Class Hours: 3. A self-study course which demonstrates the structure of the government budget in the the level of economic activity, the composition of government purchases, the tax structure and the composition of transfer payments. Offered through the Learning Center.

ECO 115 — International Trade: Class Hours: 3. A self-study course which explains the significance, concepts, theory and mechanics of International Trade. Offered through the Learning Center.

ECO 108 — Consumer Economics: Designed to help the student use his resources of time, energy and money to get the most out of life. It gives the student an opportunity to build useful skills in buying, managing his finances, increasing his resources and to understand better the economy in which he lives.

ECO 201 — Labor Economics and Labor Relations: Emphasis is placed on the history of the labor movement 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.

ELECTRICITY

ELC 101 — Fundamentals of Electricity: Elementary principles of electricity including: basic electric units. Ohms law, Kirchhoffs law, Network theorems, magnetics, basic electrical measuring instruments, inductance, capacitance, sine wave analysis and non-resonant resistive, inductive and capacitive networks.

ELC 102 — Fundamentals of Electricity: Series and parallel resonant-circuit analysis, resonant and non-resonant transformer analysis, basic diode power supply analysis, introduction to non-linear resistive control devices, and introduction to electro-mechanical devices. Prerequisite: ELC 101

ELECTRONIC DATA PROCESSING

EDP 104 — Introduction to Data Processing Systems: Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detailed study of particular computer problems.

ELECTRONICS

ELN 101 — Electronic Instruments and Measurements: A study of basic electronic instruments, their theory of operation, function, tolerances and calibration. Both service and laboratory instruments will be studied. Laboratory experience will provide application of each type instrument studies. Prerequisite: ELC 102

ELN 105 — Control Devices: A study in depth of the electrical characteristics of vacuum tubes and transistors. Basic parameters and applications of each type device to the three configurations of a three terminal two port system will be included. Prerequisite: ELC 102

ELN 205 — Applications of Vacuum Tubes: Practical applications of vacuum tubes and transistors to basic audio amplifiers, radio frequency amplifiers, detectors, modulators and oscillators. Prerequisite: ELN 105

ELN 210 — Semiconductor Circuit Analysis: A study in some depth of the analysis and design of transistor circuits. Network theorems and equivalent circuits are used extensively in evaluating total circuit performance. Device peculiarities and limitations pertinent to reliable operations are considered. H. Y. Z. and T. parameters are employed as well as signal-flow graphs. Prerequisite: ELN 105

ELN 214 — Wave Shaping and Pulse Circuits: Broadband amplifiers, magnetic amplifiers, multivibrators, wave shaping techniques, chopper amplifiers, clipper and clamper circuits. Prerequisites: ELN 105, MAT 103

ELN 215 — Wave Shaping and Pulse Circuits: Pulse techniques, diode switches, gates, step-counters, restorers and other specific circuits which function as switches. Prerequisite: ELN 214

ELN 220 — Electronic Systems: A block diagram course investigating numerous electronic systems. Modules or blocks of various circuits already studied are arranged in various manners to produce complex electronic systems. Systems will be explained and reduced to functions and then to block diagrams. AM, FM, and Single Sideband transmitters and receivers, multiplexing, TV transmitters and receivers, pulse-modulated systems, computers, telemetry, navigational systems, sonar and radar will be considered. Corequisite: ELN 215

ELN 235 — Industrial Instrumentation: Broad introduction to use of industrial electro-mechanical and electronic circuits and equipment. Provides an understanding of the methods, techniques and skills required for installation, service and operation of a variety of industrial control systems. Analysis of sensing devices for detecting changes in pressure, temperature, humidity, sound light, electricity, the associated circuitry and indicating and recording devices. Prerequisites: ELN 205, PHY 104

ELN 240 — Digital Computers: An exploration into the methodology of counting and computing. Various computer techniques will be investigated including: non-sinusoidal waveforms, binary and decade counters, industrial counters, readout devices, logic circuits, arithmetic circuits, storage devices, input-output devices, computer control, analog and digital converters. Prerequisite: ELN 214

ENGLISH

ENG 101 — Grammar: Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

ENG 102 — Composition: Designed to aid the student in the improvement of self-expression in business and technical composition. Prerequisite: ENG 101

ENG 103 — Report Writing: The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of

each student at the end of the term. This report must have to do with something in his chosen curriculum. Prerequisite: ENG 102

ENG 104 — Reading Dynamics: A course designed for the average reader who needs to improve overall reading efficiency including speed.

ENG 204 — Oral Communication: A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences and interviews. Prerequisite: ENG 101

ENG 206 — Business Communication: Develops skills in techniques in writing business communications. Emphasis is placed on writing action — getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances and inquiry. Prerequisite: ENG 102

ENG 208 — Effective Writing: A programmed course in effective writing principles offered through the institute's learning Laboratory.

ENG 209 — College Composition: Class hours: 3. A self-study course which will help the student to better think, organize, and compose his written composition. Offered through the Learning Center. Prerequisite: None.

INDUSTRIAL MANAGEMENT

ISC 102 — Industrial Safety: Problems of accidents and fire in industry. Management and supervisory responsibility for fire and accident prevention. Additional topics cover accident reports and the supervisor; good housekeeping and fire prevention; machine regulations; the first aid department and the line supervisory responsibility; job instruction and safety instruction; company rules and enforcement; use of safety committees; insurance carrier and the Insurance Rating Bureau; and advertising and promoting a good safety and fire prevention program.

ISC 103 — The Supervisor and Safety: Class Hours: 3. A self-study course which deals with common problems encountered by all first line supervisors. He learns to communicate with his men, analyze the work environment and prepare accident reports and data. Offered through the Learning Center.

ISC 104 — The Supervisor and Labor Relations: Class hours: 3. A self-study course which emphasizes dealing with people but it also gives the supervisor grounding in labor law and contracts as it applies to his responsibilities. Offered through the Learning Center.

ISC 120 — Principles of Industrial Management: The basic managerial decisions; organizational structure including plant location, building requirements, and internal factory organization; problems of factory operation and control, planning, scheduling, routing factory production, stores control, labor control, purchasing, cost control. Plant problems are utilized as lab experiments.

ISC 202 — Quality Control: Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, structure, costs, reports, record, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests for significance.

ISC 204 — Valve Analysis: The modern concept in the control of manufacturing production. This course will provide the students an opportunity to study a production system with the specific purpose of identifying unnecessary cost by the use of sound decisions through a common sense approach.

ISC 207 — Foremanship Supervision: The foreman's responsibility for planning, organizing, directing, controlling and co-ordinating supervisory activities. It teaches the

supervisor the basic functions of an organization and his responsibility in carrying out the objectives in accordance with the organization's plan. Included in the course are such topics as establishing lines of authority, functions of departments of units, duties and responsibilities, policies and procedures and rules and regulations.

ISC 209 — Plant Layout: A practical study of factory planning with emphasis on the most efficient arrangements of work areas to achieve lower manufacturing costs. Layouts for small and medium-sized plants, layout fundamentals, selection of production equipment and materials handling equipment. Effective management of men, money and materials in a manufacturing operation.

ISC 210 — Job Analysis and Evaluation: This study is based on product studies as well as personnel and wage programs. The course utilizes the study of product design, value analysis, materials and process as an intricate part of productive procedures.

ISC 211 — Work Measurement: Principles of work simplification including administration of job methods improvement, motion study fundamentals and time study techniques. Use of flow and process charts, multiple activity charts, operation charts, flow diagrams and methods of evaluation. Prerequisite: ISC 210

MEC 213 — Production Planning: Day-to-day plant direction; forecasting, product planning and control, scheduling, dispatching, routing and inventory control. Case histories are discussed in the classroom, and courses of corrective action are developed. Actual layouts are utilized for planning and control.

ISC 220 — Management Problems: A study of personnel and production problems from the standpoint of the executive. Includes selection and development of products, control problems and techniques, development of standards, employee-employer relations developing the executive staff. Case studies are utilized. Prerequisite: BUS 233, BUS 272, ISC 120

ISC 231 — Manufacturing Cycles: Purchasing and distribution costs, consumption patterns, channels of distribution, marketing and consumer goods, shopping, specialty, agricultural and industrial goods, service marketing, functional middlement, speculation and hedging; wholesaling, shipping and warehousing, exporting and trade movements; standardization and grading, pricing, government regulation and competition, sales promotional activities, merchandising practices.

MATHEMATICS

MAT 101 — Technical Mathematics: The real number system is developed as an extension of natural numbers. Numbers systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed. Prerequisite: Admission to technical program.

MAT 102 — Technical Mathematics:

A continuation of MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth. Prerequisite: MAT 101

MAT 103 — Technical Mathematics: The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Applications of these concepts to practical situations are stressed. Prerequisite: MAT 102.

MAT 104 — Income Tax: Class hours: 3. A self-study course which will provide a degree of knowledge and familiarity with income tax laws and forms and introduce the greater complexities of income tax problems. Offered through the learning Center.

MAT 105 — Consumer Insurance: Class Hours: 3. A self-study course which teaches the basic principles of insurance, financial limitations, policy benefits and decision making. Offered through the Learning Center.

MAT 106 — Investments: Class Hours: 3. A self-study course which deals with the cumulative effects of compound interest; the necessity of long-term planned and systematic savings and prudent investment; and adequate consideration to maintaining a proper balance in safety, fluidity, and yield of investments of the individual. Offered through the Learning Center.

MAT 111 — Payroll Mathematics: Class Hours: 3. A self-study course which deals with interest, negotiable instruments and payroll mathematics. Offered through the Learning Center.

MAT 112 — Math for Management: Class Hours: 3. A self-study course which deals with cash and trade discount, profit and loss, commission, depreciation. Offered through the Learning Center.

MAT 113 — Math for Accounting: Class Hours: 3. A self-study course which deals with accounting and finance, taxes, securities, insurance. Offered through the Learning Center.

MAT 201 — Technical Mathematics: A continuation of MAT 103. More advanced concepts of differentiation and integration are considered. Included are graphs and derivatives of the trigonometric functions, exponential and logarithmic and differentiation and integration, advanced integration techniques, polar equations, parametric equations, and Fourier series. Prerequisite: MAT 103

PHYSICS

PHY 101 — Physics: Properties of Matter. A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course.

PHY 102 — Physics: Work, Energy, Power. Major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas. Prerequisite: MAT 101, PHY 101

PHY 104 — Physics: Light and Sound. A survey of the concepts involving wave motion leads to a study of sound, its generation, transmission and detection. The principles of wave motion also serve as an introduction to the study of light, illumination and the principles involved in optical instruments. Application is stressed throughout. Prerequisite: MAT 101, PHY 101

SOCIOLOGY

SOC 207—Rural Society: A study of selected elements of rural sociology with emphasis on current social changes. The course provides a sociological background for the understanding of rural social changes. Areas of study include rural culture, group relationships, social classes, rural and suburban communities, farm organizations, the communication of agricultural technology, rural social problems, agricultural adjustment, and population changes.

ELECTIVES (BUSINESS)

BUS 183E—Terminology and Vocabulary: To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical and professional offices. Prerequisite: BUS 107.

BUS 237—Wholesaling: The development of wholesaling; present day trends in the United States. A study of the functions of wholesaling.

BUS 266 — Budget and Record Keeping: The basic principles, methods and procedures for preparation and operation of budgets. Special attention is given to the involvement of individual departments and the role they play. Emphasis on the necessity for accurate record keeping in order to evaluate the effectiveness of budget planning. Prerequisite: BUS 212

ELECTIVE (POLITICAL SCIENCE)

POL 201 — United States Government: A study of government with emphasis on basic concepts, structure, powers, procedures and problems.

POL 206 — U. S. Government: A programmed course in the nature and processes of government offered through the institute's Learning Laboratory.

ELECTIVE (PSYCHOLOGY)

PSY 102 — Social Behavior: A self-study course which provides provocative and stimulating information about men's social and psychological behavior. Offered through the Learning Center.

PSY 112 — Personality Development: Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement.

PSY 206 — Applied Psychology: A study of the principles of psychology that will be of assistance in the understanding of interpersonal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems.

ELECTIVES (SOCIAL SCIENCE)

SSC 201 — Social Science: An integrated course in the social sciences, drawing from the fields of anthropology, psychology, history and sociology.

SSC 202 — Social Science: A further study of social sciences with emphasis on economics, political science and social problems as they relate to the individual. Prerequisite: SSC 201

SSC 204 — Modern Consumer Education: A self-study course in consumer education with enlightenment through filmstrips and tapes. Offered through the Learning Center.

SSC 205 — American Institutions: A study of the effect of American social economic and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national and global problems viewed in the light of our political and economic heritage.

GENERAL EDUCATION DIVISION



ASSOCIATE IN GENERAL EDUCATION DEGREE

(See Section on Continuing Education also)

Thomas Jefferson stated: "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be." Since Jefferson's time our civilization has become increasingly democratic and complex. Knowledge in the broad fields of literature, the arts, philosophy, history and science has also expanded. Citizens in all walks of life must become increasingly aware not only of the complex workings and interrelationships of our institutions but also of our cultural heritage and history.

As our industrial and social needs have developed, the requirements in the various professions have forced the education of such persons to be drawn out over a longer period of time. Technical advances also have demanded more intensive training in this complex area of knowledge and skills. A large number of citizens, however, fall clearly into neither professional nor technical categories. These people constitute the majority of citizens whose occupational activities and interests demand a high degree of literacy and some special training but whose educational goals are neither professional nor technical. They are the managers of small independent businesses; the department managers of large concerns; some employees of local, state and federal government; the housewives desiring to keep abreast of their husband's expanding knowledge and interests; young women in general; and any who have a thirst for a wider and deeper insight into life and the workings of our society.

The general education program offered at Cleveland County Technical Institute 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	18 Quarter Hours
Fine Arts and Philosophy	9 Quarter Hours
Social Science	15 Quarter Hours
Science and Mathematics	18 Quarter Hours

This introduction into the broad fields of knowledge permits the student to find himself and clarify his life goals. With his background he is able to intelligently choose additional course work in terms of his own interests and social needs. The program provides a wide choice of electives and permits the student to explore areas of interest uninhibited by specific professional or technical requirements. Beyond the basic general education, the student's program is flexible to the impulse and variety of human needs. He may explore courses in

building construction, interior design, Boolean algebra, great books, home and family living, some of the introductory professional courses, or something in arts and crafts.

The program is principally designed for students wanting only two years of higher education; however, many of the required and elective courses in the program are the equivalent of regular freshman and sophomore work.

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

Admission Requirements and Procedures: Same as for Technical Division. See page 34 for these.

GENERAL EDUCATION COURSE DESCRIPTIONS

ENG 101—English: A brief history of the English language and review of grammar with particular emphasis on composition and expository writing. 3 hours

ENG 102—English: A continuation of ENG 101 with special emphasis on reading, expository writing and speaking, with an introduction to poetry and the short story. 3 hours

ENG 103—English Masterpieces In The Social Sciences: A continuation of ENG 101 and ENG 102 introducing the novel and with increased emphasis on writing and speaking on topics related to contemporary social problems. (Co-requisite with HIS 103) 3 hours

ENG 201 — English Masterpieces In the Natural Sciences: A continuation, introducing the essay and with emphasis on writing and speaking on topics related to man in his biological and physical environment. (Co-requisite with BIO 201) 3 Hours

ENG 202 — English Masterpieces In The Humanities: A continuation drawing from all literary forms with emphasis on expository writing and speaking on man and philosophy. (Co-requisite with PHI 202) 3 Hours

ENG 203 — Creative Writing: Creative writing laboratory. Emphasis on imaginative writing with special emphasis on essays, short stories and poetry.

HIS 101 — World Civilization: A survey of the cultural beginnings 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. 3. Hours

HIS 103 — World Civilization: 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 (Co-requisite with ENG 103) 3 Hours

HIS 102 — World Civilization: A continuation of HIS 101 from the Middle Ages, through the Renaissance, the Voyages of Discovery, Colonization, the Reformation and the Ages of Enlightenment. 3 Hours.

NSC 101 — Physical Science: A study of facts, principles, theories and basic concepts from the areas of astronomy, geology and climatology. Special emphasis will be given to evaluation of landscapes, effects of glaciers, streams, wind, weather, and the geological timetable. 3 Hours.

MTH 101 — Modern Mathematics: An introduction to mathematical concepts necessary for effective citizenship. The course includes set, the development of number systems, an introduction to probability, algebra and statistics.

MTH 102 — Introduction to Logic: Emphasis on both inductive and deductive logic with particular attention to the bases of scientific evidence, probability theory, hypothetical and categorical syllogisms, causation and common fallacies.

BIO 201 — General Zoology: A comprehensive study of the animal kingdom, with special emphasis on the morphology, anatomy, physiology, genetics and ecological relationships. (Co-requisite with ENG 201). 4 Hours

BIO 202 — General Botany: A comprehensive study of the plant kingdom with special emphasis on morphology, anatomy, physiology, taxonomy and ecology. 4 Hours

MUS 101 — Music Appreciation: Designed to give a basic orientation to music with emphasis on simple form and analysis, instrumentation aesthetics, masterpieces and other significant works. 3 Hours.

ART 101 — Art Appreciation: An introduction to fundamental elements and principles of creative art expression emphasizing composition, design, shape, value styles, and movements. 3 Hours

PSY 101 — Introduction to Psychology: Introductory survey of the field of psychology wherein the student becomes better acquainted with a human being as a biological-social organism. Topics covered include history of psychological development, the scientific method of psychology, theory of statistical concepts, intelligence, motivation, emotions and learning. 3 Hours

PHI 202 — Introduction to Philosophy: An introduction to philosophic world frames emphasizing cosmology, ontology, epistemology and axiology. (Co-requisite with ENG 202) 3 Hours

PHI 203 — Contemporary Issues: A culminating interdisciplinary course dealing with the basic economic, social, scientific and moral issues confronting human society. 3 Hours

PHI 204 — Great Decisions: A discussion study of key foreign policy issues faced by the United States and its citizens in the current year.



VOCATIONAL DIVISION



VOCATIONAL EDUCATION

The major aims of the Vocational Programs at Cleveland Technical Institute are to prepare skilled craftsmen to successfully meet the manpower needs of the area and to provide related areas of study which equip the student with the ability to develop an understanding of the free enterprise system and an appreciation for a broader social implication of life in a democratic society.

The Vocational Programs are designed to prepare the student for initial employment, retraining for new skills, or for advancement within a given vocation.

A diploma is awarded upon the successful completion of any of these programs:

PROGRAMS OF STUDY OFFERED

AIR-CONDITIONING AND REFRIGERATION (NIGHT SCHEDULE ONLY)

AUTO BODY REPAIR

AUTOMOTIVE MECHANICS

ELECTRICAL INSTALLATION AND MAINTENANCE

PLUMBING AND HEATING (NIGHT SCHEDULE ONLY)

PRACTICAL NURSING EDUCATION (DAY SCHEDULE ONLY)

ELECTRONICS SERVICING

WELDING

A certificate is awarded upon the successful completion of the following program:

MASONRY TRADE (NIGHT SCHEDULE ONLY)

ADMISSION REQUIREMENTS

1. Be at least eighteen years of age, or the applicant's high school class must have graduated.
2. Take diagnostic skill test battery. These tests are used to assist the applicant in the selection of a program of study suited to both his interest and general capabilities.
3. Be in acceptable condition of physical and mental health.*
4. Have a personal interview in the Student Services Office.

(Although high school graduation or equivalent is not required for entry in vocational programs,** the applicant's previous educational achievement should give some evidence of an ability to profit from the program for which the person has applied.)

ADMISSION PROCEDURE

1. Submit completed application and medical history form.
2. Have transcripts of all previous education mailed to the Institute.
3. Have counseling interviews after taking the diagnostic skill test battery.

*A complete physical and dental examination is required for Practical Nurse applicants.

**High school graduation or equivalent is required of Practical Nurse applicants (see page 119 in Continuing Education section of this catalog for details about the high school equivalency certificate.)

REQUIREMENTS FOR GRADUATION

The following are established as minimum requirements for the vocational diploma:

1. Complete all course requirements as outlined by curricula, and earn at least a 2.0 QPA in courses presented for graduation.
2. Complete not less than 60 credit hours. In most programs of study the program outlined will consist of more than this minimum credit hour total.
3. Application for graduation must be submitted to the Dean of Student Services during the quarter prior to completion of course requirements. A \$15.00 graduation fee is required at that time.
4. Fulfill all financial obligations to the Institute. Library clearance is also required.
5. Prospective graduates must be recommended by the chairman of the department in which a student completes his or her major work.
6. Be present for graduation exercises which are held at the end of the spring and summer quarters each year. Exceptions to this requirement in case of unavoidable absence, may only be granted by the President of the Institute.
7. All prospective graduates must complete one full quarter of work at this Institute before graduation.

AIR CONDITIONING AND REFRIGERATION

(Night Schedule Only)

PURPOSE OF CURRICULUM:

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 trend is toward greater use of refrigeration or cooling and heating. The food industry has required greater use of refrigeration systems in freezing, storage 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 service men 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 serviceman is employable in areas of sales, maintenance, installation and in the growing fields of truck and trailer refrigeration.

JOB DESCRIPTION:

The air conditioning and refrigeration mechanic installs, inspects, maintains, services and repairs domestic and commercial equipment, connects motors, compressors, temperature controls, humidity controls and circulating fans to control panels, tests systems, observes pressure and vacuum gauges and adjusts controls to insure proper operation

AIR CONDITIONING AND REFRIGERATION

*Suggested Curriculum By Quarters — Night Schedule Only
(60 Quarter hours required for graduation)*

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Spring 1973)</i>	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
AHR 1121 (1) Principles of Refrigeration	2	6	4
DFT 1104 Blueprint Reading: Mechanical	1	3	2
ENG 1102 Communication Skills	3	0	3
	—	—	—
	6	9	9

SECOND QUARTER (Summer 1973)

AHR 1121 (II) Principles of Refrigeration	2	6	4
PHY 1101 Applied Science	4	0	4
BUS 1103 Small Business Operations	3	0	3
	—	—	—
	9	6	11

THIRD QUARTER (Fall 1973)

AHR 1122 Domestic and Commercial Refrigeration	2	9	5
MAT 1101 Fundamentals of Mathematics	4	0	4
	—	—	—
	6	9	9

FOURTH QUARTER (Winter 1973-74)

AHR 1123 (I) Principles of Air Conditioning	2	6	4
WLD 1101 Basic Gas Welding	1	3	2
ENG 1101 Reading Improvement	3	0	3
	—	—	—
	6	9	9

SIXTH QUARTER (Summer 1974)

AHR 1128 Automatic Controls	2	6	4
ELC 1104 Applied Electricity	2	2	3
MAT 1102 Algebra	3	0	3
	—	—	—
	7	8	10

SEVENTH QUARTER (Fall 1974)

AHR 1124 (1) Air Conditioning and Refrig. Servicing	2	6	4
MEC 1120 Duct Construction and Maintenance	2	5	4
	—	—	—
	4	11	8

EIGHTH QUARTER (Winter (1974-75)

AHR 1126 All Year Comfort Systems	3	9	6
AHR 1124 (II) Air Conditioning and Refrig. Servicing	0	3	1
	—	—	—
	3	12	7

AUTO BODY REPAIR

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 foremen, 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 institute.

AUTO BODY REPAIR

Suggested Curriculum By Quarters — Day Schedule (60 quarter hours required for graduation)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Fall)</i>	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
ENG 1101 Reading Improvement	3	0	3
MAT 1101 Fundamentals of Mathematics	4	0	4
PHY 1101 Applied Science	4	0	4
AUT 1111 Auto Body Repair	3	12	7
WLD 1101 Basic Gas Welding	1	3	2
	—	—	—
	15	15	20
<i>SECOND QUARTER (Winter)</i>			
ENG 1102 Communication Skills	4	0	4
PHY 1102 Applied Science	4	0	4
DFT 1101 Schematics and Diagrams: Power Mechanics	0	3	1
AUT 1112 Auto Body Repair	4	15	9
	—	—	—
	12	18	18
<i>THIRD QUARTER (Spring)</i>			
WLD 1105 Auto Body Welding	0	3	1
AUT 1113 Metal Finishing and Painting	3	12	7
AUT 1115 Trim, Glass and Radiator Repair	3	0	6
	—	—	—
	6	24	14
<i>FOURTH QUARTER (Summer)</i>			
AUT 1114 Body Shop Applications	3	20	10
PSY 1101 Human Relations	4	0	4
BUS 1103 Small Business Operations	3	0	3
	—	—	—
	10	20	17

AUTO BODY REPAIR

Suggested Curriculum By Quarter — Night Schedule

(60 Quarter hours required for graduation)

Course Title	Hours Class	Per Week Lab-Shop	Credit Hours
FIRST QUARTER — (Fall 1973)			
AUT 1111 (I) Auto Body Repair	2	6	4
DFT 1101 Schematics and Diagrams: Power Mechanics	0	3	1
PHY 1101 Applied Science	4	0	4
	—	—	—
	6	9	9
SECOND QUARTER — (Winter 1973-74)			
AUT 1111 (II) Auto Body Repair	1	6	3
PHY 1102 Applied Science	4	0	4
WLD 1101 Basic Gas Welding	1	3	2
	—	—	—
	6	9	9
THIRD QUARTER — (Spring 1974)			
ENG 1102 Communication Skills	4	0	4
AUT 1112 (I) Auto Body Repair	2	6	4
WLD 1105 Auto Body Welding	0	3	1
	—	—	—
	6	9	9
FOURTH QUARTER — (Summer 1974)			
AUT 1112 (II) Auto Body Repair	2	9	5
PSY 1101 Human Relations	4	0	4
	—	—	—
	6	9	9
FIFTH QUARTER — (Fall 1974)			
MAT 1101 Fundamental of Mathematics	4	0	4
AUT 1113 (I) Metal Finishing and Painting	2	9	5
	—	—	—
	6	9	9
SIXTH QUARTER — (Winter 1974-75)			
ENG 1101 Reading Improvement	3	0	3
AUT 1113 (II) Metal Finishing and Painting	1	3	2
AUT 1115 (I) Trim, Glass and Radiator Repair	2	6	4
	—	—	—
	6	9	9
SEVENTH QUARTER — (Spring 1975)			
AUT 1114 (I) Body Shop Applications	2	9	5
AUT 1115 (II) Trim, Glass and Radiator Repair	1	3	2
	—	—	—
	3	12	7
EIGHTH QUARTER (Summer 1975)			
AUT 1114 (II) Body Shop Applications	1	11	5
BUS 1103 Small Business Operations	3	0	3
	—	—	—
	4	11	8

AUTOMOTIVE MECHANICS

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 his laboratory experiences.

Emphasis is placed on the mechanical parts and operation of the various automobile units. Trouble shooting 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.

AUTOMOTIVE MECHANICS

Suggested Curriculum By Quarters — Day Schedule
(60 Quarter hours required for graduation)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Fall)</i>	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
PME 1101 Internal Combustion Engines	3	15	8
MAT 1101 Fundamentals of Mathematics	4	0	4
ENG 1101 Reading Improvement	4	0	4
PHY 1101 Applied Science	4	0	4
	—	—	—
	15	15	20
<i>SECOND QUARTER (Winter)</i>			
PME 1102 Engine Electrical and Fuel Systems	4	16	9
ENG 1102 Communication Skills	3	0	3
DFT 1101 Schematics and Diagrams: Power Mechanics	0	3	1
PHY 1102 Applied Science	4	0	4
	—	—	—
	11	19	17
<i>THIRD QUARTER (Spring)</i>			
AUT 1123 Auto Chassis and Suspensions Systems	3	8	6
WLD 1101 Basic Gas Welding	1	3	2
AUT 1121 Braking Systems	2	5	4
PSY 1101 Human Relations	3	0	3
AHR 1101 Auto Air Conditioning	2	3	3
	—	—	—
	11	19	18
<i>FOURTH QUARTER (Summer)</i>			
AUT 1124 Auto Power Train System	3	8	6
AUT 1125 Auto Servicing	3	13	7
BUS 1103 Small Business Operations	3	0	3
	—	—	—
	9	21	16

AUTOMOTIVE MECHANICS

*Suggested Curriculum By Quarters — Night Schedule
(60 Quarter hours required for graduation)*

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER — (Fall 1973)</i>	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
PME 1102 (I) Electrical and Fuel Systems	3	9	6
DFT 1101 Schematics and Diagrams: Power Mechanics	—	—	—
	3	12	7
<i>SECOND QUARTER — (Winter 1973-74)</i>			
PME 1102 (II) Electrical and Fuel Systems	1	7	3
PSY 1101 Human Relations	3	0	3
ENG 1101 Reading Improvement	4	0	4
	—	—	—
	8	7	10
<i>THIRD QUARTER — (Spring 1974)</i>			
AUT 1124 Auto Power Train	3	8	6
WLD 1101 Basic Gas Welding	1	3	2
	—	—	—
	4	11	8
<i>FOURTH QUARTER — (Summer 1974)</i>			
AUT 1125 (I) Auto Servicing	2	10	5
BUS 1103 Small Business Operations	3	0	3
	—	—	—
	5	10	8
<i>FIFTH QUARTER — (Fall 1974)</i>			
AUT 1121 Braking Systems	2	5	4
MAT 1101 Fundamentals of Mathematics	4	0	4
AUT 1125 (II) Auto Servicing	1	3	2
PME 1101 (I) Internal Combustion Engines	2	8	5
AHR 1101 Auto Air Conditioning	2	3	3
	—	—	—
	4	11	8
<i>SIXTH QUARTER (Winter 1974-75)</i>			
PME 1101 (1) Internal Combustion Engines	2	8	5
AHR 1101 Auto Air Conditioning	2	3	3
	—	—	—
	4	11	8
<i>SEVENTH QUARTER — (Spring 1975)</i>			
PME 1101 (II) Internal Combustion Engines	1	7	3
ENG 1102 Communication Skills	3	0	3
PHY 1101 Applied Science	4	0	4
	—	—	—
	8	7	10
<i>EIGHTH QUARTER — (Summer 1975)</i>			
PHY 1102 Applied Science	4	0	4
AUT 1123 Auto Chassis	3	8	6
	—	—	—
	7	8	10

ELECTRICAL INSTALLATION AND MAINTENANCE

The rapid expansion of the national economy and the increasing development of new electrical products is providing a growing need for qualified people to install and maintain electrical equipment. By mid-1960 more than 350,000 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 as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out and maintenance systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power and power factor of single and polyphase alternating circuits. He 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 center.

ELECTRICAL INSTALLATION AND MAINTENANCE

Suggested Curriculum By Quarters—Day Schedule
(60 Quarter hours required for graduation)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Fall)</i>	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
ELC 1112 Direct And Alternating Current	5	11	8
ENG 1101 Reading Improvement	3	0	3
MAT 1115 Electrical Mathematics	4	0	4
PHY 1101 Applied Science	4	0	4
DFT 1110 Blueprint Reading: Building Trades	0	3	1
	—	—	—
	16	14	20
 <i>SECOND QUARTER (Winter)</i>			
ELC 1113 AC and DC Machines and Controls	4	15	9
ENG 1102 Communication Skills	3	0	3
MAT 1116 Electrical Mathematics	4	0	4
DFT 1113 Blueprint Reading: Electrical	1	3	2
	—	—	—
	12	18	18

THIRD QUARTER (Spring)

ELC 1124	Residential Wiring	4	10	8
ELN 1118	Industrial Electronics	2	6	4
PSY 1101	Human Relations	4	0	4
ELC 1114	National Electrical Code	4	0	4
		—	—	—
		14	16	20

FOURTH QUARTER (Summer)

ELC 1125	Commercial and Industrial Wiring	4	15	9
ELN 1119	Industrial Electronics	2	6	4
BUS 1103	Small Business Operations	3	0	3
		—	—	—
		9	21	16

ELECTRICAL INSTALLATION AND MAINTENANCE

Suggested Curriculum By Quarters — Night Schedule (60 Quarter hours required for graduation)

Course Title		Hours	Per Week	Credit
		Class	Lab-Shop	Hours
FIRST QUARTER (Fall)				
ELC 1112	(I) Direct and Alternating Current (EIM 1)	2	6	4
MAT 1115	Electrical Mathematics (EIM 1)	4	0	4
DFT 1110	Blueprint Reading: Building Trades (EIM 1)	0	3	1
ELC 1124	(I) Residential Wiring (EIM 2)	2	5	4
ELC 1118	Industrial Electronics (EIM 2)	2	6	4
SECOND QUARTER (Winter)				
ELC 1112	(II) AC and DC Current (EIM 1)	3	5	4
ENG 1101	Reading Improvement (EIM 1)	3	0	3
MAT 1116	Electrical Mathematics (EIM 1)	4	0	4
ELC 1124	(II) Residential Wiring (EIM 2)	2	5	4
ELN 1119	Industrial Electronics (EIM 2)	2	6	4
THIRD QUARTER (Spring)				
ELC 1113	(1) AC and DC Machines and Controls (EIM 1)	2	6	4
DFT 1113	Blueprint Reading: Electrical (EIM 1)	1	3	2
ENG 1102	Communication Skills (EIM 1)	3	0	3
ELC 1125	(I) Commercial and Industrial Wiring (EIM 2)	2	5	4
PSY 1101	Human Relations (EIM 2)	4	0	4
ELC 1114	National Electrical Code (EIM 2)	4	0	4
FOURTH QUARTER (Summer)				
ELC 1113	(II) AC and DC Machines and Controls (EIM 1)	2	9	5
PHY 1101	Applied Science (EIM 1)	4	0	4
ELC 1125	(II) Commercial and Industrial Wiring (EIM 2)	2	10	5
BUS 1103	Small Business Operations (EIM 2)	3	0	3

MASONRY

(Night Schedule Only)

Certificate Program

Masons are the craftsmen in the building trades that work with artificial stone, brick, concrete masonry units, stone and the like. During the past decades there has been a steady increase in the demand for these craftsmen. As building construction continues to increase, the demand for bricklayers, cement masons and stonemasons will also increase.

This curriculum in Masonry is designed to train the individual to enter the trade with the knowledge and basic skills that will enable him to perform effectively.

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

Most masons are employed by contractors in the building construction field to lay brick, and blocks made of tile, concrete glass, gypsum or terra cotta. Also, he constructs or repairs walls, partitions, arches, sewers, furnaces and other masonry structures.

MASONRY TRADE

Night Schedule Only
(Certificate Program)

Course Title	Hours Class	Per Week Lab-Shop	Credit Hours
FIRST QUARTER (Fall)			
MAS 1103 (I) General Masonry	2	6	4
DFT 1110 Blueprint Reading: Building Trades	0	3	1
	—	—	—
	2	9	5
SECOND QUARTER (Winter)			
MAS 1103 (II) General Masonry	2	6	4
ENG 1101 Reading Improvement	3	0	3
	—	—	—
	5	6	7
THIRD QUARTER (Spring)			
MAS 1104 (I) General Masonry	2	6	4
ENG 1102 Communications Skills	3	0	3
	—	—	—
	5	6	7
FOURTH QUARTER (Summer)			
MAS 1104 (II) General Masonry	2	6	4
BUS 1103 Small Business Operations	3	0	3
	—	—	—
	5	6	7

PLUMBING AND HEATING

(Night Schedule Only)

PURPOSE OF CURRICULUM:

Plumbers are the craftsmen who install pipe systems which carry water, steam, air or other liquids or gases needed for sanitation, heating, industrial production and various other uses. During the past decade there has been a steady increase in the demand for these craftsmen. As building construction continues to increase this demand for plumbers will also increase.

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

PLUMBING AND HEATING

*Suggested Curriculum By Quarters —
Night Schedule Only
(60 Quarter hours required for graduation)*

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
FIRST QUARTER (Spring 1973)			
PLU 1110 (I) Plumbing Pipework	2	6	4
PHY 1101 Applied Science	4	0	4
ENG 1102 Communication Skills	3	0	3
	—	—	—
	9	6	11
SECOND QUARTER (Summer 1973)			
PLU 1110 (II) Plumbing Pipework	2	6	4
PHY 1102 Applied Science	4	0	4
BUS 1103 Small Business Operations	3	0	3
	—	—	—
	9	6	11
THIRD QUARTER (Fall 1973)			
PLU 1111 Domestic Water Systems	2	6	4
DFT 1110 Blueprint Reading: Building Trades	0	3	1
MAT 1101 Fundamentals of Mathematics	4	0	4
	—	—	—
	6	9	9
FOURTH QUARTER (Winter 1973-74)			
PLU 1120 Low Pressure Steam Systems	2	6	4
ENG 1101 Reading Improvement	3	0	3
WLD 1101 Basic Gas Welding	1	3	2
	—	—	—
	6	9	9

FIFTH QUARTER (Spring 1974)

PLU 1121 (I)	Pressure Steam Systems	2	6	4
PSY 1101	Human Relations	4	0	4
DFT 1115	Blueprint Reading: Plumbing Trades	0	3	1
		—	—	—
		6	9	9

SIXTH QUARTER

PLU 1112	Installation of Plumbing Fixtures	2	6	4
PLU 1121 (II)	High Pressure Steam Systems	0	3	1
ELC 1104	Applied Electricity	2	2	3
		—	—	—
		4	11	8

SEVENTH QUARTER (Fall 1974)

PLU 1126	Hydraulic Systems Plumbing	3	3	4
PLU 1123 (I)	Hot Water and Panel Heating	3	6	5
		—	—	—
		6	9	9

EIGHTH QUARTER (Winter 1974-75)

PLU 1125	Industrial Piping	3	9	6
PLU 1123 (II)	Hot Water and Panel Heating	0	3	1
		—	—	—
		3	12	7

PRACTICAL NURSING EDUCATION

(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. The Cleveland County Technical Institute is affiliated with Cleveland Memorial Hospital to provide clinical resources for the practical nursing program.

Classes will be held at the Institute 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 a registered nurse and-or licensed 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.

Admission requirements for this program in addition to those listed at beginning of vocational section:

- (1) Be a high school graduate or Equivalent. *
- (2) Have complete medical and dental examination.

* See page 119 for information on High School Equivalency.

PRACTICAL NURSING

Suggested Curriculum By Quarters — Day Schedule Only

<i>Course Title</i>	<i>Hours Per Week</i>			<i>Quarter Credit</i>
	<i>Class</i>	<i>Lab</i>	<i>Clinic</i>	
FIRST QUARTER				
NUR 1101 Introduction to Nursing Practice	7	6	2	9
SCI 1101 Body Structure and Function	2	3	0	3
SCI 1102 Microbiology	1	0	0	1
SCI 1103 Nutrition	2	0	0	2
SCI 1104 Health	1	0	0	1
PSY 1101 Human Relations	2	0	0	2
NUR 1102 Vocational Adjustments I	2	2	0	3
	—	—	—	—
	17	11	2	21

SECOND QUARTER

NUR 1105	Medical-Surgical Nursing	3	0	0	3
NUR 1103	Nursing Principles	3	1	0	3
NUR 1106	Obstetrical Nursing	5	0	0	5
NUR 1104	Pharmacology	2	0	0	2
NUR 1110	Clinical (O.B., Ped., Med.-Surg.)	0	0	20	7
		$\overline{13}$	$\overline{1}$	$\overline{20}$	$\overline{20}$

THIRD QUARTER

NUR 1108	Pediatric Nursing	3	0	0	3
NUR 1105	Medical-Surgical Nursing	9	0	0	9
NUR 1111	Clinical (O.B., Ped., Med.-Surg.)	0	0	22	7
		$\overline{12}$	$\overline{0}$	$\overline{22}$	$\overline{19}$

FOURTH QUARTER

NUR 1107	Medical Surgical Nursing	9½	½	0	10
NUR 1109	Vocational Adjustments II	2	0	0	2
NUR 1112	Clinical (Med.-Surg.)	0	0	22	7
		$\overline{11\frac{1}{2}}$	$\overline{\frac{1}{2}}$	$\overline{22}$	$\overline{19}$

Electronic Servicing

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

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 radios, transistorized radios, monochrome and color television sets, inter-communication, public address and paging systems, high fidelity and stereophonic amplifiers, record players and tape players.

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

Electronic Servicing

Suggested Curriculum By Quarters — Day Schedule

(60 Quarter hours required for graduation)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
<i>FIRST QUARTER (Fall)</i>			
MAT 1115 Electrical Mathematics	4	0	4
ENG 1101 Reading Improvement	3	0	3
ELC 1112 AC and DC Current	5	11	8
PHY 1101 Applied Science	4	0	4
ELN 1101 Troubleshooting Concepts	3	0	3
	—	—	—
	19	11	22
<i>SECOND QUARTER (Winter)</i>			
MAT 1116 Electrical Mathematics	4	0	4
ENG 1102 Communication Skills	3	0	3
ELN 1122 Vacuum Tubes and Circuits	3	12	7
ELN 1123 Amplifier Systems	2	6	4
	—	—	—
	12	18	18
<i>THIRD QUARTER (Spring)</i>			
ELN 1125 Radio Receiver Servicing	2	6	4
ELN 1126 Transistor Theory and Circuits	3	6	5
PSY 1101 Human Relations	4	0	4
ELN 1127 TV Receiver Circuits and Servicing	3	6	5
	—	—	—
	12	18	18

FOURTH QUARTER (Summer)

ELN 1128	Television Receiver Servicing-Color	6	9	9
ELN 1130	Two-Way Mobile Maintenance	3	6	5
ELN 1146	FCC Rules and Regulations	3	0	3
BUS 1103	Small Business Operations	3	0	3
		—	—	—
		15	15	20

Electronic Servicing

**Suggested Curriculum By Quarters — Night Schedule
(60 Quarter hours required for graduation)**

Course Title		Hours	Per Week	Credit
FIRST QUARTER (Fall)		Class	Lab-Shop	Hours
ELC 1112	(I) AC & DC Current (R&TV 1)	2	6	4
MAT 1115	Electrical Mathematics (R&TV 1)	4	0	4
ELN 1101	Troubleshooting Concepts (R&TV 1)	3	0	3
ELN 1125	(I) Radio Repair Servicing (R&TV 2) 1	1	3	2
ELN 1126	(I) Transistor Theory & Circuits (R&TV 2)	2	4	3
ELN 1127	(I) TV Receiver Circuits & Servicing (&TV 2)	2	3	3
SECOND QUARTER (Winter)				
ELC 1112	(II) AC & DC Current (R&TV 1)	3	5	4
ENG 1101	Reading Improvement (R&TV 1)	3	0	3
MAT 1116	Electrical Mathematics (R&TV 1;	4	0	4
ELN 1125	(II) Radio Receiver Servicing (R&TV 2)	1	3	2
ELN 1126	(II) Transistor Theory & Circuits (R&TV 2)	1	2	2
ELN 1127	(II) TV Receiver Circuits & Servicing (R&TV 2)	1	3	2
ELN 1130	(I) Two-Way Mobile Maintenance (R&TV 2)	1	3	2
THIRD QUARTER (Spring)				
ELN 1122	(I) Vacuum Tubes & Circuits (R&TV 1)	3	9	6
ENG 1102	Communication Skills (R&TV 1)	3	0	3
ELN 1130	(II) Two-Way Mobile Maintenance (R&TV 2)	2	3	3
ELN 1128	(I) TV Receiver Servicing—Color (R&TV 2)	2	4	3
PSY 1101	Human Relations (R&TV 2)	4	0	4
FOURTH QUARTER				
ELN 1123	Amplifier Systems (R&TV 1)	2	6	4
ELN 1122	(II) Vacuum Tubes & Circuits (R&TV 1)	0	3	1
PHY 1101	Applied Science (R&TV 1)	4	0	4
BUS 1103	Small Business Operations (R&TV 2)	3	0	3
ELN 1128	(II) Receiver Servicing—Color (R&TV 2)	2	6	4
ELN 1146	FCC Rules & Regulations (R&TV 2)	4	0	4

WELDING

PURPOSE OF CURRICULUM:

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

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.

JOB DESCRIPTION:

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

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

WELDING

Suggested Curriculum By Quarters — Day Schedule

(60 Quarter hours required for graduation)

<i>Course Title</i>	<i>Hours Class</i>	<i>Per Week Lab-Shop</i>	<i>Credit Hours</i>
FIRST QUARTER (Fall)			
WLD 1120 Oxyacetylene Welding and Cutting	4	11	8
MAT 1101 Fundamentals of Mathematics	4	0	4
DFT 1104 Blueprint Reading: Mechanical	1	3	2
PHY 1101 Applied Science	4	0	4
ENG 1101 Reading Improvement	3	0	3
	—	—	—
	16	14	21
SECOND QUARTER (Winter)			
WLD 1121 Arc Welding	4	12	8
MAT 1103 Geometry	3	0	3
MEC 1157 Metallurgy I	2	2	3
PHY 1102 Applied Science	4	0	4
ENG 1102 Communication Skills	3	0	3
	—	—	—
	16	14	21

THIRD QUARTER (Spring)

WLD 1124	Pipewelding	3	12	7
WLD 1123	Inert Gas Welding	1	3	2
MEC 1158	Metallurgy II	2	2	3
DFT 1118	Pattern Development and Sketching	0	3	1
PSY 1101	Human Relations	4	0	4
		—	—	—
		10	20	17

FOURTH QUARTER (Summer)

WLD 1122	Commercial and Industrial Practices	3	9	6
WLD 1125	Certification Practices	2	6	4
WLD 1112	Mechanical Testing and Inspection	0	3	1
BUS 1103	Small Business Operations	3	0	3
DFT 1117	Blueprint Reading: Welding	1	3	2
		—	—	—
		9	21	16

WELDING TRADE**Suggested Curriculum By Quarters — Night Schedule**
(60 Quarter hours required for graduation)

<i>Course Title</i>	<i>Hours</i>	<i>Per Week</i>	<i>Credit</i>
<i>FIRST QUARTER (Fall 1973)</i>	<i>Class</i>	<i>Lab-Shop</i>	<i>Hours</i>
WLD 1124 (I) Pipe Welding	2	6	4
MAT 1103 Geometry	3	0	3
DFT 1104 Blueprint Reading: Mechanical	1	3	2
	—	—	—
	6	9	9
SECOND QUARTER (Winter 1973-74)			
WLD 1124 (II) Pipe Welding	1	6	3
MEC 1157 Metallurgy I	2	2	3
PSY 1101 Human Relations	4	0	4
	—	—	—
	7	8	10
THIRD QUARTER (Spring 1974)			
MEC 1158 Metallurgy II	2	2	3
WLD 1125 Certification Practices	2	6	4
WLD 1112 Mechanical Testing and Inspection	0	3	1
	—	—	—
	4	11	8
FOURTH QUARTER (Summer) 1974)			
BUS 1103 Small Business Operations	3	0	3
WLD 1122 Commercial & Industrial Practices	3	9	6
	—	—	—
	6	9	9
FIFTH QUARTER (Fall 1974)			
MAT 1101 Fundamentals of Mathematics	4	0	4
DFT 1117 Blueprint Reading: Welding	1	3	2
WLD 1120 (I) Oxyacetylene Welding	2	5	4
	—	—	—
	7	8	10

SIXTH QUARTER (Winter 1974-75)

WLD 1120 (II) Oxyacetylene Welding	2	6	4
WLD 1121 Arc Welding	1	3	2
ENG 1101 Reading Improvement	3	0	3
	—	—	—
	6	9	9

SEVENTH QUARTER (Spring 1975)

WLD 1121 (II) Arc Welding	2	6	4
PHY 1101 Applied Science	4	0	4
ENG 1102 Communication Skills	3	0	3
	—	—	—
	9	6	11

EIGHTH QUARTER (Summer 1975)

WLD 1121 (III) Arc Welding	1	3	2
DFT 1118 Pattern Development and Sketching	0	3	1
PHY 1102 Applied Science	4	0	4
WLD 1123 Inert Gas Welding	1	3	2
	—	—	—
	6	9	9

VOCATIONAL COURSE DESCRIPTIONS

AIR CONDITIONING

AHR 1101 — Automotive Air Conditioning: 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 1121 — Principles of Refrigeration: An introduction to the principles of refrigeration, terminology, the use and care of tools and equipment and the identification and the function of the component parts of 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: 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 manufacturers' 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: 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: 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, and location and correction of equipment failure. Prerequisite: AHR 1123

AHR 1126 — All Year Comfort Systems: Auxiliary equipment used in conjunction with refrigeration systems to provide both heating and cooling for "all year" comfort will be studied and set up in the laboratory. Included will be oil fired systems, gas fired systems, water circulating systems and electric-resistance systems. Installation of heat pumps will be studied along with servicing techniques. Reversing valves, special types of thermostatic expansion valves, systems of de-icing coils, and electric wiring and controls are included in the study. Prerequisites: AHR 1123, AHR 1128

AHR 1128 — Automatic Controls: 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. Prerequisites: AHR 1122

AUTOMOTIVE BODY REPAIR

AUT 1111 — Auto Body Repair: 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: 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: 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: 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 1115 — Trim, Glass and Radiator Repair: Methods of removing and installing interior trim; cutting, sewing and installing headlinings, seat covers and door trim panels; painting of trim parts and accessories. Glass removal, cutting fitting and installation. The student gains a thorough knowledge of the engine cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal engine cooling operation.

AUTOMOTIVE MECHANICS

AUT 1121 — Braking Systems: A complete study of various braking systems employed on automobile and light weight trucks. Emphasis is placed on how they operate.

AUT 1123 — Automotive Chassis and Suspension Systems: Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage and front end alignment.

AUT 1124 — Automotive Power Train Systems: Principles and functions of automotive power train systems; clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing and repair.

AUT 1125 — Automotive Servicing: Emphasis is on the shop procedure necessary in determining the nature of troubles developed in the various component systems of the automobile systems, providing a full range of experiences in testing, adjusting, repairing and replacing.

BUSINESS

BUS 1103 — Small Business Operations: 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.

BUS 1105 — Industrial Organizations: Methods, techniques and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost.

DRAFTING

DFT 1101 — Schematics and Diagrams: Power Mechanics-Interpretation and reading of blueprints. Development of ability to read and interpret blueprints, charts, instruction and service manuals and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures and notes.

DFT 1103 — Reading Engineering Drawings: Class Hours: 3. A self-study course dealing with the reading of engineering drawings from the basic to more complexed. Offered through the Learning Center.

DFT 1104 — Blueprint Reading: 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-Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.

DFT 1111 — Blueprint Reading and Sketching: Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevators, chimneys, fireplaces, arches and cavity wall construction. Development of proficiency in making three view and pictorial sketches.

DFT 1112 — Blueprint Reading and Sketching: Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings will be studied with emphasis on the plot plan, floor plan, basement and-or foundation plan, walls and various detailed drawings of masonry work.

DFT 1113 — Blueprint Reading: 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: Sketching diagrams and schematics, and interpretation of blueprints applicable to the plumbing trades. Emphasis will be on plumbing plans for domestic and commercial buildings. Piping symbols, schematics, diagrams and notes will be studied in detail. Applicable building and plumbing codes will be used for reference. Prerequisite: DFT 1110

DFT 1116 — Blueprint Reading: Air Conditioning: 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 systems.

DFT 1117 — Blueprint Reading: Welding: A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations and specifications.

DFT 1118 — Pattern Development and Sketching: Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates.

ELECTRICITY

ELC 1101 — Basic Electricity: Class Hours: 3. A self-study course which develops the basic electrical concepts essential to later studies in electronics. Offered through the Learning Center. Prerequisite: None

ELC 1102 — Basic Electronics: Class Hours: 3. A self-study course which develops the basic electronic concepts essential to present and later studies in electricity and electronics. Offered through the Learning Center. Prerequisite: ELC 1101

ELC 1103 — Basic Transistors: Class Hours: 3. A self-study course which continues a tested procedure for taking firm steps toward electronic specialization. This course develops the basic and essential concepts related to transistors. Offered through the Learning Center. Prerequisite: ELC 1102

ELC 1104 — Applied Electricity: 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. Prerequisite: PHY 1101

ELC 1112 — Direct and Alternating Current: 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 current circuit analysis.

ELC 1113 — Alternating Current and Direct Current Machines and Controls: Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple control systems. An introduction to the type control used in small appliances such as: thermostats, times, or sequencing switches. Prerequisites: ELC 1112, MAT 1115

ELC 1114 — National Electrical Code: 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 multi-family dwellings, commercial establishments and industrial locations.

ELC 1124 — Residential Wiring: Provides instruction and application in the fundamentals of blueprint reading, planning, layout and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulators in actual building mock-ups. Prerequisite: ELC 1113, DFT 1110

ELC 1125 — Commercial and Industrial Wiring: 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. Prerequisites: ELN 1118, ELC 1124

ELC 1121 — Electrical Machines and Controls: An introduction to the construction, operation and utilization of direct current and alternating current machines. Familiarization with the various types of machine control devices. Prerequisite: None

ELECTRONICS

ELN 1101 — Troubleshooting Concepts: A study of the techniques used in analysis of defective systems by block diagram. Introduction to test equipment used in trouble-shooting.

ELN 1118 — Industrial Electronics: Basic theory, operating characteristics and application of vacuum tubes such as: diodes, triodes, tetrodes, pentodes and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes and other basic applications. Prerequisite: ELC 1113

ELN 1119 — Industrial Electronics: Basic industrial electronic systems, such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyatron tubes, and other basic types of systems commonly found in most industries. Prerequisite: ELN 1118

ELN 1122 — Vacuum Tubes and Circuits: An introduction to vacuum tubes and their development; the theory characteristics and operation of vacuum diodes, semiconductor diodes, rectifier circuits, triodes and simple voltage amplifier circuits. Prerequisites: ELC 1112, MAT 1115

ELN 1123 — Amplifier Systems: An introduction of commonly used servicing techniques as applied to monophonic and stereophonic high fidelity amplifier circuits. Prerequisites: ELC 1112, MAT 1115

ELN 1123 — Amplifier Systems: An introduction of 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 1115, ELC 112

ELN 1125 — Radio Receiver Servicing: Principles of radio reception and practices 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. Prerequisites: ELN 1123, ELN 1122

ELN 1126 — Transistor Theory and Circuits: Transistor theory, operation, characteristics and their application to audio and radio frequency amplifier and oscillator circuits. Prerequisite: ELN 1123

ELN 1127 — Television Receiver Circuits and Servicing: 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, trouble-shooting and repair of the color television circuits. Prerequisites: ELN 1126, ELN 1125

ELN 1128 — Television Receiver Servicing — Color: A continuation of ELN 1127 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 1125, 1126, 1127

ELN 1130 — Two-Way Mobile Maintenance: A course to acquaint the student with the theory and maintenance of fixed station and mobile station transmitters and receivers.

ELN 1146 — FCC Rules and Regulations: A course designed to enable the student to obtain a Third Class Radio-telephone Operator's license with broadcast endorsement Covers subject matter in Part 13 of FCC Rules and Regulations, primary and basic radio-telephone procedures in general.

ENGLISH

ENG 1101 — Reading Improvement: Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units.

ENG 1102 — Communication Skills: Designed to promote effective communication through correct language usage in speaking and writing.

MACHINE SHOP

MEC 1101 — Machine Shop Theory and Practice: An introduction to the machinist trade and the potential it holds for craftsmen. Deal primarily with the identification, care and use of basic hand tools and precision measuring instruments. Elementary layout procedures and processes of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and practice.

MEC 1102 — Machine Shop Theory and Practice: Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all the operations, tools and procedures thus far used and those to be stressed throughout the course. Prerequisite: MEC 1101

MEC 1157 — Metallurgy I: Properties of metals and various methods of changing these properties, classification of metals, power metallurgy and factors contributing to production and selection of metals will be presented. Chemical finished, electroplating and other methods of finishing or treating metals will be areas of study.

MEC 1158 — Metallurgy II: A continuation of Metallurgy I with more time devoted to actual preparation of sample specimen pieces, more advanced techniques in the analysis of the structure and composition of metals.

MASONRY

MAS 1103 — General Masonry: Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta and modular masonry construction theory and techniques.

MAS 1104 — General Masonry: Continuation of MAS 1103.

MATHEMATICS

MAT 1101 — Fundamentals of Mathematics: Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ration and proportion. Plane and solid geometric figures used in industry; measurement of surface and volumes. Introduction to algebra used in trades. Practice in depth.

MAT 1102 — Algebra: Basic concepts and operations of algebra; historical backgrounds of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division, fractions, letter representation, grouping, factoring, ratios and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subtraction, substitution, graphing, exponents, logarithms, tables and interpolation.

MAT 1103 — Geometry: Fundamental properties and definitions; planes and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations.

MAT 1105 — Measurements for Installation and Construction Skills: A self-study course of various measurements and equipment for installation and construction. Offered through the Learning Center.

MAT 1112 — Building Trades Mathematics: Practical problems dealing with volumes, weights, ratios; mensuration; and basic estimating practices for building materials.

MAT 1115 — Electrical Mathematics: An introductory algebra course with trigonometry and vectors needed in alternating current; algebraic operations of addition, subtraction, multiplication and division; use of letters and signs, grouping, factoring; exponents, ratios and proportions; algebraic and graphic solutions of first-degree equations; introduction to trigonometric functions, their graphs and applications to right triangles. Addition, subtraction and resolution of vector quantities.

MAT 1116 — Electrical Mathematics: A working knowledge of the powers of 10, Ohm's Law for series and parallel circuits, quadratic equations, Kirchoff's Laws, trigonometric functions, plane vectors, alternating currents, vector algebra and logarithms. Prerequisite: MAT 1115

NURSING

NUR 1101 — Introduction to Nursing Practice: Beginning knowledge of principles basic to nursing practice. Philosophy and objectives of practical nursing. Beginning knowledge of interpersonal relationships in nursing. Body mechanics for nurse and patient. Sterilization techniques and disinfection methods. Techniques in daily hygienic patient care. Laboratory practice in simple skills and hygienic care of patients.

SCI 1101 — Body Structure and Function: A thorough study of the general plan of the body and the nine systems: nervous, endocrine, skeletal, muscular, circulatory, digestive, respiratory, urinary, male and female reproductive systems. Designed for understanding how the body controls its function, stands erect and moves, distributes food and oxygen, removes waste and provides for survival.

NUR 1102 — Vocational Adjustments I: A study of the principles of good personal and vocational behavior of the practical nursing student to enable her to work at ease and intelligence with the health team as well as with the community at large.

SCI 1102 — Microbiology: A study of micro-organisms and their relationships to health.

NUR 1103 — Nursing Principles: This course is planned to provide the opportunity for students to gain a knowledge of the principles which are basic to effective and safe nursing care. Emphasis is placed on the development of the essential skills for the performance of those nursing measures that normally are the responsibility of the licensed practical nurse. Lecture and planned class laboratory experience are followed by related clinical experience.

SCI 1103 — Nutrition: Designed to give knowledge of the basic principles of nutrition for nurse and patient. Functions and sources of nutrients. Principles of meal planning. Nutrition requirements for all age groups. The mechanics of digestion, absorption and metabolism of nutrients.

NUR 1104 — Pharmacology: The basic concepts of drug therapy and an appreciation of the responsibilities and the basic limitations of the Licensed Practical Nurse in the administration of medications are emphasized.

SCI 1104 — Health: This course is designed to give the student an understanding of the various aspects of health, the influences on health, and means available to protect health.

NUR 1105 — Medical-Surgical Nursing: This course is designed to provide the student the opportunity to gain an understanding of the nursing needs of patients who have various medical-surgical conditions and to develop further understanding of the common drugs and therapeutic measures of concern to the practical nurse. Lecture and class laboratory provide the background for selected clinical experiences.

NUR 1106 — Obstetrical Nursing: This course is designed to provide opportunities for students to acquire the knowledge, understanding and skill needed for rendering safe and effective nursing care to the maternity patient and newborn infant. Classroom instruction provides the background essential for planned clinical experience centered around analysis of nursing needs and formulation of a nursing care plan to meet individual patient needs.

NUR 1107 — Medical-Surgical Nursing: A continuation of NUR 1105.

NUR 1108 — Pediatric Nursing: This course is designed to provide opportunities for students to acquire the knowledge, understanding and skills needed for rendering safe and effective nursing care of infants and children. Classroom instruction provides the background essential for planned clinical experience centered around analysis of nursing needs and formulation of a nursing care plan to meet individual patient needs.

NUR 1109 — Vocational Adjustments II: A presentation of the legal and ethical responsibilities of the practitioner. Provision is made for the practical nurse to better understand her professional associations and the values to be gained by active participation in them.

NUR 1110 — Clinical Experience: Beginning experience in a general hospital under supervision of clinical teachers, practicing skills earned in laboratory practice.

NUR 1111 — Clinical Experience: A continuation of NUR 1110.

NUR 1112 — Clinical Experience: A continuation of NUR 1111.

PHYSICS

PHY 1101 — Applied Science: An introduction to physical principles and their application in industry. Topics in this course include measurements, properties of solids, liquids, and gases; basic electrical principles.

PHY 1102 — Applied Science: The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry and principles of force, motion, work, energy and power.

PHY 1104 — Pressure and Its Measurement: A self-study course on various types of pressure and instruments. Offered through the Learning Center.

PLUMBING

PLU 1110 — Plumbing Pipework: 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: 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 the storage and circulation of hot water will be studied. Private and public sewage and drainage systems, including their ventilation is a part of this course. Field trips will be taken to study various types of installations. Prerequisite: PLU 1110

PLU 1112 — Installation of Plumbing Fixtures: The difference in materials and styles of lavatories, bathtubs and sinks, and the many ways that these fixtures can be installed will form the basis of this course. The proper use of traps is included. The student will get actual practice by making installations.

PLU 1120 — Low Pressure Steam Systems: The student will become acquainted with types of low pressure steam boilers, and the principles of boiler operation. Boiler accessories such as connectors, fittings, and insulation are to be included. Low pressure steam systems, their layout, and component parts will be studied and installed. Equipment used in heat transmission, such as radiators, coils and connectors will be included. Prerequisites: PLU 1110.

PLU 1121 — High Pressure Steam Systems: Applications of low pressure steam equipment will be continued. Principles involved in industrial applications of both low-pressure and high-pressure steam equipment. Commercial and industrial blueprints will be studied, utilizing low and high pressure equipment. High pressure boilers and installations of high pressure systems will be emphasized. Prerequisite: PLU 1120

PLU 1123 — Hot Water and Panel Heating: The piping and accessory equipment needed to transfer hot water to radiators, heaters and coils, and the advantages and disadvantages of each of these units will be studied, including apparatus for radiant heating and panel heating. Methods of "sizing" equipment for various installations will be included. Practical application will be provided in installing this equipment. Prerequisites: PLU 1120, PLU 1111

PLU 1125 — Industrial Piping: 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. Prerequisites: PLU 1112, WLD 1101

PLU 1126 — Hydraulic Systems Plumbing: Plumbing application in hydraulic systems. Hydraulic principles, circuits, control valves, actuators, pumps, fluids and various accessories that complete hydraulic systems will be studied. Installation and servicing methods of these systems will be undertaken. Prerequisites: PLU 1110, PHY 1102

POWER MECHANICS

PME 1101 — Internal Combustion Engine: Development of a thorough knowledge and ability in using, maintaining and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance, servicing and 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 and Fuel Systems: A thorough study of the electrical and fuel systems in the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors and fuel injectors. Characteristics of fuels, types of fuel systems, special tools and testing equipment for the fuel and electrical system.

PSYCHOLOGY

PSY 1101 — Human Relations: 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.

WELDING

WLD 1101 — Basic Gas Welding: 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 1105 — Auto Body Welding: Welding practices on material applicable to the installation of body panels and repairs to doors, fenders, hoods and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course.

WLD 1112 — Mechanical Testing and Inspection: The standard methods for mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guide-bend, nick-tear, notched-bend, tee-bend, non-destructive, V-notch, Charpy impact, etc.

WLD 1120 — Oxacetylene Welding and Cutting: Introduction to the history of oxacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of the unit. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

WLD 1121 — Arc Welding: The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities and electrodes for use in

joining various metal alloys by the arc welding process. Butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding.

WLD 1122 — Commercial and Industrial Practices: Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper, the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspection.

WLD 1123 — Inert Gas Welding: Introduction and practical operations in the use of inert-gas-shield arc welding. A study of the equipment, operation, safety, and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding.

WLD 1124 — Pipe Welding: Designed to provide practice in the welding of pressure piping in the horizontal, vertical and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.

WLD 1125 — Certification Practices: This course involves practice in welding the various materials to meet the certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds.

WLD 1128 — Pipefitting: A programmed course in the Learning Laboratory.



CONTINUING EDUCATION



CONTINUING EDUCATION

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 County Technical Institute to afford this opportunity to each individual to develop to his fullest potential in whatever vocational, intellectual or cultural areas he desires. It is also the aim of the institute 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 institute 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 competent 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 institute welcomes such requests and suggestions for additional courses.

Continuing education classes conducted by Cleveland County Technical Institute are both vocational and avocational in nature. The classes are non-curriculum, vary in length, conducted both day and evening, and are taught by qualified instructors selected by the institute. A schedule of some classes being offered is announced by the institute 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 institute by phone, letter, or personal visit to place their names on the pre-registration list for classes.

EXPENSES

In most continuing education classes the only cost is for books or other materials, plus a tuition charge of \$2.00. The only exception to the tuition charge is in Fire Service and Law Enforcement Training Programs. A charge may be necessary in some courses for class

supplies. Books and supplies are available through the institute Bookstore for both campus and off-campus classes.

CLASS LOCATIONS

Many of the continuing education classes are held on the campus at Cleveland County Technical Institute. Others are conducted throughout Cleveland County in local public schools, community centers, churches, industries, businesses 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 are 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

MANAGEMENT DEVELOPMENT PROGRAMS

Supervision and management in modern business is an art. Because of this, one of the most important programs in the extension division is that of Management training. The current MDP training consists of twenty-six well prepared courses having the following purposes:

1. To broaden the educational background of supervisors.
2. To develop the leadership abilities of supervisors.
3. To provide preparatory training.
4. To help make supervisors more proficient in their present jobs.
5. To Provide life-long learning opportunities.

A supervisor may pursue as many of the courses as he desires and thereby afford himself an opportunity for extensive training. Emphasis has been placed on group dynamics and creative problem-solving techniques. Classes are scheduled to meet the needs of local business

and industry, and qualified instructors are provided. Please contact the Director of Adult Education for information concerning specific courses or a booklet outlining the complete Management Development Program.

NEW INDUSTRY TRAINING

One of the primary functions of Cleveland County Technical Institute 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 in 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 Director of Adult Education, Cleveland County Technical Institute, or the Director, Industrial Services Division, North Carolina Department of Community Colleges, Raleigh, North Carolina.

ADULT BASIC EDUCATION

Adult Basic Education is designed for those adults who have less than a high school education and includes instruction in reading, writing, mathematics, social studies, science and health education. In all these areas instruction is related as closely as possible to helping students meet their adult responsibilities by improving their fundamental skills.

Classes are organized into two groups. The first group is for those who are unable to study individually because of inability to read and write. Persons in this group usually function at grade levels 0-4. In group two, a higher level of ability is achieved and basic sciences and social studies are expanded. The work difficulty is at grade level 5-8.

With completion of group two, the student should be ready to advance into the high school program.

Students may enter ABE classes at any time. However, it is recommended 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 institute encourages students to maintain attendance in these classes over a period of several school quarters.

ADULT HIGH SCHOOL

This program is designed for those adults eighteen years of age or older who would like to complete their high school education. Classes in English, mathematics, science and social studies are available in either individual classes or self-study units from the Learning Resource Center.

In order to enroll in the Adult High School Diploma Program, it is necessary to have completed and passed the eighth grade or to have successfully passed the eighth grade equivalency test.

A total of sixteen units will be required for graduation from this program and include the following:

English	4 units
Social Studies	2 units
Mathematics	2 units
Science	2 units
Electives	6 units

For additional information on the ABE or Adult High School programs, please contact the Adult Education Director, Cleveland County Technical Institute.

GENERAL ADULT EDUCATION

General Adult and Community Service classes and programs are offered through the Extension Division of Cleveland County Technical Institute 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 Institute.

AVOCATIONAL COURSE

DESCRIPTIONS

Beginner Sewing: 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 application of sewing procedures; individual instruction in use of machines during class time. 33 contact hours.

Dressmaking: More detailed in 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 contact hours.

Tailoring: An advanced course for those students who wish to progress beyond dressmaking. Students will make suits, coats, men's and ladies' sport wear and other projects as desired by individual members of the class. 60 contact 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 contact 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. 20 contact 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 canvass. Finally the student has learned to create a design to be worked in needlepoint for whatever purpose the students intends — upholstery material, draperies, framing, wall hanging, etc. 24 contact hours.

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 contact 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. 24 contact 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 contact hours.

Tole Painting: An interesting technique rather than talent where patterns of decorative design are panted 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 contact 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. 30 contact 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. Instructions will involve use with mixed media and use with various painting medicine. 30 contact 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 calligraphv. 30 contact 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. 30 contact hours.

Copper Tooling: A fascinating craft class where student make beautiful and useful objects for the home. Simple tools are used to form various patterns on copper and brass which are then used to make pictures, plaques, waste baskets, flower urns, etc. 30 contact 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. 33 contact hours.

Pottery Making: A class similar to ceramics but using clay instead of slip. Students are encouraged to use their imagination and self-expression in the formation of various objects of creation. Instructions will also include use of the potter's wheel as well as other techniques used in pottery making. 33 contact hours.

Cake Decoration 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. 24 contact hours.

Cake Decoration 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. 24 contact hours.

Slimnastics: The ideal class for students desiring to get rid of those "extra" pounds. A systematized and progressively planned program of rhythmic exercises properly planned to meet the needs of all students. 18 contact hours.

Community Chorus: A mixed voice musical organization open to all adult members of the community service area without audition. Two or three major concerts featuring a variety of music are given by the participants each year. Each rehearsal contains vocal techniques and instructions in music reading. 32 contact hours.

Sign Language: Instruction is designed for the parents of deaf children and those who come in contact with deaf people. Classes will begin with finger spelling and continue through the more difficult signs. 18 contact hours.

Driver Education: (48 hours, \$14.00) 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 vehicles 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 instructions, 12 hours in the car as an observer, and 6 hours of actual driving practice. 48 contact 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 contact hours.

New Math for Parents: This course is designed for the parents of children in grades one through five. The material includes the studies of set theory, various numeration systems, open sentences, the structure of our number system and other mathematical systems. 12 contact hours.

Psychology: The basic principles of psychology are explored and how they may be applied to the 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 contact hours.

VOCATIONAL COURSE DESCRIPTION

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. 100 contact hours.

Home-Sitter Nursing: Instructions in the basic nursing skills that would aid students in caring for children, older people, and even themselves. Nursing skills such as bed-making, baths, back-rubs, positioning, diet therapy, basic first aid, and a limited amount of basic psychology needed to relate productively with those who are sick are taught in this course. 50 contact 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 contact 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 contact 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. 12 contact hours.

Ambulance Attendant Training (E-03): A course designed to developing understanding of and appreciation for the role of the ambulance attendant in the care and transportation of the sick and injured. Classroom discussions include principles related to administering emergency aid to victims in selected situations, to safe transportation of the sick and injured, and to safe operation of the ambulance. Students experiences include supervised practice in applying splints, in using resuscitation techniques in applying dressing, and in positioning and transporting victims with a variety of conditions. 24 contact hours.

Ambulance Attendant Training (E-04): A course designed especially for ambulance attendants dealing with external cardiac compression and treatment of burns. The course is to serve as upgrading for those who have already completed the E-03 Ambulance Attendant Training. 6 contact hours.

Photography: Introduces the student to fundamental factors influencing the quality of the image captured in the photograph. Students may study lighting, the primary subject, the field of view, color and camera techniques in this class. 33 contact 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 reading. 24 contact 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 computation, and methods of reporting income. Both state and federal forms are covered in this class. 20 contact 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 instructions in real property laws, appraising, brokerage, finance and the mechanics of closing. 33 contact 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. 12 contact hours.

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 contact hours.

Auto Tune-Up: General trouble shooting 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 contact hours.

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 contact hours.

National Electrical Code: This course is provided for those who wish to study 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 multi-family dwellings, commercial establishments and industrial locations. 80 contact 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 contact 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 contact 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 contact 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 it and maintain it. 18 contact 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 illustrates 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 made available.

FIRE SERVICE TRAINING

Arson Detection

Civil Disorder

Firefighting Procedures

Hose and Ladder Practices

Forcible Entry

Fire Brigade Training

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 Director of Adult Education, Cleveland County Technical Institute.



GENERAL EDUCATION DEVELOPMENT (GED) TEST

The General Educational Development test is to appraise the educational development of adults who have not completed their formal high school education. Upon satisfactory completion of the tests, adults may earn a high school equivalency certificate, and in turn, qualify for admission to college or, in general, for admission to more advanced educational opportunities.

GED tests, a battery of five comprehensive exams in the areas of English composition, social studies, natural sciences, literature and mathematics will be given on a Friday afternoon and Saturday morning once each month at the Cleveland County Technical Institute. Both sessions are required.

Applications for taking this exam may be secured from the superintendents of the three school systems in the county or from the Cleveland County Technical Institute.

A fee of three dollars has been set for taking the full battery of tests. If one part is failed and it is necessary to be retested for that particular portion, a fee of one dollar will be charged for each retest.

Applicants for the test may wish to enroll in the Learning Center for a period of time prior to the testing date. The Learning Center Coordinator will enroll the applicant and suggest subject area materials. Applications must be on file at Cleveland Tech one week prior to the testing date. Late applicants will be scheduled for tests the following months.

For additional information, contact the Chief GED Examiner, Cleveland County Technical Institute, 137 South Post Road, Shelby, North Carolina 28150.

THE LEARNING RESOURCES CENTER

Hours: 8 a.m.-9 p.m. Monday-Thursday

8 a. m.-4 p. m. Friday

INTRODUCTION

The Learning Resources Center houses the Library, Audio Visual Media, and Self-Study Learning Center.

The Learning Resources Center adheres to a philosophy of service to students, faculty, administration and the community.

The functions of the Center are to support and enrich classroom instruction through a collection of carefully selected materials related to the curricula and to supply materials for personal enrichment. These functions are achieved through book, and non-book media, and self-study materials.

The Center is staffed by the Director, the Librarian, the Media Specialist, Self-Study Coordinator, Secretary and student assistants.

THE LIBRARY

The library has a continuously growing collection of 8,000 volumes, most of which are related to the Degree and Diploma courses offered by the Institute. These are selected in consultation with faculty, students and administration. The library subscribes to 125 periodicals as well as seven newspapers. The staff provides assistance and orientation in the use of the collection. The open shelf system is used to encourage students to browse and to study in a quiet atmosphere.

AUDIOVISUAL MEDIA

The function of the audiovisual media section of the Learning Resource Center is the coordinating and distributing of audiovisual or non-book instructional materials and equipment.

The audiovisual media includes over 2,000 types of instructional materials such as films, cassette tapes, records, transparencies, slides, filmstrips, film loops, video tapes, etc. All audiovisual materials may be checked out by students for self-study in the Learning Resources Center, in the classroom, or if necessary for home use.

Students may check out necessary AV equipment for use in the Learning Resources Center or classroom. The equipment is not checked out for use off campus. Available equipment includes movie projectors, filmstrip and overhead projectors, cassette and tape recorders, record players, slide projectors, video tape recorders and other items.

SELF STUDY LEARNING CENTER

The Learning Center Program is designed to provide study opportunities in practically any field that might be of interest.

Persons interested in participating in the Learning Center, after an initial interview, are provided study materials starting at a point in keeping with their achievement level and are able to progress from there. The coordinator will arrange an individual study schedule adjusted to each student's convenience and job hours.

The Learning Center is essentially an individual study situation in which a person eighteen years of age or older may undertake most any level of available subjects. All of the material used is programmed.

Programmed material is designed in such a manner as to aid the student in learning in small sequences called "frames." Each frame requires immediate response, and each response is immediately checked. If the student fails to learn or learns incorrectly, the program makes the correction or re-teaches. In this manner the student progresses at his own rate; he neither has to wait for others to catch up nor slow down to someone else's rate.

The co-ordinator, the instructor in charge of the Learning Center, has the responsibility of locating the level at which a student can proceed to learn by himself, of formulating the sequence of programs the student will undertake to achieve his desired goal, and of administering the test that will assure the student that he is approaching his goal.

Because there are no classes in the Learning Center, most students may enroll at any time, usually each student sets his own work sessions and attends the center as many days and hours as he thinks he can attend. There are no fees for most, and any adult can take as many courses as fit his needs.

SERVICES AVAILABLE

Pre-High School Program

Eighth Grade Equivalency

High School Equivalency Program (GED)

High School Diploma Program

General Interest Program

Pre-Curriculum Program

College Preparatory Program

Regular Curriculum Programs

VETERANS

The Veterans Administration has approved the program of High School Equivalency Preparation for veterans. You may enroll as a full-time student (25 hours per week), three-quarter time student (18 hours per week), or half-time student (12 hours per week). You may schedule these hours anytime between the hours of 8:00 a. m. to 9:00 p.m. Monday through Thursday and 8:00 a. m. to 12 noon Friday. Once a schedule is established, each veteran must comply with the exact hours of attendance. You receive the same allowance as in any other educational program but the time does not count against your months of eligibility for post-high school education. You may be enrolled in this program for a maximum of 900 hours.



BOOK STORE



CLEVELAND COUNTY TECHNICAL INSTITUTE

VOCATIONAL, TECHNICAL EDUCATION

GENERAL ADULT EDUCATION

DIV. OF N.C. DEPT. COMMUNITY COLLEGE

CLEVELAND

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NOTES

REQUEST FOR ADMISSION PAPERS

Any student who desires to apply for admission should use the form below, or a personal letter, to request the necessary admission papers. An official application blank and other papers will be forwarded by return mail.

For any information not covered in the catalog, correspondence and personal conferences are cordially welcomed. Such correspondences should be addressed to:

Director of Student Services
Cleveland County Technical Institute
137 South Post Road
Shelby, North Carolina 28150

Dear Sir:

Please send the necessary admission papers to:

NAME
(First) (Middle) (Last)

MAILING ADDRESS
.....
.....

I (will graduate from high
(was graduated)

school in 19..... I (have, have not) previously attended another college or vocational-technical school.

I am interested in theCurriculum

My age is

I expect to enroll for the.....term, 19.....

Date..... Signed.....
.....
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