FAYETTEVILLE TECHNICAL INSTITUTE

1984-1987

CATALOG

VOLUME VIII

P. O. Box 35236, FAYETTEVILLE, NORTH CAROLINA 28303
PHONE 323-1961

NOTICE

The provisions of this publication are not to be construed as a contract between the student and Fayetteville Technical Institute. The Institute reserves the right to change any provision or requirement when such action becomes necessary. You are advised to work closely with your advisor or counselor to verify the appropriateness of the courses for which you register.

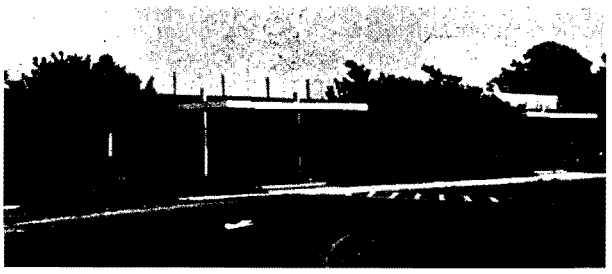
GREETINGS FROM THE PRESIDENT

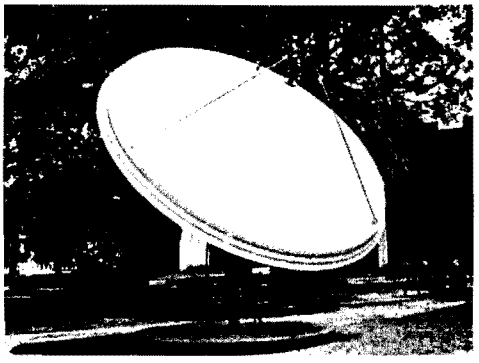
North Carolina is in the midst of an unprecedented growth pattern. Billions of dollars from new and expanding industry and thousands of new jobs have come about during the past few years. By promoting and developing our natural and human resources, North Carolina has been able to attract high technology industry and has provided its citizens with an opportunity for better jobs and better pay.

The Community College System in North Carolina has played a vital role in the economic development of our state and has provided specialized training to meet the needs of business and industry. Fayetteville Technical Institute, in order to accomplish the role of educational provider for this training, has divided its curriculum offerings into six main divisions: Business Education, Engineering Technology, General Education, Health Occupations, Public Service, and Vocational Education. This catalog is presented to you for your information regarding F.T.I. and its role and purpose as a post-secondary institution of higher education.

Howard E. Boudreau, President
Fayetteville Technical Institute

FTI CAMPUS





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ACADEMIC CALENDAR 1983-84

New Faculty Workshop and Orientation	August 15-19
Full Faculty Workshop and Orientation	August 25-30
Labor Day Holiday — September 5	

FALL QUARTER

Registration for all Students	August 22, 23 & 24
Student Orientation and Schedule Correction	August 31
Classes begin	September 1
Last day to drop courses without penalty	September 22
Last day to request refund	September 12
End of 6 Weeks	October 13
Registration for returning students for Winter Quarter (No Classes)	To be Announced
Registration for New students for Winter Quarter	To be Announced
Last day of Fall Quarter	November 18
Faculty Workdays	Nov. 21, 22 & 23
Schedule Correction and Late Registration for Winter Quarter	November 28
Thanksgiving Holidays — November 24-27	
School resumes — November 28	

WINTER QUARTER

Classes begin	November 29
Last day to drop courses without penalty	December 19
Last day to request refund	December 8
End of 6 weeks	January 20
Registration for returning students for Spring Quarter (No Classes)	To be Announced
Registration for New Students for Spring Quarter	To be Announced
Last day of Winter Quarter	February 27
Faculty Workdays	Feb. 28, 29, March 1
Schedule Correction and Late Registration for Spring Quarter	March 2
Christmas Holidays — Dec. 21 - Jan. 2	
Last day of classes — Dec. 20	
School resumes — January 3	

SPRING QUARTER

Classes begin	March 5
Last day to drop courses without penalty	March 23
Last day to request refund	March 14
End of 6 weeks	April 13
Registration for Summer Quarter (No Classes)	To be Announced
Last day of Spring Quarter	May 22
Faculty Workdays	May 23, 24 & 25
Graduation	May 28
Faculty teaching 2nd session summer qtr. start vacation	May 29
Easter Holiday — April 23	
Last day of classes — April 20	
School resumes — April 24	

SUMMER QUARTER (1st session)

Registration for new students	May 29
Classes begin for Four-Quarter Students	May 30
Classes begin for Summer Quarter Students	May 30
Last day to drop classes without penalty	June 18
Last day of classes (1st session)	July 6
Faculty Workday	July 9
Faculty teaching 2nd session returns from vacation	July 9
Faculty teaching 1st session start vacation	July 10
July 4th Holiday — July 4	

SUMMER QUARTER (2nd Session)

Registration for new students	July 9
Classes begin for 2nd session	July 10
Last day to drop 2nd session	July 27
Last day of classes - 2nd session	August 15
Last day of classes - Four Quarter Curricula	August 15
Faculty Workday	August 16 & 17
New Faculty come in — August 13	
All Faculty return — August 17	
Four Quarter Faculty Vacation — August 16-19	
Four Quarter Faculty return — August 30	

ACADEMIC CALENDAR 1984-85

New Faculty Workshop and Orientation	August 13-17
Full Faculty Workshop and Orientation	August 23-28
Labor Day Holiday — September 3	

FALL QUARTER

Registration for all Students	August 20, 21 & 22
Student Orientation and Schedule Correction	August 29
Classes begin	August 30
Last day to drop courses without penalty	September 20
Last day to request refund	September 10
End of 6 Weeks	October 11
Registration for returning students for Winter Quarter (No Classes)	To be Announced
Registration for New students for Winter Quarter	To be Announced
Last day of Fall Quarter	November 16
Faculty Workdays	Nov. 19, 20 & 21
Schedule Correction and Late Registration for Winter Quarter	November 26
Thanksgiving Holidays — Nov. 22-25	
School resumes — Nov. 26	

WINTER QUARTER

Classes begin	November 27
Last day to drop courses without penalty	December 17
Last day to request refund	December 6
End of 6 weeks	January 21
Registration for returning students for Spring Quarter (No Classes)	To be Announced

Registration for New Students for Spring Quarter	To be Announced
Last day of Winter Quarter	February 26
Faculty Workdays	Feb. 27, 28, March 1
Schedule Correction and Late Registration for Spring Quarter	March 4
Christmas Holidays — Dec. 24 - Jan. 4	
Last day of classes — Dec. 21	
School resumes — Jan. 7	

SPRING QUARTER

Classes begin	March 5
Last day to drop courses without penalty	March 25
Last day to request refund	March 14
End of 6 weeks	April 16
Registration for Summer Quarter (No Classes)	To be Announced
Last day of Spring Quarter	May 22
Faculty Workdays	May 23, 24 & 27
Graduation	May 28
Faculty teaching 2nd session summer qtr. start vacation	May 29
Easter Holiday — April 8	
Last day of classes — April 5	
School resumes — April 9	

SUMMER QUARTER (1st session)

Registration for new students	May 29
Classes begin for Four-Quarter Students	May 30
Classes begin for Summer Quarter Students	May 30
Last day to drop classes without penalty	June 19
Last day of classes (1st session)	July 8
Faculty Workday	July 9
Faculty teaching 2nd session returns from vacation	July 9
Faculty teaching 1st session start vacation	July 10
July 4th Holiday — July 4	

SUMMER QUARTER (2nd Session)

Registration for new students	July 9
Classes begin for 2nd session	July 10
Last day to drop 2nd session	July 30
Last day of classes - 2nd session	August 15
Last day of classes - Four Quarter Curricula	August 15
Faculty Workday	August 16
New Faculty come in — August 12	
All Faculty return — August 19	
Four Quarter Faculty Vacation — August 16-29	
Four Quarter Faculty return — August 30	

ACADEMIC CALENDAR 1985-86

New Faculty Workshop and Orientation	August 12-16
Full Faculty Workshop and Orientation	August 22-28
Labor Day Holiday — September 2	

FALL QUARTER

Registration for all Students	August 19, 20 & 21
Student Orientation and Schedule Correction	August 30
Classes begin	September 3
Last day to drop courses without penalty	September 23
Last day to request refund	September 12
End of 6 Weeks	October 14
Registration for returning students for Winter Quarter (No Classes)	To be Announced
Registration for New students for Winter Quarter	To be Announced
Last day of Fall Quarter	November 19
Faculty Workdays	Nov. 20, 21 & 22
Schedule Correction and Late Registration for Winter Quarter	November 25
Thanksgiving Holidays — Nov. 28-Dec. 1	
School resumes — Dec. 2	

WINTER QUARTER

Classes begin	November 26
Last day to drop courses without penalty	December 18
Last day to request refund	December 5
End of 6 weeks	January 22
Registration for returning students for Spring Quarter (No Classes)	To be Announced
Registration for New Students for Spring Quarter	To be Announced
Last day of Winter Quarter	February 27
Faculty Workdays	Feb. 28, Mar. 3 & 4
Schedule Correction and Late Registration for Spring Quarter	March 5
Christmas Holidays — Dec. 23-Jan. 3	
Last day of classes — Dec. 20	
School resumes — January 6	

SPRING QUARTER

Classes begin	March 6
Last day to drop courses without penalty	March 26
Last day to request refund	March 17
End of 6 weeks	April 17
Registration for Summer Quarter (No Classes)	To be Announced
Last day of Spring Quarter	May 23
Faculty Workdays	May 26, 27 & 28
Graduation	May 29
Faculty teaching 2nd session summer qtr. start vacation	May 30
Easter Holiday — March 31	
Last day of classes — March 28	
School resumes — April 1	

SUMMER QUARTER (1st session)

Registration for new students	May 30
Classes begin for Four-Quarter Students	June 2
Classes begin for Summer Quarter Students	June 2
Last day to drop classes without penalty	June 20
Last day of classes (1st session)	July 9
Faculty Workday	July 10
Faculty teaching 2nd session returns from vacation	July 10
Faculty teaching 1st session start vacation	July 11

July 4th Holiday — July 4

SUMMER QUARTER (2nd Session)

Registration for new students	July 10
Classes begin for 2nd session	July 11
Last day to drop 2nd session	July 31
Last day of classes - 2nd session	August 18
Last day of classes - Four Quarter Curricula	August 18
Faculty Workday	August 19

New Faculty come in — August 14
All Faculty return — August 20
Four Quarter Faculty Vacation — August 19 - Sept. 2
Four Quarter Faculty return — September 3

ACADEMIC CALENDAR 1986-87

New Faculty Workshop and Orientation	August 14-19
Full Faculty Workshop and Orientation	August 25-29

Labor Day Holiday — September 1

FALL QUARTER

Registration for all Students	August 20, 21 & 22
Student Orientation and Schedule Correction	September 3
Classes begin	September 4
Last day to drop courses without penalty	September 24
Last day to request refund	September 15
End of 6 Weeks	October 15
Registration for Winter Quarter (No Classes)	To be Announced
Registration for New students for Winter Quarter	To be Announced
Last day of Fall Quarter	November 20
Faculty Workdays	November 21 & 24
Schedule Correction and Late Registration for Winter Quarter	November 25

Thanksgiving Holidays — November 27-30
School resumes — December 1

WINTER QUARTER

Classes begin	November 26
Last day to drop courses without penalty	December 18
Last day to request refund	December 9
End of 6 weeks	January 19
Registration for returning students for Spring Quarter (No Classes)	To be Announced

Registration for New Students for Spring Quarter	To be Announced
Last day of Winter Quarter	February 26
Faculty Workdays	Feb. 27, March 2
Schedule Correction and Late Registration for Spring Quarter	March 3
Christmas Holidays — Dec. 23-Jan. 2	
Last day of classes — Dec. 22	
School resumes — January 5	

SPRING QUARTER

Classes begin	March 4
Last day to drop courses without penalty	March 24
Last day to request refund	March 13
End of 6 weeks	April 14
Registration for Summer Quarter (No Classes)	To be Announced
Last day of Spring Quarter	May 21
Faculty Workdays	May 22, 25 & 26
Graduation	May 27
Faculty teaching 2nd session summer qtr. start vacation	May 28
Easter Holiday — April 20	
Last day of classes — April 17	
School resumes — April 21	

SUMMER QUARTER (1st session)

Registration for new students	May 28
Classes begin for Four-Quarter Students	May 29
Classes begin for Summer Quarter Students	May 29
Last day to drop classes without penalty	June 18
Last day of classes (1st session)	July 7
Faculty Workday	July 8
Faculty teaching 2nd session returns from vacation	July 8
Faculty teaching 1st session start vacation	July 9
July 4th Holiday — July 3	

SUMMER QUARTER (2nd Session)

Registration for new students	July 8
Classes begin for 2nd session	July 9
Last day to drop 2nd session	July 29
Last day of classes - 2nd session	August 14
Last day of classes - Four Quarter Curricula	August 14
Faculty Workday	August 17
New Faculty come in — August 12	
All Faculty return — August 18	
Four Quarter Faculty Vacation — August 17-28	
Four Quarter Faculty return — August 31	

FAYETTEVILLE TECHNICAL INSTITUTE

BOARD OF TRUSTEES

Harry F. Shaw, Chairman
Thomas Council, Vice-Chairman
Howard L. Hall, Secretary

APPOINTMENTS

Name	Expiration Date	Appointed By
Steve R. Satisky	June 30, 1983	Board of County Commissioners
William C. Beard, Jr.	June 30, 1985	Board of County Commissioners
Jimmy Harvey	June 30, 1987	Board of County Commissioners
Wayne T. Williams	June 30, 1989	Board of County Commissioners
Howard L. Hall	June 30, 1983	City and County School Boards
Thomas Council	June 30, 1985	City and County School Boards
Thornton W. Rose	June 30, 1987	City and County School Boards
Mrs. Lura S. Tally	June 30, 1989	City and County School Boards
Bruce R. Pulliam	June 30, 1983	Governor
Harry F. Shaw	June 30, 1985	Governor
Mrs. Mary Ann McCoy	June 30, 1987	Governor
Tom R. McLean	June 30, 1989	Governor

ATTORNEY

L. Stacy Weaver, Jr.

HISTORY

Fayetteville Technical Institute originated in 1961 as the Fayetteville Area Industrial Education Center under the auspices of the City Board of Education. In 1963 the North Carolina General Assembly created the Department of Community Colleges for the expressed purpose of providing for the establishment, organization, and administration of a system of educational institutions. Located throughout the State, these institutions were to offer courses of instruction in one or more of the general areas of two-year college parallel, technical, vocational, and adult education programs. The authority for this newly created department was vested in the North Carolina State Board of Education. The Center became a part of this system at that time.

The Center's progress in providing quality educational programs resulted in the Board of Trustees requesting that the status "Technical Institute" be given to the Center. This request was granted by the State Board of Education in September, 1963, and the current name, Fayetteville Technical Institute, was adopted. With the status of "Technical Institute," the Board of Trustees was granted authority to award the Associate Degree in Applied Science and Associate Degree in General Education in addition to the diplomas already offered in numerous programs.

The original building, now Lafayette Hall, consisted of approximately 38,000 square feet of classroom and laboratory areas, and the campus consisted of 10 acres. In 1965, the Board of Trustees acquired an additional 43 acres adjoining this property. It was at this time that a master plan was developed for the utilization of the 53-acre campus.

Several renovations and two major constructions on campus increased the physical facilities from 38,000 square feet to a net assignable footage of 192,873 square feet.

In June, 1976, the Institute obtained title to thirty-eight acres of land and a 90,000 square-foot building immediately adjacent to the present campus. This land, deeded to F.T.I. by the Fayetteville City School System, and the building (formerly a junior high school in that system) became available for occupancy in the 1977-78 school year. This facility provided general and specific classroom and laboratory space needed for expansion of several ongoing programs and the specialized facilities required to support new curricular offerings. Additionally, convertible space was made available to ease overcrowded staff and faculty work areas, and in 1977 the Institute began its phased occupancy of this three-building complex.

F.T.I. has never enjoyed the luxury of having enough classroom space to accommodate its student body, but by 1979 it was obvious from continuing and forecasted enrollment growth patterns that the need for additional facilities would reach an even more critical stage by the mid 1980's. As an interim measure, the Board of Trustees authorized the use of remaining construction funds and in-house capabilities to build an eight-classroom annex to the Horace Sisk Building and a six-bay automotive shop building. These were completed by trades students in the summer of 1981. Additions to date have resulted in a total physical plant of over 300,000 square feet.

Effective January 1, 1981, the North Carolina Community System was transferred from under the control of the State Board of Education to the newly created State Board of Community Colleges. This new Board will lead the N.C. Community College System into the third decade of educational challenge. F.T.I.'s Board of Trustees and administration will guide the institution forward to meet the ever-expanding and complex technical, vocational and adult educational needs of the citizenry.

PURPOSE

The purpose of Fayetteville Technical Institute is to provide a specialized occupational and general education to fulfill the needs of society and to provide for the fullest possible development of the potential of students so that they may attain effective citizenship.

To accomplish this purpose, offerings and programs are designed to meet the various interests and aptitudes of all prospective students. Curricular programs are designed to produce highly skilled personnel to meet the needs of the expanding advances in industry, business, health, public service occupations, and general education. These programs also provide the base upon which to build further formal or informal education and strengthen the general educational base of our society.

NONDISCRIMINATION STATEMENT

Fayetteville Technical Institute is dedicated to equality of opportunity within its community. Accordingly, Fayetteville Technical Institute does not practice nor condone discrimination, in any form, against students, employees, or applicants on the grounds of race, color, national origin, religion, sex, age, or handicap. Fayetteville Technical Institute commits itself to positive action to secure equal opportunity regardless of those characteristics.

Fayetteville Technical Institute supports and adheres to the protection available to members of its community under all applicable federal laws including Titles VI and VII of the Civil Rights Act of 1964. Specific reference is drawn to Section 703 of Title VII which addresses sexual harassment. Unwelcomed sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when (1) submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting such individual, or (2) such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile, or offensive working environment. Embraced here is Title IX of the Education Amendments of 1972.

For information concerning these provisions, contact:

John E. McDaniels
Affirmative Action Officer/Personnel Officer
Fayetteville Technical Institute
P. O. Box 35236
Fayetteville, N.C. 28303

EDUCATIONAL PROGRAM CLASSIFICATION

To accomplish the Institute's purpose, the major areas of general and specialized education are presented within instructional divisions which group related courses according to discipline, instructional orientation, and focus. The major divisions are as follows:

A. **Business Education**—Specialized training for entry into positions such as (a) management and sales, (b) accounting, and (c) secretarial science in the technical and executive fields. Elements of training common to all business occupations such as communication skills, economics, and business law are included plus such specialized business subjects as accounting, business management, business finance, and data processing.

B. **Engineering Technology Education**—Highly specialized training for effective entrance into specialized areas of business and industry. Elements of training common to all technical occupations are included such as basic science, mathematics, oral and written communications, engineering and industrial drafting, and other appropriate technical skills.

C. **General Education**—Instruction which is general to two or more divisions such as English, mathematics, natural science, the social sciences and the humanities.

The Associate Degree in General Education is essentially a two-year residential program in which students may complete all work toward an associate degree. Courses include those learning experiences traditionally considered to be the arts and science subjects necessary to transform the post-secondary student into a thinking, self-directed citizen. Courses are the same high quality as those offered in four-year colleges.

The Developmental Studies Program is an integrated, student-centered program of instruction designed to increase the likelihood of success for students who enter this Institute with academic deficiencies. The goal of this program is to develop the academic ability of entering students to the extent that they have a high likelihood of success in one of the several curricular areas that are selected for continuing study.

D. **Health Occupations Education**—Specialized education and training for both technical and vocational occupations. The various curricula provide the special technical knowledge and skills plus elements of training common to all health-related occupations for which state licensing is required. Dexterous manipulative skills and a strong basic background in the social and physical sciences, mathematics, and communicative skills are emphasized in the training for those health occupations where such skills are paramount.

E. **Public Service Education**—Highly specialized training leading to the professional pursuits of occupations which include direct and prolonged contact with the public. Elements of training common to all public service occupations include communicative skills, psychology, sociology, and specialized legal considerations. The capacity to function in stressful, emotional situations and the willingness to work at irregular, unpredictable times are prerequisites to success in public service occupations.

F. **Vocational Education**—Specialized training to provide depth in manipulative skills and diagnostic abilities in a selected range of activities and to develop a strong basic background in such related areas as mathematics, social and physical science, and communicative skills.

G. **Adult Continuing Education**—Instruction which provides a community-wide program of courses to prepare adults for better job opportunity promotion in present employment, civic and community leadership, and family living.

ACCREDITATION

ACCREDITATION BOARD FOR ENGINEERING AND TECHNOLOGY, INC. (ABET)

The following curricula offered by Fayetteville Technical Institute are accredited by the Accreditation Board for Engineering and Technology, Inc. (ABET).

1. Civil Engineering Technology
2. Electronic Engineering Technology

The Engineering Technology Committee, a standing committee of the Engineers' Council for Professional Development, operates the accrediting program for engineering technology curricula. The purpose of the accrediting committee is to identify those curricula which qualify for recognition as engineering technology curricula and to identify the institutions which offer them.

Institutions which offer accredited engineering technology curricula must demonstrably maintain a high standard of ethics in their educational program and in their published materials and other public announcements. The statements must be frank and factual and must not be misleading. Engineering technology curricula are evaluated on the basis of both qualitative and quantitative criteria, which include requirements for maintaining acceptable depth and scope usually found in college-level training.

AMERICAN BAR ASSOCIATION

Fayetteville Technical Institute's Paralegal Technology program is accredited by the American Bar Association.

AMERICAN BOARD OF FUNERAL SERVICE EDUCATION

Fayetteville Technical Institute's Department of Funeral Service Education is approved by the North Carolina State Board of Mortuary Science. The American Board of Funeral Service Education accredited the Funeral Service Education curriculum on May 3, 1974.

AMERICAN DENTAL ASSOCIATION

The American Dental Association is directly concerned with dental and dental auxiliary education. Through this council, the Association accredits all auxiliary dental programs to insure quality educational training for auxiliary personnel who will provide dental health care to people. Fayetteville Technical Institute has been granted full accreditation.

AMERICAN PHYSICAL THERAPY ASSOCIATION

The Physical Therapy Technology program at Fayetteville Technical Institute is accredited by the American Physical Therapy Association.

COMMITTEE ON ALLIED HEALTH EDUCATION AND ACCREDITATION

The Surgical Technology program at Fayetteville Technical Institute is fully accredited by the Committee on Allied Health Education and Accreditation. This accreditation decision was made upon the recommendation of the Joint Review Committee on Education for the Surgical Technologist (JRC/ST), which is sponsored by the American College of Surgeons, the American Hospital Association, and the Association of Surgical Technologists.

DEPARTMENT OF COMMUNITY COLLEGES

Fayetteville Technical Institute is chartered by the North Carolina State Department of Community Colleges, as specified in Chapter 115D of the *General Statutes of North Carolina.*

The Department of Community Colleges and the State Board of Community Colleges have granted the Institute's Board of Trustees the authority to award the Associate of Applied Science Degree, the General Education Associate Degree, and to award the Diploma for all vocational curricula.

JOINT REVIEW COMMITTEE ON EDUCATION IN RADIOLOGIC TECHNOLOGY

Fayetteville Technical Institute's Radiologic Technology program is fully accredited by the Joint Review Committee on Education in Radiologic Technology.

JOINT REVIEW COMMITTEE FOR RESPIRATORY THERAPY EDUCATION

Fayetteville Technical Institute's Respiratory Therapy program is accredited by the Joint Review Committee for Respiratory Therapy Education.

NATIONAL LEAGUE FOR NURSING

The Associate Degree Nursing Program of Fayetteville Technical Institute is fully accredited by the National League for Nursing. This type of approval is national in scope and voluntary rather than required by law. The standards set by the accrediting body are uniform throughout the United States. The achievement of NLN accreditation by a program signifies that it has met the national standards of excellence for programs in nursing of its type.

NORTH CAROLINA STATE BOARD OF NURSING

Fayetteville Technical Institute is accredited to offer a two-year associate degree program with a major in nursing and a one-year practical nurse education program. Both programs qualify the graduates to write the State Board Test Pool Licensing Examination for the respective levels of preparation. Candidates who complete these examinations are awarded licensure in North Carolina.

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS

Fayetteville Technical Institute is fully accredited by the Commission on Colleges of the Southern Association of Colleges and Schools. The Southern Association of Colleges and Schools is a regional accrediting agency for the purpose of identifying and accrediting institutions which meet their standards for quality and scope of higher education.

UNITED STATES DEPARTMENT OF EDUCATION

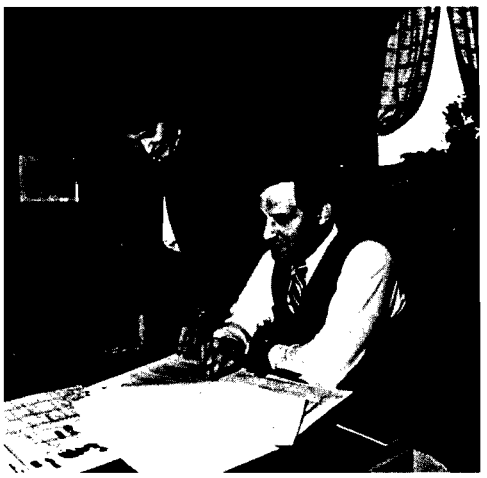
Fayetteville Technical Institute is recognized by the U.S. Department of Education as being an institution of higher learning and is qualified to receive federal assistance in all of its higher education programs.

PROFESSIONAL ORGANIZATIONS

The Institute has membership in several educational associations which carry on a variety of programs and services that will provide the institution with informational services, research, consultants, and workshops on many of the varied problems and issues in which we are engaged in technical and trade education on a national and state level.

1. American Association of Community and Junior Colleges
2. American Association of Dental Schools
3. American Bar Association
4. American Board of Funeral Service Education
5. American Council on Education
6. American Nurses Association
7. American Physical Therapy Association
8. American Society of Engineering Education
9. American Society of Hospital Pharmacists
10. American Technical Education Association
11. American Vocational Association
12. Association of Business Offices of the U.S. and Canada
13. Association of Community College Public Information Officers
14. Association of Community College Trustees
15. Association of Physical Plant Administrators of Universities
16. Emergency Department Nurses Association
17. Joint Review Commission on Education
18. National Association of Adult Education
19. National Association of Emergency Medical Technicians
20. National Education Association
21. National League for Nursing
22. North Carolina Association of Adult Educators
23. North Carolina Association of Emergency Medical Technicians
24. North Carolina Association of Junior Colleges
25. North Carolina Education Association
26. North Carolina Placement Association
27. North Carolina Trustees Association of Community Colleges
28. North Carolina Vocational Association
29. Southeastern NCR Computer User Group
30. Southern Association of Colleges and Schools
31. Southern Association of Community and Junior Colleges
32. The University Mortuary Science Education Association

PUBLIC SERVICE DIVISION



GENERAL INFORMATION

Fayetteville Technical Institute, as a technical, state-supported institution, adheres to an "Open Door" admissions policy. High school graduates, persons achieving a North Carolina equivalency certificate (GED), and adults who show potential for post high school education may be admitted to courses which are appropriate to their educational potential. Successful implementation of an "Open Door" admissions policy requires an emphasis on admissions counseling services. These services are provided to ascertain potential for success in the particular program to be pursued by the student. As part of the admissions counseling process, Fayetteville Technical Institute utilizes an initial placement test battery, a personal interview and an evaluation of the applicant's prior school record. When the admissions counseling process indicates that an applicant lacks sufficient academic background to pursue credit courses, he/she will be directed to the Developmental Studies program prior to entry into a diploma or degree curriculum. If the applicant lacks a high school diploma, he/she will be given the opportunity to pursue courses to achieve an Adult High School Diploma or a North Carolina equivalency certificate (GED) prior to entering a regular curriculum. Admissions to curricula are open to applicants without regard to race, creed, national origin or sex.

ADMISSIONS POLICIES AND PROCEDURES

1. Applicants must submit an application form, including a residency statement.
2. Applicants must be high school graduates or must have attained the North Carolina Equivalency GED scores. Official transcripts verifying secondary school completion must be sent to Director of Admissions, P.O. Box 35236, Fayetteville, N.C. 28303.
3. Applicants who have previously attended any other college or post-secondary institution must request official transcripts of all work attempted be sent to the Admissions Office.
4. Each applicant is required to submit a medical history statement; the information provided will be used in health care. F.T.I. does not discriminate on the basis of handicap in the recruitment and admissions of students and the operation of any of its programs and activities. Approved health area students must submit physical and dental exams provided by the Admissions Office.
5. Each applicant is scheduled for an admissions interview. Previous school records and the results of the Entrance Test Battery will be used in conjunction with the student's personal aspirations to help plan a workable educational program.
6. Applicants for Engineering Technology curricula, Radiologic and Pharmacy Technology, and General Education must have a minimum of two units of algebra in their backgrounds; one unit of chemistry is required for Chemical Engineering Technology, Pharmacy Technology and Radiologic Technology applicants.
7. Applicants for Associate Degree Nursing, Dental Hygiene, Emergency Medical Science, Physical Therapy Assistant, and Respiratory Therapy must have a minimum of one unit of algebra, one unit of biology, and one unit of chemistry in their academic backgrounds.

8. Applicants for Funeral Sevice Education must have a minimum of one unit of algebra and one unit of biology in their academic backgrounds.
9. Applicants for Electronic Data Processing, Accounting, Commercial Art, and Architectural Drafting must have a minimum of one unit of algebra in their academic background.
10. Applicants for all other curricula need no specific requirements beyond the normal high school courses required for a high school diploma; however, it may be advisable that applicants take refresher courses in the sciences, math and have acquired good reading habits.
11. Applicants who do not seek to apply credit to any diploma or degree will be enrolled as "special credit students." Special credit students need only submit an application, medical form and residency statement.
12. For exploration purposes a student may take a maximum of work equivalent to one full quarter under limited approval before meeting all general entrance requirements except as listed in number 13 below. Students enrolled under this plan will be placed on limited approval pending completion of entrance requirements. Failure to supply all pertinent entrance documents will prohibit further enrollment other than as a special credit student.
13. Applicants applying for financial aid and/or VA benefits must meet all entry requirements before they can be certified by this institution for third party payments.
14. This school is authorized under federal law to enroll nonimmigrant alien students. International students are carefully screened for evidence of English proficiency, adequate financial backing and academic credentials indicating potential for success.
15. The following admissions policy relative to the entrance test battery requirement is effective for all applicants:

    a. High school graduates who have taken the regular high school academic program and who rank in the top 30 percent of their graduating class will be accepted into the Associate and/or the Associate of Applied Science Degree curricula at Fayetteville Technical Institute. This does not preclude the fact that some curricula require prerequisites which must be met. The selection of a curriculum by the student will be that in which the student demonstrates a keen interest as determined in the admissions process. These applicants will be accepted without being required to take the current entrance test battery.
    b. All other applicants, including recent high school graduates who apply for an Associate or an Associate of Applied Science Degree curriculum and who are under the top 30 percent of their graduating class, will be required to take the entrance test battery.
    c. High school graduates who rank in the top 50 percent of their graduating class and who elect to take a vocational curriculum will be accepted into the curriculum. This does not preclude the fact that some curricula require prerequisites which must be met. The determination of the curriculum will be that in which the student demonstrates a keen interest as determined in the admissions process. These applicants will be accepted without having to take the current entrance test battery.
    d. All other applicants, including recent high school graduates who apply for a vocational curriculum and who are under the top 50 percent of their graduating class, will be required to take the entrance test battery.

e. The class ranking used to make determinations will be the student's position in grade rank from the top of the class in relation to the total number of students in that grade computed at the completion of the junior year.
f. SAT/CEEB or ACT scores should be made available to the Admissions Office for consideration.
g. The entrance test battery requirement will be waived for all applicants who have earned a degree at the associate level or above and who meet stated prerequisites for the curriculum to which they are applying.
h. All out-of-state applicants will be required to take the entrance test battery except that such requirement may be waived under the conditions of paragraph (g) above, and (i) below.
i. Students who are taking Developmental Studies courses under *limited approval* and who make grades of "C" or better in all courses undertaken may continue in Developmental Studies without meeting the entrance test battery requirement. Students taking Developmental Studies courses must meet prerequisite requirements for the curriculum which they plan to enter. Prerequisite requirements may include evaluative testing. Students who are taking curricular courses for exploratory purposes on *limited approval* and who maintain a 3.0 QPA on those courses may continue without having to meet the entrance test battery requirement.

Admission of Transfer Students

Students may be admitted with advanced standing by transfer from other accredited technical institutes, colleges, or universities. All credits to be transferred must be equated with the curricular offerings at Fayetteville Technical Institute and be of "C" grade quality or better. No quality points are assigned for transfer grades.

To prevent duplication of work previously taken, an official transcript of the student's previous college work must be submitted prior to approval.

Admission with advanced standing in all major subject areas must be approved by the department chairperson of the major subject area, and in some instances, students may be required to take proficiency examinations to indicate their depth of knowledge in those subjects for which they are requesting credit.

Fayetteville Technical Institute is a Serviceman's Opportunity College (SOC) and supports the concept that military personnel should be encouraged to begin their post-secondary education while serving their country. F.T.I. also participates in the SOCAD network with degree completion programs available to the serviceman in Accounting, Criminal Justice, Electronic Data Processing, Food Service Management, and Business Administration—Mid-Management.

Under the SOC program, servicemen are encouraged to submit for transfer credit evaluation CLEP test results, DANTES test results, military service school records, MOS evaluations and prior college course work. CLEP/DANTES must meet the recommended ACE minimum score. All course work considered for transfer must be equivalent to F.T.I. courses appropriate to the student's program of study. SOC policies extend to dependents of military members and to veterans who started their enrollment at F.T.I. prior to discharge from the service.

Intercurricular Transfer of Credits

If a student changes curriculum, he/she may be allowed transfer credit for applicable courses taken and passed in the previous curriculum. These grades will

be treated in the same way as transfer credit and will carry no quality points for total quality point averages in the new curriculum.

Readmission of Former Students

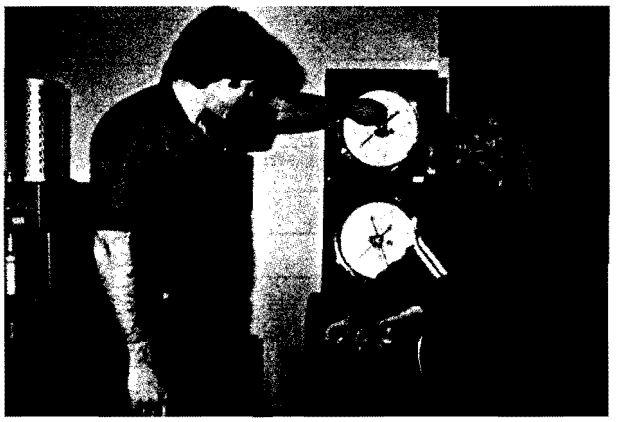
Any student who withdrew from the Institute and wishes to return must contact the Student Development Office to reactivate his/her application for admission.

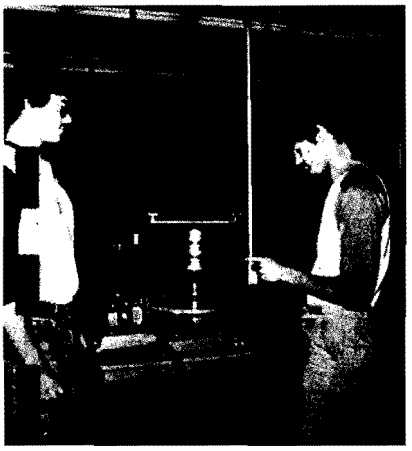
1. A student who withdrew for unavoidable reasons may be considered for re-admission at the beginning of the next quarter.
2. A student who was suspended for unsatisfactory academic progress is required to reapply for re-entrance through the Admissions Office. Re-admissions decisions will then be made by the Admissions Committee based upon a review of previous grades, consultation with instructors and department chairpersons involved, additional achievement and/or interest testing and interviews to determine the reasons for unsatisfactory progress. In cases where the probable causes of unsatisfactory progress while previously enrolled have not been removed, re-entry to curricular studies may be denied or re-entry approved under specific conditions which can include change of curriculum, remedial course work and probationary status.
3. A student who was dismissed from the Institute by disciplinary action may re-enter only upon approval by the Dean for Student Development.
4. A student who withdraws from the institution and re-enters at a later quarter, including students who have completed at least one or more quarters, will be subject to curricular requirements in effect for the following fall quarter. In cases where students re-enter at the beginning of fall quarter, they are subject to the requirements of the curriculum at the fall quarter re-entry.
5. Any student indebted to the institution is ineligible to re-enter until all financial obligations to the institution have been satisfied.

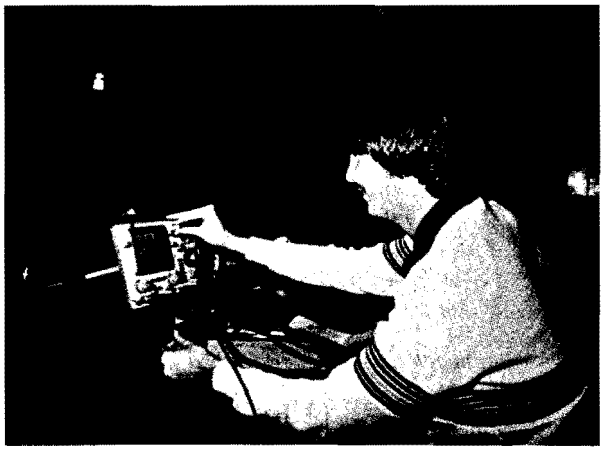
SERVICES FOR THE HANDICAPPED

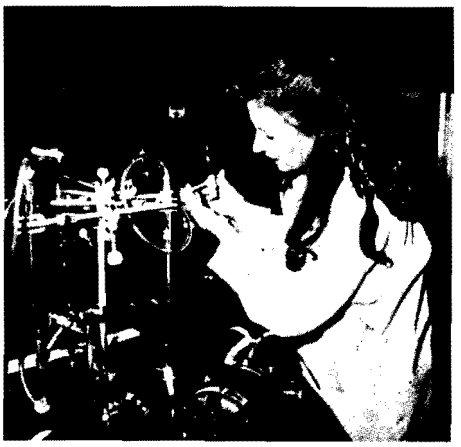
It is the purpose of Fayetteville Technical Institute to provide equal opportunity for education to academically qualified students. Fayetteville Technical Institute commits itself to positive action to secure equal opportunity regardless of race, color, national origin, religion, sex, age, or handicap. Disabled students are encouraged to apply early in order to receive the full assistance of the institutional programs. Information with respect to the existence and location of services, activities, and facilities that are accessible to and usable by handicapped persons may be obtained from the Director of Admissions or any counselor in the Student Development Office.

ENGINEERING DIVISION









*Persons over age 65 are exempt from reg. fee.

STUDENT FINANCES

Expenses

The estimated academic expenses for an academic year (3 quarters) are approximately $435.00 for an in-state student and $900.00 for an out-of-state student. These expenses are listed separately below.

Tuition and fees are assessed on a quarterly basis and are due at registration. Payments may be made by cash, personal check drawn on an in-state bank, Bankamericard/VISA or Mastercard. Personal checks drawn on out-of-state banks, second party checks, and checks in excess of actual costs are not accepted. A student is not considered as registered until fees are paid.

The estimated expenses for a full-time student during an academic year are as follows:

*

	In-State	Out-of-State
Tuition	~~117.00~~ 153.00	~~595.50~~ 765.00
Activity Fee	6.00	6.00
Books and Supplies	300.00	300.00
Parking fees	~~12.00~~	~~12.00~~
	16.00	16.00

Other Fees:

1. Additional expenses required to cover uniforms, instruments, tools, malpractice insurance, and dues to student associations are detailed in the institution's recruitment brochures. 4.25
2. Tuition for students taking less than 12 quarter hours is ~~$3.25~~ per credit hour for in-state students and ~~$16.50~~ $21.25 per credit hour for out-of-state students. Note: "Tuition is set by state policy and is subject to change without notice."
3. Parking stickers are issued upon payment of the parking fees. Students are held responsible for all parking regulations as stated in the Rules and Regulations Bulletin.
4. A Late Registration fee of $5 will be charged to the students who register after the dates listed in the school calendar for student registration.
5. All prospective graduates will be charged a graduation fee of $20.00.

Residency Classification for Tuition Purposes

Every applicant is required to provide information as to his or her length of residency in North Carolina. The tuition charge for legal residents of North Carolina is less than for non-residents attending Fayetteville Technical Institute. To qualify for in-state tuition, a *legal resident* must have maintained his or her *domicile* in North Carolina for *at least twelve months* prior to his or her classification as a resident for tuition purposes. Copies of the applicable law (G.S. 116-143.1) and implementing regulation are available in the office of the Dean for Student Development. Initial classification of residency for tuition purposes is made in the Admissions Office. Appeals and requests for re-classification should be addressed to the Dean for Student Development.

Responsibilities of the Student Relative to Residency Classification

1. If you currently are classified as a nonresident for tuition purposes, it is your right to petition for a change in classification to that of resident if you claim that you are now and, for at least the twelve-month period immediately preceding the date of such petition, have been a legal resident of the State of

North Carolina. The fact that you have resided in the state for twelve months does not in itself constitute in-state residency. You must be able to show proof that you have indeed taken steps to become a legal resident. Examples are: filing income tax in North Carolina, registering for voting, listing personal property taxes, automobile registration, etc.

2. If you currently are classified as a resident for tuition purposes, it is your obligation to petition for a change in classification to that of a nonresident if you have reasonable basis for believing that change in facts requires such a change in classification. Failure to fulfill this obligation may result in appropriate disciplinary action including, but not necessarily limited to, cancellation of enrollment. If it is determined that in fact you have become a nonresident, the effective date of change in applicable tuition rates shall be the next quarter following the date of change in facts which required the change in classification, unless you are deemed eligible to further enjoy the in-state tuition rate under the statutory twelve-month grace period.
3. North Carolina laws requires that each student supply all information requested relative to residency classification for tuition purposes. Failure to do so would result in classification as a nonresident for tuition purposes.

Financial Obligations

All students are expected to meet their financial obligations to the institution. Students who have delinquent accounts will not be permitted to enroll for subsequent quarters nor will students be permitted to register if they have unpaid parking and/or library fines. The established State Fiscal Policies and Regulations, under which Fayetteville Technical Institute operates, state that student tuition and fees are payable at registration. A student is not considered registered nor eligible to attend class until all tuition and fees have been paid. The responsibility for meeting financial obligations rests on the student rather than on the Institute. This policy is not considered unduly burdensome considering the low cost of tuition at F.T.I. and the availability of third party support, including financial aid and VA benefits.

Refunds

TUITION REFUNDS for students shall not be made unless the student is, in the opinion of the Institute, compelled to withdraw for unavoidable reasons. In such cases, two-thirds (2/3) of the student's tuition may be refunded if the student withdraws within ten (10) calendar days beginning with the first day of classes as published in the school catalog.

Tuition refunds will not be considered after that time nor will tuition refunds of $5.00 or less be considered, except if a course or curriculum fails to materialize.

Eligibility for refunds for summer sessions is reduced to five calendar days beginning with the first day of classes for each session. Requests for refunds must be made in writing stating the reasons for withdrawing from the course. No requests for refunds will be approved after the periods indicated above.

BOOKSTORE REFUNDS are made under the following conditions:

A. Books which have not been used, damaged, or marked in will be accepted for 100% refund or credit from students in the following categories, provided proof of purchase (cash register receipt) is furnished at the time books are returned:
   (1) registered in error (must present signed drop/add form indicating such and sales receipt);

(2) course cancelled (signed drop/add form and sales receipt);
(3) purchased in error (must present schedule of courses and sales receipt);
(4) drop/add (signed drop/add form and sales receipt);
(5) books which are defective or damaged at the time of purchase.

B. Students are allowed five (5) school days after the end of drop/add period to return textbooks for refund or credit as outlined above.

C. All refunds, other than credit toward a purchase of additional items, will be made by check, issued by the Fiscal Affairs Office. No cash refunds will be made for books returned at any time after purchase.

ACADEMIC STANDING

Credits

A. All curricular students receive quarter-hour credit for courses which they successfully complete.

B. The Board of Trustees of Fayetteville Technical Institute has been authorized by the North Carolina Board of Community Colleges to award the Associate of Applied Science Degree, Associate Degree in General Education, and the Diploma upon successful completion of curricular requirements.

C. Fayetteville Technical Institute has structured its curricula, of both one and two years' duration, on a post-secondary level and grants credit on a quarter-hour basis. Instruction in all curricula is post-secondary and requires students to be capable of study beyond the high school equivalency level for success. The curricula are designed on a quarter-hour basis to include general education areas which require extra out-of-class preparation each quarter. Each class, lab and shop session is of 50 minutes duration and requires a minimum of outside preparation of two hours for each classroom session, one hour for each lab session, and additional outside preparation for shop sessions. Quarter-hour credit is granted on a basis of one credit to three sessions of shop, one credit to two sessions of lab, and one credit to each classroom session of weekly attendance.

D. It is the policy of this institution to permit students to enroll in additional subjects since the instructional hours shown in the curricula are minimum. A student may enroll on request for additional instructional hours deemed by the instructor to be consistent with the program and appropriate to the student as approved by his/her advisor.

E. Students with academic deficiencies, who require remedial work as background material, may enroll in Developmental Studies. These Developmental Studies courses carry credit hours for institutional accounting purposes *only* and are *not counted* as credit hours toward graduation in any of the curricula.

F. A student must obtain approval from the faculty advisor to take credit hours excessive to the normal curricular load as stated in the curricular outline. Students falling below a 2.50 quality point average *will not* be permitted to attempt credit hours beyond the stated curricular quarter load.

Grading Procedures

Each grade is assigned a "grade-point equivalent" in quality points for each quarter credit hour scheduled. The scholastic point average is determined by dividing the total of quality points earned by the number of quarter hours scheduled.

93-100	A—Excellent	4 qual. pts. for each qtr. hr.
85-92	B—Above Average	3 qual. pts. for each qtr. hr.
77-84	C—Average	2 qual. pts. for each qtr. hr.
70-76	D—Below Average	1 qual. pt. for each qtr. hr.
Below 70	F—Failing	0 qual. pt. for each qtr. hr.
	NC—No Credit	0 qual. pt. for each qtr. hr. (not computed)
	P—Proficiency	0 qual. pt. for each qtr. hr. (not computed)
	WD—Withdrawn	0 qual. pt. for each qtr. hr. (not computed)
	WP—Withdrawn Passing	0 qual. pt. for each qtr. hr. (not computed)

WF—Withdrawn Failing	0 qual. pt. for each qtr. hr. (computed as "F")

1. Inc.—Incomplete: Given at the discretion of the instructor when all course requirements have not been satisfied. Students must remove Incompletes by the mid-term of the following quarter, or an automatic "F" grade is assessed.
2. WD—Given during the first fifteen (15) school days when a student drops a class or withdraws completely. No penalty is involved.
3. WP or WF—A student withdrawing after the mid-term of any quarter will receive an automatic WF (shown on the transcript as an "F" grade) unless he/she is compelled to withdraw from the institution for unavoidable reasons. In such cases (determined by the Dean for Student Development), the student is eligible to receive a WP in all courses in which a passing grade was achieved at the time of withdrawal.
4. NC—No Credit: Fayetteville Technical Institute offers the student an alternative grading plan; the intent of this grading plan is to allow a student to explore fields of study outside his/her known areas of competency. Such courses will not be computed in grade-point averages, and therefore, no credit or penalty is attached to the 'No Credit" grade; however, all course requirements must be met by the student. Limitations on the number of courses taken for "No Credit" will be handled on an individual basis. A student may not repeat the same courses for a "No Credit" grade. Developmental Studies courses are remedial in nature and are ineligible for "No Credit" grades. A drop at any time for a "No Credit" class will result in a WD. *The request for a "No Credit"* grade must be made at the first class session. Veterans will not be certified for "No Credit" courses.
5. P—Proficiency: Students who plan to take a challenge examination must contact the department chairperson of the curriculum in which they wish to challenge the course. Where a CLEP test is available for such courses, students are urged to take the CLEP subject exams. All students who request to take a proficiency exam in any course must complete the exam either prior to registration or within the first four class days of any quarter for courses in which a student is registered in that quarter. Student grade cards will indicate by an asterisk (*) courses passed by proficiency. A student will not be carried on the class roll for the purpose of full-time enrollment after passing a proficiency exam for that class. Veteran students will not receive educational monetary benefits for courses passed by proficiency. Students who pass courses by proficiency are urged to add another course to their schedule during drop/add period.

All final course grades will be letter grades in accordance with the adopted grading system. Student grade reports are mailed at the end of each quarter. Grades will also reflect student's attitude toward scholastic work as measured by the instructor.

All students must have at least a 2.0 quality point average and have passed all curricular subjects as listed in the course outline under which they entered to be eligible for graduation. They must also meet the grade level needed in major subjects required to take licensure examinations.

Health occupations curricula require grading policies necessary to meet state requirements. Each health department area will issue to the student in written form the necessary information to cover such grading policies. Students who request transfers to other degree curricula are expected to have maintained a 2.0 QPA on all courses completed including prerequisite courses.

C.E.U. Credit for Teachers Seeking Renewal Credit

C.E.U. certificates may be awarded for completion of degree level course work completed with a "C" or better upon request to the Registrar's Office.

F.T.I. does not determine acceptability of courses for teacher renewal credit. That decision is the sole prerogative of the employing educational unit.

Academic Deficiency

A student whose quality point average for any given quarter's work falls below the minimum as stated in the current *Student Handbook* will be placed on Academic Probation. If subsequent quarter's work should also fail to meet the minimum requirement of probation, the student may be requested to drop certain courses, and/or take remedial work, or may be placed on academic suspension for at least one quarter. Certain curricula have minimum course grade requirements which will be specified either in the *Student Handbook* or a division bulletin.

The conditions of academic probation are as follows: (1) Maintain at least a grade of "C" on all courses taken during the quarter, (2) Non-participation in organized extra-curricular activities while on academic probation, and (3) Participation in a minimum of three academic probation sessions.

Students placed on Academic Suspension for one quarter may be re-enrolled after the suspension period; however, the student will be placed on Academic Probation for the first quarter of re-enrollment.

Anyone receiving VA educational allowance on academic probation must receive at least a 2.0 grade-point average during the quarter of probation. If the 2.0 grade-point average is not met during the probational period, VA benefits will be terminated due to unsatisfactory academic progress, regardless of the school's decision as to whether to allow the student to continue.

Students who are on academic probation and do not meet the conditions of probation are subject to academic suspension for a minimum of one quarter.

Developmental Studies

Students in Developmental Studies will be required to maintain a 2.0 QPA as a minimum level of achievement after one quarter. Students below 1.0 QPA at the end of their first quarter will be placed on academic suspension. Those students on probation with QPA between 1.0 and 1.99 will be put on academic probation for the next quarter enrolled. If in succeeding quarters they do not meet probationary requirements as listed in the *Student Handbook*, they will be placed on academic suspension. At any time a Developmental Studies student falls below a 1.0 QPA for the quarter, that student *will be* placed on academic suspension.

The length of time a student remains in Developmental Studies will depend on his level of achievement upon entrance into the program and his/her progress while in Developmental Studies. Most students complete nine (9) months of remedial work. Those who make exceptionally high grades or need only a little preparatory work may stay a shorter time and/or may take a modified Developmental Studies curriculum. Movement from Developmental Studies to a curriculum is determined by an evaluation committee. Placement in a given curriculum may be restricted by class size.

Attendance Policy

Because of the nature of the vast majority of the courses at Fayetteville Technical Institute, the Administration has established the following policy. The policy has been established for the benefit of the students who are forced, because of reasons beyond their control, to miss classes as well as of those who do not miss any classes (both groups of students are involved).

A. If a student is absent from class meetings more than 10% of the number of class hours scheduled per quarter, he/she shall be notified by the instructor that his/her class standing is in jeopardy. Absences will be computed starting at the end of the drop/add period.

B. Instructors are encouraged to refer students with excessive absences to the Counseling Office.

C. If a student is absent during a quarter 20% of the number of class hours scheduled per quarter, he/she may be dropped from the course.

D. Each student dropped may submit a request for review by the Student Appeals Committee.

E. Tardy students interrupt the beginning of a class meeting. If a student enters the class ten minutes after the instructor has started the class, the student shall be recorded as being tardy. Three tardies shall be counted as one absence.

F. No absence, for any reason, shall excuse a student from an announced test, examination, or other assigned activities. Make-up of any tests or work missed shall be at the discretion of the faculty member. The make-up of any test or examination shall be scheduled on the earliest possible date after the student returns to class.

G. No department may impose a different attendance policy unless specifically required for licensure purposes. Requests for a more stringent policy must be submitted in writing to and approved by the Dean of Instruction.

Course Drop-Add Policy

1. Students may not add a class after the first five *school* days of any quarter.
2. A student may drop a class as late as the 15th school day *without penalty*. The transcript will indicate a "WD."
3. A student who has to withdraw from the institution for unavoidable reasons within the first 10 *calendar* days may request a refund of 2/3 tuition rates.
4. A student who drops a class after the 15th school day and before the six-week period may receive a WP or WF at the discretion of the instructor.
5. A student who drops a class after the six-week period will receive an automatic WF, unless the student has to withdraw from all classes due to unavoidable reasons. In cases of total withdrawal for unavoidable reasons, the Dean of Student Development will grant permission to withdraw passing, if the student indeed is passing at that point. In such cases the transcript would indicate WP (no penalty).
6. All students who drop must follow the instructions listed in the current *Student Handbook* under "withdrawals."
7. Electives may exceed total required hours of a curriculum only by the hours of the last elective taken to fulfill those requirements. VA students are advised that excess electives are not eligible for benefit certification.
8. Catalog graduation requirements are firm. Substitutions may only be made in special cases and require prior approval of the Department Chairperson and Dean for Student Development. Course content and credit hours must be of equal or greater value than the course being replaced. In some cases this may cause students to exceed minimum hours for graduation.

Withdrawals

Once a student has duly enrolled in a class and paid the registration fee, the student shall maintain membership in said class, until one of the following occurs:

1. Student Withdrawal—He/she officially withdraws. (This constitutes student withdrawal and is effective as of that date.)
2. Administrative Withdrawal
    a. He/she ceases attending class. Students who are absent for more than 20% of scheduled class sessions may be dropped from the class rolls. (See Attendance Policy.)
    b. The responsible instructional personnel are reasonably assured that the student does not intend to pursue the learning activities of the class. (This constitutes administrative withdrawal and is effective as of that date.)
    c. He/she completes the minimum objectives stated for the class, or transfers to another class.

Students who decide to withdraw themselves from a class must submit a statement to the instructor of intent to withdraw. A "Registration Change Notice" must be completed by the student and initialed by the instructor, then presented to his/her faculty advisor and the Registrar before an official withdrawal can be recorded.

Students whose prior academic progress at this institution was unsatisfactory, including those students who are placed on academic suspension, may be re-admitted only by approval of the Admissions Committee.

The failure to withdraw properly will jeopardize the student's right to re-enroll at a later date.

Class Repeat Rules

A student who fails a required course will be required to repeat the course. Both grades made on the course will be counted in the total quality-point average.

Students must have the permission of a faculty advisor and the Associate Dean for Student Development to repeat a course they have already passed with a grade of "C" or better. The first grade made on the course will be counted in the total quality point average. Veterans should be aware that they cannot receive VA benefits for duplication of courses passed.

Student Records

Records of progress are kept by this institution on veteran and non-veteran students alike. Progress records are furnished the students, veterans and non-veterans alike, at the end of the scheduled school term.

1. The Registrar is responsible for student records. The following documents will be maintained as a part of the student's institutional records and will be subject to all state and federal regulations governing the safety and confidentiality of those records: completed application, completed medical form, veterans' records, statement of residency, transcripts, any statement of waiver by the student concerning student records, and a list of persons, firms, or other institutions to which a copy of the institutional records have been sent.
2. A student may receive an unofficial copy of his/her transcript upon graduation. One official transcript may be sent to a school of his/her choice upon written request. A fee of $1 is charged for each transcript after the first one. No fee is charged for transcripts sent to employers. *Official* transcripts are mailed only to another educational institution or to an employer.
3. When a student has a name change or change of address, he/she is responsible for contacting the Registrar's office in person to fill out the necessary forms.

TO ALL PARENTS OF STUDENTS CURRENTLY ATTENDING FAYETTEVILLE TECHNICAL INSTITUTE AND ALL STUDENTS CURRENTLY ATTENDING WHO HAVE REACHED THE AGE OF 18:

The Family Educational Rights and Privacy Act (FERPA) is a federal law that governs the maintenance of students' records. Under the law, parents of students or students, if they are at least 18, have both the right to inspect records kept by the school about the student and the right to correct inaccuracies in the records. Access to the records by persons other than the parents or the student is limited and generally require prior consent by the parents or the student. The Board of Trustees has adopted a written policy governing all the rights of parents and students under FERPA. Copies of this policy may be found in the Registrar's Office.

Fayetteville Technical Institute classifies the following as directory information: student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous school attended by the student. School officials may release this information to any person without the consent of the parents or the student. Any parent or eligible student who objects to the release of any or all of this information without his/her consent must notify in writing the Registrar by a date which is five (5) school days from the date that the student receives his/her *Student Handbook*. The objective must state what information the parent or student does not want to be classified as directory information. If no objective is received by the aforesaid date, the information will be classified as directory information until the beginning of the next school year.

Complaints about failures of Fayetteville Technical Institute to comply with the Family Educational Rights and Privacy Act may be made in writing to FERPA Office, Department of Health, Education and Welfare, 330 Independence Avenue, S.W., Washington, D.C. 20201.

Requirements for Graduation

To be eligible for graduation, the student must:

1. Successfully complete the curricular requirements in effect at the time the student entered the curriculum. Students who enter a curriculum after the winter quarter are subject to the curricular requirements in effect for the following fall quarter. A student who withdraws from the institution and re-enters at a later quarter, including students who have completed at least one or more quarters, will be subject to curricular requirements in effect for the following fall quarter. In cases where students re-enter at the beginning of fall quarter, they are subject to the requirements of the curriculum at the fall quarter re-entry.
2. Have sufficient quality points to average 2.0 in total program.
3. Have passing grades in all required courses (certain curricula, especially in the health area, require that a student make at least a "C" grade on major subject areas for the student to be eligible to take state and national examinations for licensure.)
4. Must have taken care of ALL financial indebtedness to Fayetteville Technical Institute, including $20 graduation fee.
5. Applications for degrees or diplomas available in the office of department chairpersons and advisors must *be completed by the student* no later than the end of the fourth quarter for a two-year curriculum, the first quarter of a three-quarter curriculum, and the fourth quarter of a four-quarter curriculum. THIS IS THE STUDENT'S RESPONSIBILITY!

6. A $20 graduation fee is required of all students who complete their curriculum and are eligible to graduate. This fee must be paid within the first three weeks of the student's last quarter before graduation.

Classification of Students

Full-time student: A student enrolled for 12 or more quarter hours.

Part-time student: A student enrolled for fewer than 12 quarter hours.

Freshman: A student who has fewer than the number of quarter hours required for the first three quarters.

Sophomore: A student who has satisfied freshman requirements.

Audit: Students are not permitted to audit courses. (See provisions for students taking courses for "No Credit.")

Special credit student: A special credit student classification is designed for adults interested in technical/vocational courses for special reasons and who do not desire to work toward a diploma or degree at F.T.I. Special credit students who wish to change to regular status at a later date must meet the same admission requirements as other candidates for admission.

HONORS AND AWARDS

Any student who has earned a quality point average of 4.0 and has completed at least half of his/her diploma or degree requirements in residence at Fayetteville Technical Institute will be granted a diploma or degree with highest honors. Any student who has earned a quality point average of 3.5 and has completed at least half of his/her diploma or degree requirements in residence at Fayetteville Technical Institute will be granted a diploma or degree with honors. A seal of recognition will be placed on the student's degree or diploma, and the student's transcript will be noted to reflect this achievement.

President's List

The President's List is published at the end of each quarter to honor those students (full-time curriculum) whose grades were "B's" or better for each course taken during that quarter. Students taking remedial courses are ineligible for consideration for the President's List.

Marshals

Marshals are selected and given the privilege to lead the academic procession during graduation exercises. The selection of marshals is a competitive process based on academic averages. Recipients must be third-quarter freshmen in a two-year curriculum.

Trox Poland Memorial Award

The criteria set forth for this award are as follows:

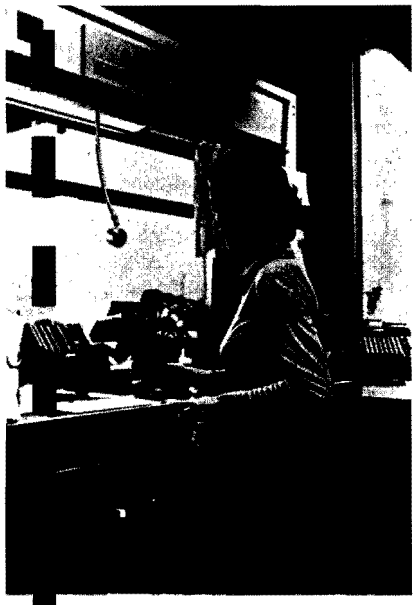
1. Student must have a minimum overall quality point average of 3.00.
2. Student must have been in continuous enrollment on a full-time basis at F.T.I. during year of nomination.
3. Student will be selected during the spring quarter of his/her year of graduation at F.T.I.
4. Student will be judged on "attributes" and "contributions" while attending F.T.I.

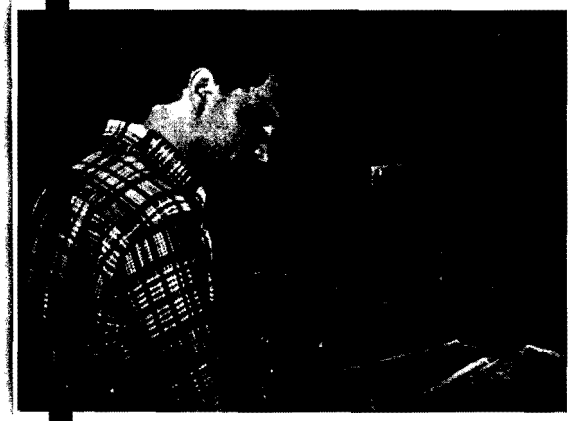
5. Student should demonstrate a genuine concern for F.T.I. and its role in the community. In addition, he/she should exhibit and promote good student morale.

Who's Who

Each year the faculty makes nominations of students who attain scholastic averages of 3.00 or better to be selected for "Who's Who Among Students in American Junior Colleges." Other criteria used in selection include leadership abilities, moral character, and commitment to educational goals. The students selected are recognized nationally through publications by the awarding body.

BUSINESS DIVISION





STUDENT DEVELOPMENT

The Office of Student Development at Fayetteville Technical Institute is held responsible for the following functions: student recruitment, testing, admissions, registration, orientation, guidance and academic advisement, counseling, veterans affairs, financial aid, student housing, health services, student activities, graduate job placement, and alumni or follow-up coordination.

The primary purpose of Student Development is to provide the professional services needed to effectively administer the above functions and to assist students in their adjustment to learning experiences as presented in the instructional programs offered at Fayetteville Technical Institute. The purpose includes the providing of guidance and academic advisement in helping maintain the institution's academic standards within the instructional programs. The counseling services provide the necessary supportive role to the student to affect his/her highest possible achievement toward success.

The effective adjustment of a person to any new situation will determine the degree of success which that individual will achieve in the new environment. Therefore, a secondary purpose is to provide a planned program of services designed to create an atmosphere which will be most beneficial to the student in his/her adjustment to the institutional environment.

In order to fulfill the purposes of Student Development, the following objectives are established:

1. To provide an organized recruitment plan for reaching prospective students in the area public schools, general population, and business and industry.
2. To disseminate factual materials and printed information which describes the institution, its purposes and its programs of instruction.
3. To invite to the campus formalized groups and individuals for the purpose of touring the facilities.
4. To have a planned program of evaluative tools which will produce data for the use in aiding the placement of students within the institution's programs.
5. To state entrance requirements in keeping with the institution's philosophy and purpose.
6. To list general and specific admission requirements for each instructional program.
7. To involve admissions personnel and the Student Development staff in the concerns of maintaining quality standards in selective processes and in academic programs.
8. To provide structured registration procedure for the matriculation of students.
9. To maintain a system of student records which provides personal and academic information which will be kept as a part of the student's institutional record.
10. To provide back-up records which are kept at separate locations outside of the institution.
11. To have a planned orientation program for incoming students.
12. To provide a guidance program which includes the use of the total resources of the institution and community.
13. To maintain a staff of professional counselors who will provide areas of counseling services to students and others and make referrals when necessary to appropriate community resources.
14. To provide as a part of the counseling services planned group participation.

15. To provide a structured veterans affairs and veterans information staff who will assist the veteran in meeting requirements necessary for certification and for participation in the veterans educational assistance program.
16. To provide a Financial Aid Coordinator who will assist the student in assessing his/her financial needs and who will provide information on all available financial resources to meet those needs.
17. To maintain a plan for assisting students in locating off-campus housing.
18. To maintain a job placement office dedicated to assisting the student.
19. To provide a method through which emergency health needs of the student can be met.
20. To have a planned extracurricular activities program which will provide the students with a wide variety of out-of-class experiences.
21. To implement a planned program of follow-up of graduates and non-graduates which will provide information that may be used in evaluative processes which may include implications for curriculum revision.

Counseling Services

Counseling services are available to students during school hours. Services provided by the staff of trained counselors include career planning, exploration and interpretation of interests and abilities, and development of interpersonal communication skills and problem solving skills. Serious problems which require special treatment are referred to appropriate community agencies.

Special efforts are made to work with students in academic difficulty. Students are encouraged to use the counseling services. Students are encouraged to become acquainted with their counselor and advisor before problems arise. Counselors are available from 8:00 a.m. until 9:30 p.m. Mondays through Fridays in the Student Development Office located in Lafayette Hall on the campus of Fayetteville Technical Institute.

Career Center

Assistance with the development of realistic career goals and plans is available through the Career Center. Through the Career Center an individual can talk with a trained counselor and work jointly in solving problems associated with career choices, daily choices and educational planning. The Career Center offers information on career-related topics, including job descriptions, duties, working environments, earnings, minimum entry skills, and the education and training required for entry into the job market.

Special Testing

Interest, aptitude, achievement, ability and human relations tests are available for the students desiring personal and occupational counseling. For more information, students are encouraged to contact a counselor in the Student Development Office.

Financial Aid

Financial aid at Fayetteville Technical Institute is offered to all students enrolled in eligible curricula who meet eligibility requirements. Most aid is granted on the basis of need rather than scholastic ability.

Various resources available through the Financial Aid Office at Fayetteville Technical Institute include:

1. Pell Grants
2. Supplemental Educational Opportunity Grant
3. North Carolina Student Incentive Grant (Available to all in-state students)
4. National Direct Student Loan
5. College Work-Study
6. Federal funds for Nursing Loans and Scholarships specifically for Associate Degree Nursing students
7. College Foundation—Federally insured student loan program available to all in-state students
8. Local loan funds: From time to time various companies and associations in the area donate money for loans and scholarships. Since this type of funding is not necessarily repeated annually, an applicant may secure a list of local scholarships from the Financial Aid Director.
9. Emergency Loan Fund (Short-term loans not to exceed $100.00 and repayable in 30/60 days up to maximum of amount in fund)
10. Radiologic Technical Scholarship
11. American Board of Funeral Service Education Scholarship
12. Wachovia Scholarship
13. Short term book-tuition/fee loan (2/3 tuition and fees, exact amount of book costs, repayable in 30/60 days)
14. Other sources of financial aid are often available through independent agencies such as V.A., Vocational Rehabilitation, Social Security, CETA, military service and National Guard.
15. Educational Loans: All full-time students enrolled in the Associate Degree and diploma programs at Fayetteville Technical Institute are eligible to apply for a delayed payment educational loan within the limitations outlined below.

    1. Maximum loans for an academic year are not to exceed $300.00. Aggregate loan limit: $600.00.
    2. Disbursement of the loan to the student is divided by the number of quarters in the academic year.
    3. Interest shall be computed at the rate of 8 percent per annum.
    4. Repayment of the loan will begin on the ninetieth (90th) day after the student graduates or terminates his enrollment, whichever comes first.
    5. Repayments will not be less than $30.00 per month.
    6. Failure to comply with the repayment provisions could result in actions by the institution to accelerate the loan. To accelerate a loan means that the institution demands immediate payment in full of the unpaid balance of the loan plus accrued interest and collection charges and fees.
    7. Approval of the loan is tentative and contingent upon availability of funds.
    8. Loan recipients are required to notify the Financial Aid Office immediately of any changes in residency, or of withdrawal from school.

Students applying for financial aid must meet the student eligibility requirements listed below.

The applicant must:

1. Be a citizen or national of the United States or be in the United States for other than a temporary purpose, or be or intend to be a permanent resident, or be a permanent resident of the Trust Territory of the Pacific Islands.

2. Be enrolled in an eligible program of study which is at least six (6) months long. (Enrollment in the Nurses' Assistant or Developmental Studies toward Nurses' Assistant Program would make you ineligible for all financial aid.)
3. Be enrolled on at least a half-time basis.
4. Maintain "satisfactory academic progress" in the course of study the student is pursuing, according to the standards and practices of the institute. F.T.I.'s policy concerning "satisfactory academic progress" can be found in the *Student Handbook*.
5. Not be in default on any NDSL or Guaranteed loan made for attendance at F.T.I. or owe a refund on federal grant aid received at Fayetteville Technical Institute.

A student wishing to be considered for all forms of financial aid at Fayetteville Technical Institute must submit an application to the American College Testing (ACT) center (also called the Family Financial Statement). Based on the students' needs and resources available, the Financial Aid Director will help meet those needs through a "package deal" composed of various types of grants, work-study, and loans.

Requests for all financial aid should be made when you apply for admission to F.T.I. Applications received before July 1, 1982, will receive primary consideration for 1982-83 financial aid. Applications received after that date will be processed as funds are available.

Any student who needs financial aid or has questions concerning financial aid should contact the Financial Aid Director, whose office is located in Room 212-A.

Student Housing

The Financial Aid Coordinator assists the student in finding housing when it is necessary or desirable on the part of the student to live in Fayetteville. Financial arrangements for rooms or apartments are on an individual basis between the student and the landlord. The college assumes no responsibility in any financial arrangement between the student and the landlord.

Health Services

Health services at F.T.I. are handled by the coordination of health services. Each shop and lab is equipped with first-aid kits. Basic first aid is available. Students are referred to the hospital Emergency Room when treatment is required. Health counseling is provided by a trained staff member. The Health Services Coordinator will act as a referral agent as necessary.

Student Insurance

All students, either full or part time, who attend classes on campus or are charged a Student Activity Fee are covered by a master student accident insurance plan carried by the Institute. Students are insured while attending school during the hours that school is in regular session or participating in or attending an activity (other than an athletic activity) exclusively sponsored and supervised by the school, and traveling directly to or from such activity (other than an athletic activity) in a vehicle furnished and supervised by the school.

Students participating in athletic activities which are a part of their regular scheduled instruction are covered by this insurance; however, students participating in intramural sports are not covered.

The student accident insurance plan does not guarantee payment of all medical costs, and the student is responsible for the payment of all costs in excess of those

paid by the insurance policy. A copy of the student accident insurance plan for this Institute is published in the current *Student Handbook*.

Job Placement

The Placement Office is available year round to assist graduates entering the job market. The Placement Office maintains placement records on students, initiates contacts with prospective employers, arranges and coordinates job interviews between students and employer representatives and maintains current information on employment opportunities including salaries. Follow-up studies of F.T.I. graduates are conducted yearly in order to provide current information on graduate placement, including type of employment, geographic location and salary scale.

A list of part-time jobs available locally is posted on the Placement Office bulletin board for student use.

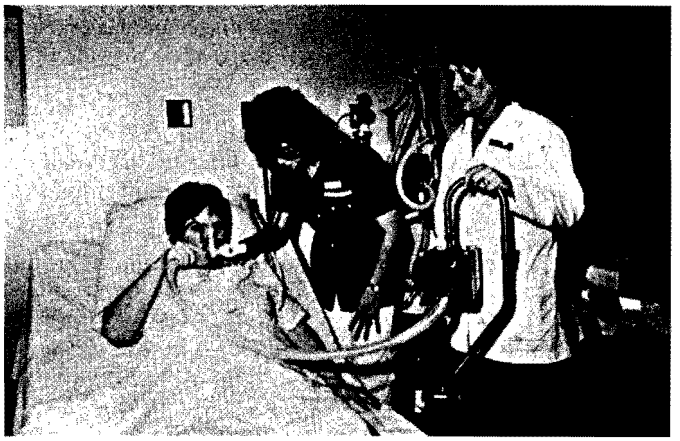
Student Activities

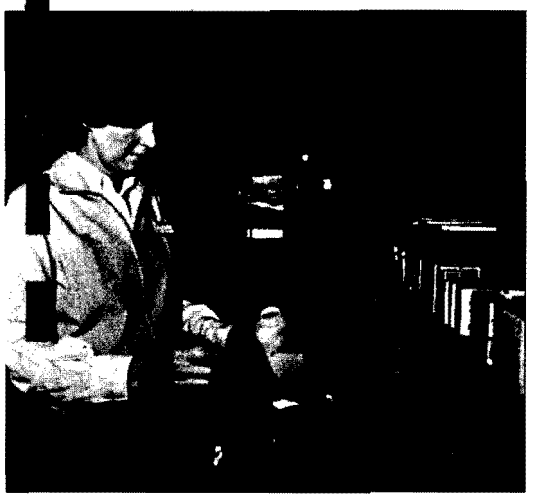
Student activities are an integral part of the total development of students at Fayetteville Technical Institute. Through participation in these activities, students receive practical experience in the responsibility of citizenship. All students are encouraged to participate. Intramurals club membership, educational, cultural, and social events are provided. Activities are open to all students without regard to race, creed, national origin, or sex.

FACULTY ADVISORY SYSTEM

The Faculty Advisory System at Fayetteville Technical Institute is an integral part of the instructional and student development programs of the institution and serves two primary functions: (1) to assist students with course selection for their curricular studies, and (2) to provide assistance with the scholastic and school-related problems encountered in reaching their academic goals. The faculty advisory system is designed to provide the student with information, assistance with procedural tasks and educational program planning. In addition, the faculty advisory system is to provide the student with an educational supportive relationship outside of the classroom environment. The effective use of the faculty-advisor/student relationship is essential to both student academic success and retention.

HEALTH DIVISION





GENERAL STUDENT REGULATIONS

The total educational program of the college is designed to assist the student to reach his/her highest level of potential in his/her personal development. Each curriculum is designed as a vital part of that development, and the successful completion of all course work will enhance the probability of good job placement. Each out-of-class activity is designed to provide the best opportunity for social development as a part of overall training.

In order to maintain a climate supportive of learning, certain rules and regulations are expected of students. The Dean for Student Development is responsible for administrative discipline of students. The institution's standards of behavior are published in the *Student Handbook*. They are as follows:

1. Students are expected to conduct themselves as mature adults at all times.
2. Students who negligently lose, damage, destroy, sell or otherwise dispose of school property placed in their possession or entrusted to them will be charged the full extent of the damage or loss and subject to disciplinary action.
3. Students who engage in such acts as cheating, stealing, gambling, profane language or personal combat, make themselves liable to disciplinary action, which may include being dropped from school.
4. Under no condition will alcoholic beverages or illegal drugs be permitted in or on the school property. No one under the influence of alcohol or illegal drugs will be permitted on the campus. Any violation of this regulation will result in the expulsion of the student.
5. Students are required to observe "no smoking" regulations.
6. Students are under a moral obligation to conduct themselves in a respectful manner in off-campus housing.
7. Off-campus activities under the name or sponsorship of F.T.I. are subject to the same rules and regulations for on-campus activities.
8. Students are responsible for information, rules and regulations published in the *Catalog* and *Student Handbook*.

Dismissal

Fayetteville Technical Institute reserves the right to dismiss any student when it believes such action is in the best interest of the institution and/or the student. In all cases, the right of due process is the student's prerogative.

Students' Right to Due Process

It is the student's responsibility to seek due process when appropriate. All students have rights to due process through the following channels: Counselor, Associate Dean for Student Development, Student Appeals Committee (for recommendation to the Dean for Student Development), Dean for Student Development, Vice-President, President, and Board of Trustees. This right to due process is administered without regard to race, creed, national origin or sex.

In every case, your CONTACT person should be your COUNSELOR. The counselor may be able to resolve a problem through clarification or intervention. If an appeal is planned, the counselor will assist you with processing and appointments.

The procedures for appeals are detailed below:

Grades and Academic Standing

1. See your instructor to discuss grades.

2. The Associate Dean of Instruction (Faculty) is available to discuss grading practices and policies.
3. Appeals to the Student Appeals Committee should be made through the counselor to the Associate Dean for Student Development.
4. Decisions of the Appeals Committee are referred to the Dean for Student Development as recommendations.
5. The Dean for Student Development will use all evidence from the Appeals Committee and will give written response to all parties concerned as to final action.

Admissions Decisions

1. See your counselor or the Director of Admissions to discuss any problems concerning admissions.
2. The Director of Admissions is available to discuss admissions criteria, policies and procedures.
3. Appeals to the Admissions Committee should be made through the counselor to the Director of Admissions.
4. Decisions for the Admissions Committee are referred to the Dean for Student Development as recommendations.
5. The Dean for Student Development will use all evidence from the Appeals Committee and will give written response to all parties concerned as to final action.

Disciplinary Action

Disciplinary action is the responsibility of the Dean for Student Development and may only be appealed to the Vice-President for Academic Affairs, the President, and the Board of Trustees.

VOCATIONAL DIVISION

LEARNING RESOURCES CENTER

The Learning Resources Center, located in the Paul H. Thompson Library, contains a collection of carefully selected printed and non-printed materials to support and enrich instruction. Components of the Learning Resources Center are the Library, the Learning Laboratory and Media Services.

The Library provides excellent facilities for study, research, browsing, self-improvement and enjoyment. The Library houses over 34,000 volumes of books and subscribes to over 280 current magazines and newspapers. Back issues of periodicals are available in bound volumes, unbound issues and on microfilm. Audio-visual software, such as filmstrips, records, cassettes, and slides are available in the Library, as is the space and equipment necessary for viewing and listening. Also available is a staff ready to instruct students in the use of the Library and to assist them in finding information here or at other institutions through Inter-Library Loans.

The Learning Lab makes available to the student body and the community an opportunity to learn new subjects to strengthen weak areas of learning and to study for specific test requirements. It serves as a remedial center for aspiring students and an individualized classroom for adults who desire new or specialized training.

Through the use of teachers, texts, audio-visual equipment, programmed materials, and other teaching aids, the Learning Lab assists a person in furthering his/her knowledge in many subjects. Various types of instructional materials are employed including filmstrips, records, and cassettes. Subjects available include English, social studies, mathematics, foreign languages, reading skills, science and many others.

Media Services provides a qualified staff and excellent facilities to support the instructional programs with materials production and equipment. Equipment that circulates is controlled through Media Services.

The Learning Resources Center has a seating capacity of over 300 with study arrangements to meet student needs. The Learning Resources Center strives to make available all types of media for enjoyment, enrichment and instructional purposes for the student body, the faculty, the staff of Fayetteville Technical Institute, and the community.

ADULT CONTINUING EDUCATION

General Information

Fayetteville Technical Institute provides educational opportunities for adults interested in upgrading their occupational skills, developing new skills, participating in self-enrichment classes, participating in Adult Basic Education, or completing their High School Diplomas. Adult Continuing Education courses may be of any length to accommodate the needs of the students and the course content.

Fayetteville Technical Institute, in order to provide better services to the residents of Cumberland County, has an agreement with the Fayetteville City Board of Education and the Cumberland County Board of Education to offer evening courses in the public schools throughout the county. These schools have been designated as Adult Continuing Education Centers and are an integral part of the total Continuing Education Program of F.T.I.

Purposes

The general purposes of the Department of Adult Continuing Education are:

To administer and supervise a broad range of Adult Continuing Education courses.

To provide educational opportunities for adults in locations convenient to the students in almost any area of interest at a cost easily affordable by all persons.

To maintain constant contact with local industry to determine the occupational needs of the County, and

To plan, coordinate, supervise, and conduct in-service training programs for instructors in Adult Continuing Education.

Admission

Any adult who is eighteen years of age or older is eligible to attend Adult Continuing Education offered by Fayetteville Technical Institute on campus or at any of the Adult Education Centers.

Fees

A nominal registration fee of $8 is charged for Adult Continuing Education classes. All fees must be paid before the first class session. Refunds will be made only if classes are cancelled. Books and supplies are available through the F.T.I. Bookstore, which will be opened in the evening for the convenience of students enrolled in Adult Continuing Education classes. Persons over 65 years of age are exempt from the registration fee.

Certificates

Fayetteville Technical Institute issues a certificate to each student who officially completes the requirements of the course whether practical or by written examination and attends a minimum of 80 percent of the classroom hours. Adult High School Diplomas are awarded to those students who meet the requirements as set forth in the Adult High School Diploma Program and pass the North Carolina State Competency Test.

EDUCATIONAL PROGRAMS

Adult Basic Education

Classes meet from two to four week nights in Adult Continuing Education Centers and on the Fayetteville Technical Institute campus when space is available where there is a sufficient number of interested adults. THERE IS NO REGISTRATION FEE.

Adult High School Diploma Program

The Adult High School Diploma Program provides adults eighteen years of age, and older, the opportunity to receive the Adult High School Diploma. A student may enter the program by presenting a transcript or proof of previous work. He/she is then tested for placement into the appropriate level of instruction.

The Adult High School Diploma will be awarded only when a student successfully completes all requirements as outlined in the Adult High School Diploma Program and the State Competency Test. THERE IS NO REGISTRATION FEE.

OCCUPATIONAL EXTENSION

Fayetteville Technical Institute sponsors courses in Occupational Extension Education providing adults an opportunity to learn new occupational skills or upgrade current skills. Classes are offered in the Adult Continuing Education Centers and special courses are organized at any time a sufficient number of students show interest in a particular occupational area. Course offerings in Occupational Extension include business education, health, management development, apprenticeship training, automotive, building trades, law enforcement, and firemanship.

ARTS, CRAFTS, AND HOME ECONOMICS

In order to concur with Fayetteville Technical Institute's goal of meeting the needs of the community, an extensive program is offered in arts, crafts, home economics, and other special interest classes. This community-wide program includes instruction to prepare adults for better job opportunities, promotion in present employment, self-enrichment, improved family living, and creative self-expression. Classes are offered in the Adult Continuing Education Centers and at special locations at any time or place when requested by a sufficient number of students.

Special Locations

Locations are utilized to reach adults in their communities from Beaver Dam to Hope Mills to Spring Lake and throughout Cumberland County.

Various classes are cooperatively offered with local agencies. One of the most successful is with the Fayetteville Museum of Art (Art Angles Program) and the Fayetteville Recreation and Parks Department.

Art Angles

Art Angles is a three-way plan utilizing the resources of the Fayetteville Museum of Art and the Fayetteville Recreation and Parks Department boosting public participation in applied arts, art appreciation and crafts instruction and philosophy. It is an on-going series of classes that draws interest and enthusiasm from people in Cumberland County.

SPECIAL PROGRAMS

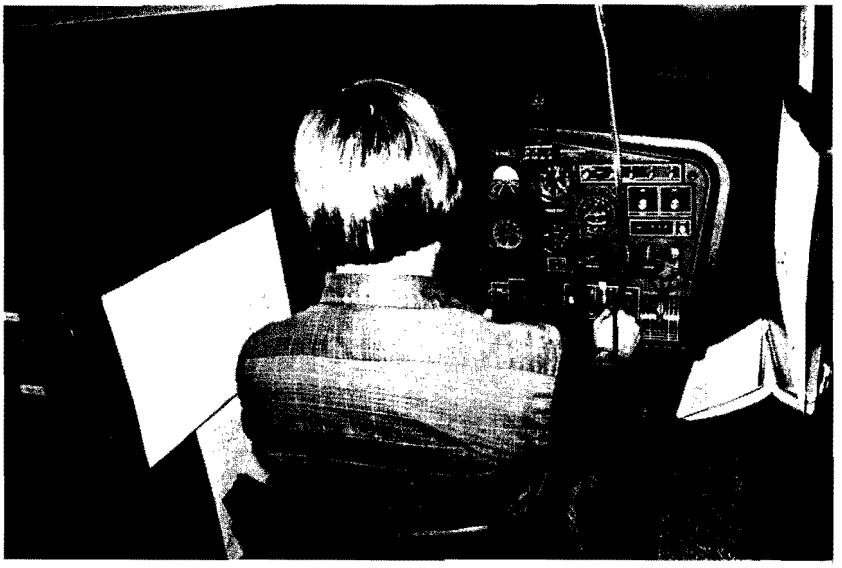
New and Expanding Industry

Fayetteville Technical Institute, in cooperation with the industrial community in Cumberland County, provides new and expanding industry training to meet the needs of the expanded industrial development in North Carolina. New industry training is normally accomplished by using on-the-job training, pre-employment training, or a combination of both.

This program is designed to train only that number of individuals which the participating industry can assure jobs.

General Educational Development (GED)

The General Educational Development Program provides adults 18 years of age and older the opportunity to prepare for the GED test. The GED Program is a structured learning situation consisting of five classes one hour each, four days per week for a total of 20 contact hours per week. The total program covers four academic quarters. Courses include mathematics, English, literature, history, and science. Students are pre-tested and placed in the appropriate level based on the results of this test. The GED test is given by the Test Administrator of F.T.I. at a location designated by the State of North Carolina. Upon successful completion of the test, the student will be awarded a North Carolina State Board of Education Diploma (Equivalency Certificate).



COOPERATIVE EDUCATION

Cooperative Education offers an extension and application of classroom instruction through a supervised work experience that is related to the student's educational goals. It is an educational plan designed to use the "laboratories of the community" in business, industry, and civic agencies to the best advantage of the students, the school, and the employers.

The principle of this concept is that classroom instruction along with practical experience is the most effective way to obtain a balanced education. The program is designed to provide the necessary tools to prepare the student for the transition from school to work.

Eligibility

Any student who is enrolled at Fayetteville Technical Institute is eligible to enter the Cooperative Education program provided he/she meets the following requirements:

1. Has approval from the Co-op Director.
2. Maintains a good academic standing (2.0 QPA).
3. Possesses the abilities, interest, and maturity to benefit from the co-op experience.

6 cr. in curr.

transfer credit accepted 7099. waived

Academic Credit

Credit hours for Cooperative Education work periods are determined by dividing the average number of hours worked per week by 10 and rounding to the nearest whole number. Generally, Co-op students may earn a maximum of nine quarter hours of Cooperative Education credit toward diploma or degree requirements.

How to Apply

If a student is interested in the Cooperative Education Program, he/she should obtain an application for Cooperative Education from the Co-op Office anytime during the quarter. He/she will then have an in-depth interview regarding career interests and possible co-op assignments.

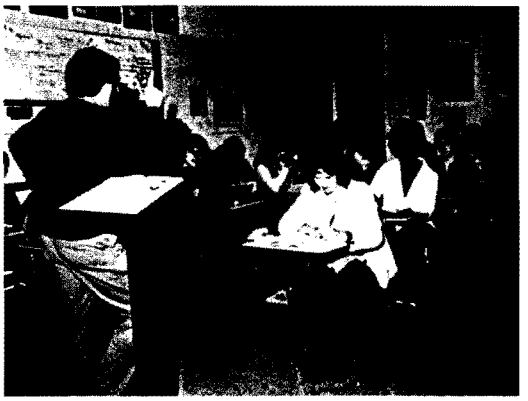
If a student is already employed, continuing employment may be approved for co-op credit if it meets program requirements.

Registration

Students must have the "Approval for Cooperative Education Program" form signed by the Co-op director before officially registering for a co-op work experience course. Students who are approved and are placed on co-op must register before going on their assignment. Pre-registered students have first priority.

Students interested in Cooperative Education are invited to contact the Co-op Office. Information is also available through faculty advisors.

GENERAL EDUCATION DIVISION



THE ASSOCIATE DEGREE

History

The first Associate Degree conferred in the United States was granted in 1900, by the University of Chicago. At the time, President William Rainey Harper, the man most instrumental in its initiation, listed among his reasons for this action: (1) that many students would not be able to continue beyond the sophomore year because of personal or financial difficulties and (2) that two years of college would appeal to students whose interest would wane in a four-year program. These reasons are still of significance today, yet perhaps not so important as easing a manpower gap created by the mushrooming technology of the past half century.

The New Approach

Recognizing the critical nature of the problem and that the Associate Degree was one answer to the problem, the North Carolina State Board of Education authorized a number of two-year training programs which helped satisfy the needs of North Carolina.

Approval to offer these programs was granted by the North Carolina State Board of Education and the North Carolina Department of Community Colleges in 1963. Fayetteville Technical Institute is one of the many colleges and universities across the country which in the past decade and a half has prepared literally thousands of graduates for the labor market with the Associate in Applied Science Degree (AAS). While this degree may be terminal, it carries full transfer credit to many other colleges for those who wish to continue their education.

Definition

An Associate Degree is usually granted after the successful culmination of a two-year college program which is either of a technical or general nature. Though a variety of the degree titles are used by granting institutions, Fayetteville Technical Institute awards the Associate in Applied Science degree (AAS) to graduates whose academic preparation includes the major areas of concentration and provides focused instruction in critical yet diverse areas of business, industry, technical fields, health areas, and public service education. General Education graduates are awarded the General Education Associate Degree (GEAD).

ACCOUNTING

Purpose of Curriculum

Accounting is one of the fastest growing employment fields in America today. These opportunities result from the tremendous business and industrial expansion in all parts of the country. Because of this emphasis, there is a growing need for trained people in the area of accounting to help managers keep track of a firm's operation. The accounting curriculum is designed to fill this need by offering students the necessary accounting theories and skills for the entry into the accounting profession.

The accounting curriculum is designed to give the student an understanding of the principles of organization and management in business operations, understanding of the fundamentals of accounting and analysis of financial statements, and understanding and skill in effective communications for business.

Job Description

The graduate of the accounting curriculum may qualify for positions in public accounting, business and industry, and government. Some job titles are accounting clerk, payroll clerk, auditor, cost accountant, and junior accountant.

ACCOUNTING CURRICULUM

	Quarter Hours Credit
*Required Accounting Courses**	
BUS 120, 121, 122, 221, 222, 223, 224 or 227, 225, 269	46
Other Required Business Courses	
BUS 102 or 103, 110, 115, 116, 123, 124, 229, 234, 247, 282	38
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Courses	
EDP 103, 104, 109	11
Required English Courses	
ENG 101, 102, 204, 206	12
Required Math Course	
MAT 106	5
Required Electives	
Two Social Science	6
Total Required Hours	124

*A grade of "C" or better is required for accounting course prerequisites prior to taking another accounting course.

AGRICULTURAL BUSINESS TECHNOLOGY

Purpose of Curriculum

Rapid technological changes in farming and related agricultural businesses have given rise to the need for more technically trained people. A variety of agricultural businesses and industries employ persons to assist in marketing, processing, and distributing of farm products and providing services to the farmer. Many responsible positions in agricultural businesses and industries require technical training not available in high schools or in four-year colleges.

The Agricultural Business curriculum is designed to help students acquire knowledge, understandings, and abilities in the broad field of agricultural businesses, including agricultural production. It combines knowledge of agriculture with business training to prepare the graduate for many of the varied employment opportunities in agriculture.

Job Description

Upon graduation from this curriculum, an individual should qualify for various jobs in agricultural business and industry such as salesman or store manager in farm supply stores; agricultural field serviceman; salesman; demonstrator, or plant manager of feed and food companies; farm products inspector; sales-person, or office manager of farm products marketing firms; or manager of farm operations.

AGRICULTURAL BUSINESS TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 104, 125, 157, 170, 185, 201, 204, 205, 218, 228, 256, 257, 296, 299	68
Required Business Courses	
BUS 115, 119, 123, 185, 228, 272, 285	27
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 110	4
Required Electives	
Two Social Science Electives from the following: PSY 101, 206; SOC 101, 102, 201; SSC 205	6
Total Required Hours	121

AGRICULTURAL SCIENCE AND MECHANIZATION

Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed for successful operation and management of a general farming program involving crops and livestock. There is a growing scarcity of young persons trained in basic agriculture science and mechanics. Larger farming operations require more mechanization and tremendous outlays of capital; thus, the need for trained farmers becomes increasingly critical. The objective of this curriculum is to provide the managerial and operative training needed for the successful farm operation.

Job Description

The graduate of the General Agriculture and Mechanics curriculum is trained to manage and operate a farm. In addition, he/she should be able to perform most of the repairs to buildings and equipment as well as perform the necessary electrical, construction and plumbing requirements pertaining to the farm operation.

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

AGRICULTURAL SCIENCE AND MECHANIZATION

	Quarter Hours Credit
Required Agriculture Courses	
AGR 101, 102, 106, 108, 109, 112, 114, 118, 121, 122, 124, 126, 127, 128, 131, 133, 136, 138, 141, 142, 154, 155, 183, 186, 190, 200, 208, 213, 228, 238, 240, 243, 245, 272, 274, 296.....	
Total Required for Diploma	96

AGRICULTURAL SCIENCE TECHNOLOGY

Purpose of Curriculum

There is a growing scarcity of young persons trained in basic agricultural science of production and management. The size of farms is increasing, and the complexity of producing crops and livestock profitably is requiring an increased amount of scientific knowledge and technology. Large outlays of capital for farm structures and mechanization of farm operations necessitates knowledge of local, state and federal requirements for housing, equipment operation, and maintenance. The purpose of this curriculum is to enable the student to acquire the kinds of knowledge and skills necessary for sound economical operation of a farm or producing unit as owner or manager.

Job Description

The graduation of the Agricultural Science Technology curriculum is trained to operate and manage a farm and should be able to schedule operations and draw up a long-range farm management plan. In addition, he/she should be able to perform repairs on buildings and equipment and plan for the electrical, construction, and plumbing requirements pertaining to the farm operation.

AGRICULTURAL SCIENCE TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 101, 102, 106, 108, 109, 112, 114, 118, 121, 122, 124, 126, 127, 128, 131, 133, 136, 138, 141, 142, 154, 155, 183, 186, 190, 200, 208, 213, 228, 238, 240, 243, 245, 272, 274, 296	96
Required English Courses	
ENG 101, 102, 103, 204	12
Required Electives	
Two Social Science electives from the following:	
PSY 101, 206, SOC 101, 102, SSC 205	6
Total Required Hours	114

AIR CONDITIONING, HEATING, AND REFRIGERATION

Purpose of Curriculum

There is today a greater demand from industry for qualified mechanical experts in all areas of the field of air conditioning, heating, and refrigeration. This curriculum is designed to help equip young people who plan for a vocation in this broad sphere of activity. A comprehensive study of theory and fundamentals of refrigeration, heating, and air conditioning is completed, and the student is enabled to understand rather than merely accept the functions of the mechanical equipment involved.

Job Description

Graduates may pursue any one of the many and varied job opportunities that are provided by this vast industry. Some of these are installation and service mechanic; control technician; application engineer; estimator; self-employed contractor. Plant maintenance supervisory positions in industry and government provide attractive possibilities.

AIR CONDITIONING, HEATING, AND REFRIGERATION CURRICULUM

	Quarter Hours Credit
Required Air Conditioning Courses	
AHR 1121, 1122, 1125, 1127, 1129, 1130, 1132, 1133, 1135, 1136, 1141, 1142, 1145, 1146, 1149	71
Required Business Course	
BUS 1103	3
Required Drafting Course	
DFT 1180	4
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Course	
MAT 1101	4
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	112

ARCHITECTURAL DRAFTING AND DESIGN

Purpose of Curriculum

Since the beginning of man, two of his most basic needs have been food and shelter. The latter, referred to as architecture, has been defined as an expression of civilization through the medium of its buildings. Our buildings are, in fact, architecture reflecting the use of materials, light, and space. Every type of building in our environment is the result of the application of design, drawing, and science. Today, architecture is still one of our most basic needs. There are more people involved in satisfying this need than any other single need.

Job Description

The curriculum at F.T.I. prepares the individual to assume a position in the broad building industry. Opportunities exist in all aspects of design, production, and construction of our physical environment. Graduates find work with architects, architectural departments of corporations, contractors, residential designers, city planning departments, decorators, engineering firms, materials manufacturers, and virtually all types of businesses which require individuals skilled in reading, preparing, and interpreting architectural drawings.

ARCHITECTURAL DRAFTING CURRICULUM

	Quarter Hours Credit
Required Architectural Courses	
ARC 1112, 1145, 1226, 1227, 1228, 1231, 1232, 1233, 1238, 1239, 1241, 1242, 1250, 1264, 1265	71
Required Commercial Art Courses	
CAT 1108, 1111, 1112, 1114, 1120, 1121, 1126	28
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1102, 1103, 1104	11
Required Physics Courses	
PHY 1101, 1102	8
Required Psychology Course	
PSY 1106	3
Total Required Hours	133

ASSOCIATE DEGREE NURSING PROGRAM

Purpose of Curriculum

One of the great needs of this community is for registered nurses. It is the purpose of the Associate Degree Nursing program at Fayetteville Technical Institute to prepare nurses to help meet this need through a well-balanced curriculum of general education and nursing education.

The formal classroom teaching is conducted at F.T.I. Clinical laboratory experience is obtained in the hospitals and health agencies in the Fayetteville area where learning experiences are selected to meet the objectives of the curriculum. Graduates of the program are granted an associate degree and are eligible to write the National State Board Test Pool Examination for the registered nurse.

Job Description

The registered nurse with an associate degree licensed for the practice of nursing participates with other members of the health team in rendering care to individuals, uses principles from an ever-expanding body of knowledge, assesses the individual's nursing needs, plans day-to-day care of individuals, selects appropriate nursing measures with knowledge and precision, implements measures to alleviate distress, performs nursing and other therapeutic measures with a high degree of skill, evaluates the individual's reaction to therapy and supervises other workers in the technical aspects of care. The associate degree nurse works under the direction and supervision of the professional registered nurse.

ASSOCIATE DEGREE NURSING CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
NUR 101, 102, 103, 104, 205, 206, 207, 208	63
Required Biology Courses	
BIO 106, 107, 108	18
Required Economics Course	
ECO 102	3
Required English Courses	
ENG 104, 105, 204, 210	12
Required Psychology Courses	
PSY 101, 202, 204	9
Required Sociology Courses	
SOC 101, 102	6
Required Electives	
One Humanities	3
Total Required Hours	114

AUTOMOTIVE MECHANICS

Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair, or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice.

Job Description

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

AUTOMOTIVE MECHANICS CURRICULUM

	Quarter Hours Credit
Required Automotive Courses	
PME 1101, 1102, 1123, 1124, 1125, 1132, 1133, 1135, 1170, 1175, 1181, 1182, 1183	72
Required Drafting Course	
DFT 1180	4
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Course	
MAT 1101	4
Required Machinist Course	
MEC 1198	4
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	114

BANKING AND FINANCE

Purpose of Curriculum

The associate degree in Banking and Finance curriculum is designed primarily for banking employees and others who wish to begin work toward a college degree or to continue a degree program interrupted at an earlier date. Many bank employees are presently enrolled in AIB certificate courses for professional development. These same courses, successfully completed, can now also systematically lead to an associate degree in Banking and Finance from F.T.I. Further, through transfer of credits to a four-year institution, a student may apply for further work toward a bachelor's degree.

Job Description

The ultimate mission of the Banking and Finance curriculum is excellence in job performance. Graduates entering the banking profession will have knowledge, skills, and attitudes consonant with employment opportunities in bank middle management. With only a minimum of specific on-the-job instruction, graduates will quickly be able to make a significant contribution to the banking enterprise.

BANKING AND FINANCE CURRICULUM

	Quarter Hours Credit
Required Banking Courses	
AIB 202, 203, 205, 207, 209, 210, 211, 213, 214, 219, 233	44
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 185, 234, 239, 272	42
Required Economics Courses	
ECO 102, 104	6
Required Electronics Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103	9
Required Math Course	
MAT 110	4
Required Electives	
One Social Science	3
One approved elective	5
Total Required Hours	116

Banking Electives

AIB 110, *120, *121, 123, 204, 206, 216, 220, 225, 227, 231, 232, 239, 259.

*AIB 120 and 121 are equivalent to BUS 120.

Banking & Finance—Co-op Option:

Qualified students may elect to take up to 5 credit hours of Cooperative Education in place of 5 hours elective credit.

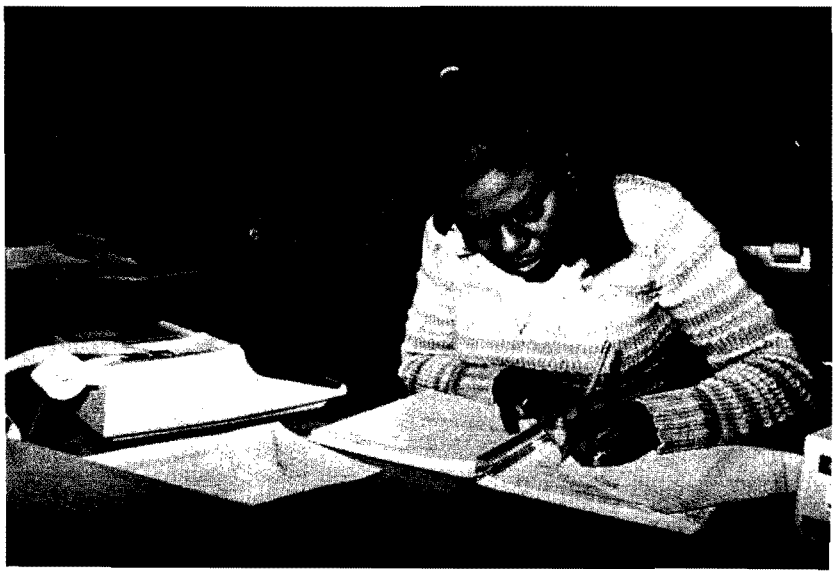
BUSINESS ADMINISTRATION

Purpose of Curriculum

The Business Administration curriculum is designed to prepare the student for employment in one of the 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 the following competencies: (1) understanding the principles of organization and management in business operations, (2) understanding our economy through study and analysis of the role of production and marketing, and (3) knowledge in specific elements of accounting, finance, and business law.

Job Description

The graduate of the Business Administration curriculum may enter a variety of career opportunities from beginning salesperson or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include making up and filing reports, tabulating and posting, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising, banking, credit, finance, retailing, hotel, wholesaling, tourist, travel industry, industry, transportation, and communications.



BUSINESS ADMINISTRATION CURRICULUM

	Quarter Hours Credit
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 123, 124, 185, 234, 239, 247, 285	53
Required Economics Courses	
ECO 102, 104	6
Required Electronics Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Management Course	
ISC 220	3
Required Math Course	
MAT 110	4
Required Electives	
*Curriculum electives	18
**Business electives	12
Social Science electives	6
Total Required Hours	120

*Curriculum Electives
AIB 202
BUS 122, 125, 228 or 229, 235, 243, 257, 260, 272, 279, 282, 286
ECO 201, 210
RLS 285 or 286.

**Business Electives
Any technical course offered by the Business Education Division and approved by department chairperson and advisor.

Business Administration-Co-op Option:
Qualified students may elect to take up to 9 credit hours of Cooperative Education in place of 9 of the 12 hours of business electives.

BUSINESS ADMINISTRATION
(Mid-Management Option)

Purpose of Curriculum

Fayetteville Technical Institute is a member of the Servicemembers Opportunity Colleges (SOC)—an organization of more than four hundred postsecondary institutions which make college-level courses available to military personnel. With the cooperation and support of these member institutions, the U.S. Army and various military installations around the world, SOC sponsors a network of Associate Degrees known as the Servicemembers Opportunity Colleges Associate Degree (SOCAD) program.

The Business Administration (Management Option) degree has been accepted by SOCAD and included in its Management Science network. It is a degree designed to meet the needs of active duty military personnel, primarily Non-Commissioned Officers and Warrant Officers.

Job Description

Servicemembers will find that this degree helps prepare them to assume the ever-expanding duties and responsibilities which go with promotions. In addition, it will better equip them for positions in the civilian job market when they separate or retire from active duty military service. Civilian job possibilities are many and varied in such fields as private business, industry, marketing, wholesaling, and retailing.

BUSINESS ADMINISTRATION CURRICULUM
(Mid-Management Option)

	Quarter Hours Credit
Required Business Courses	
BUS 115, 116, 120, 121, 233, 275, 276, 277	36
Required Economics Courses	
ECO 102, 104	6
Required English Courses	
ENG 101, 102, 103 or 204	9
Required Electives	
Social Science	6
Mathematics/Science	9
Humanities	9
Other approved electives	22
Total Required Hours	97

CARPENTRY

Purpose of Curriculum

Carpentry is one of the basic trades in the construction field. Carpenters construct, erect, install, and repair structures of wood, plywood, and wallboard, using hand and power tools. The work must conform to local building codes for both residential and commercial structures. This curriculum is designed to train the individual in safe and proper work habits in order to enter the trade with a background in both skills and related information. He/she must have a knowledge of mathematics, blueprint reading, estimating materials, methods of construction and a thorough knowledge of building materials.

Job Description

The carpenter constructs, erects, installs and repairs structures and fixtures of wood, plywood, wall board, and other materials, safely using carpenter's handtools and powertools to conform to local building codes. He/she is required to use specifications, blueprints, sketches or building plans for information pertaining to type of material, dimensions, layout and design of structure, and method of construction.

CARPENTRY CURRICULUM

	Quarter Hours Credit
Required Carpentry Courses	
CAR 1101, 1102, 1103, 1104, 1113, 1114	47
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1111	4
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1110	4
Required Physics Course	
PHY 1103	4
Required Psychology Course	
PSY 1101	3
Total Required Hours	71

CHEMICAL ENGINEERING TECHNOLOGY

Purpose of Curriculum

Participants in the Chemical Engineering Technology curriculum will enter a two-year course of study to prepare them for employment in one of several related areas. A foundational study of general chemistry, technical math, physics and support courses will prepare the student to enter more in-depth studies of qualitative, quantitative and organic chemical principles. After successful completion of these objectives, the student will be working with simulated activities encountered in public, private and industrial operations of a chemical-related nature.

Job Description

The Chemical Engineering Technology graduate will be prepared to work with chemists, chemical engineers, and quality assurance personnel. Quality control activities such as raw material analyses, intermediate process analyses, and final product analyses will be areas in which the graduate can work. Use of monitoring equipment, sample collection and testing of collected samples for regulatory agencies and industry will be activities performed. In all phases of operation, the graduate will be responsible for preparation of adequate reports of all work-related activities.

CHEMICAL ENGINEERING TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Chemistry Courses	
CHM 101, 102, 103, 201, 202, 203, 211, 212, 213, 214, 215, 216, 217.	60
Required Physics Courses	
PHY 101, 102, 103	12
Required Math Courses	
MAT 121, 122, 123	15
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, 204	12
Required Psychology Course	
PSY 206	3
Required Management Courses	
ISC 102, 202	7
Required Electronic Data Processing Course	
EDP 104	3
Total Required Hours	115

CIVIL ENGINEERING TECHNOLOGY

Purpose of Curriculum

Civil engineering is the oldest branch, also one of the broadest fields of engineering. Consequently, the general purpose of the curriculum is to provide the base upon which to build future training either formal, informal, or self-motivated to assure future advancement in the expanding world of technology. Specifically, the curriculum provides training in the acceptable performance of those duties commonly assigned civil engineering technicians including field operations, office services, and construction management.

Job Description

Civil engineering technicians perform many of the planning, design, and construction tasks in building highways, railroads, bridges, airfields, dams, factories, and ground facilities for sea transportation, and control of the flow of and uses of water for flood protection, power generation and recreation. Although they are trained to perform different tasks, they generally specialize in certain activities.

CIVIL ENGINEERING CURRICULUM

	Quarter Hours Credit
Required Civil Courses	
CIV 101, 102, 103, 107, 108, 110, 112, 114, 202, 204, 219, 221, 227, 229, 230, 231, 271	69
Required Drafting Courses	
DFT 101, 111	6
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 121, 122, 123	15
Required Physics Courses	
PHY 101, 102, 103	12
Required Psychology Course	
PSY 206	3
Total Required Hours	120

COMMERCIAL ART

Purpose of Curriculum

The Commercial Art curriculum is designed to prepare the graduate with a sound, well-rounded background for technical and creative achievement throughout his/her professional life. The background is developed to prepare the student for performance on a contemporary professional level. Graduates will have adequate backgrounds in illustration, layout and lettering, design and production enabling them to be employed in some facet of commercial artistry.

Job Description

Graduates are qualified for employment in advertising agencies, design studios, department stores, industrial advertising departments, government agencies, newspapers, printing and publishing houses.

COMMERCIAL ART CURRICULUM

	Quarter Hours Credit
Required Commercial Art Courses	
CAT 1108, 1111, 1112, 1113, 1114, 1120, 1121, 1126, 1201, 1202, 1203, 1211, 1212, 1213, 1221, 1222, 1231, 1232, 1251, 1260	89
Required Architectural Courses	
ARC 1226, 1227, 1228	12
Required Economics Course	
ECO 1105	3
Required Business Course	
BUS 102	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1102, 1103	7
Required Psychology Course	
PSY 1106	3
Total Required Hours	126

COSMETOLOGY

Purpose of Curriculum

Professional tonsorial and cosmetic care for today's women and men has attained professional status and has become a contemporary necessity rather than the luxury it used to be. It is generally recognized that personal grooming in today's professional and personal encounters is essential. Cosmetologists are the experts who, in minimum time, provide many of the personal grooming services necessary to meet contemporary demands.

The cosmetology curriculum is designed to prepare the student for employment in the field of cosmetology. The curriculum provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, haircutting, styling, hair pressing, chemical relaxing, thermal waving, curling, and wig service.

Job Description

Upon completion of all required cosmetology training and upon successfully passing the North Carolina Cosmetic Arts Examination, cosmetology students are licensed to practice their trade in this state. Various arrangements are available for the cosmetologist seeking employment in already established businesses. Some rent space, or a chair in a shop, while others may work for salary, percentage or commission. Others, desiring to strike out on their own, may seek to establish their own business or shop. Additionally, cosmetology graduates often qualify for sales or related positions in the retail of cosmetic supplies and equipment. Whichever route the prospective cosmetologist chooses, he or she will be qualified to practice all of the cosmetic skills acquired during his or her training.

COSMETOLOGY CURRICULUM

	Quarter Hours Credit
Required Cosmetology Courses	
COS 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108	76
Total Required Hours	76

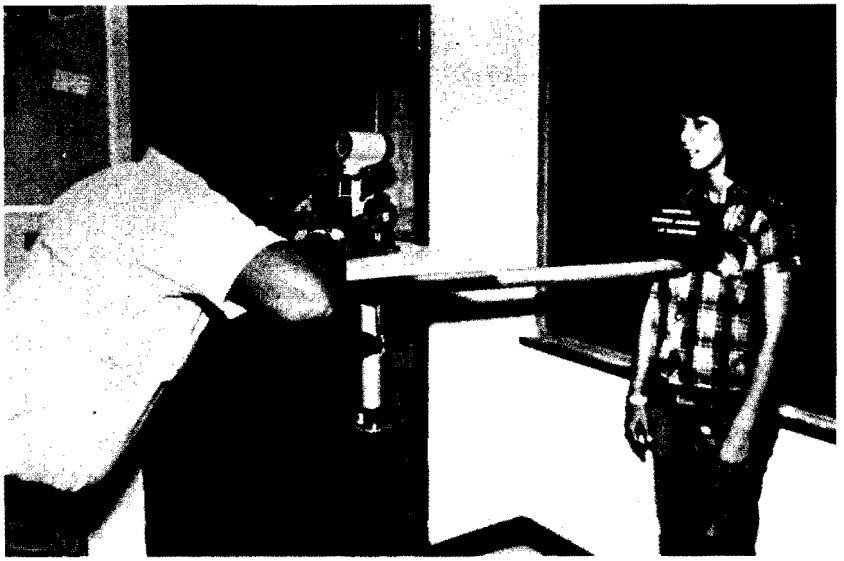
CRIMINAL JUSTICE

Purpose of Curriculum

Interest in upgrading the quality of criminal justice personnel has been of national concern since 1931 when the Wickersham Crime Commission recommended upgrading the caliber of the individual criminal justice officer through incorporating higher educational standards into the selection criteria. This concern has been increasingly voiced by various individuals and groups representing many areas of public responsibility, and it has been intensified by continued social upheaval and increasingly complicated legal procedures. Ineffectual criminal justice response to public distress has often furthered serious avoidable manifestations. The criminal justice curriculum has been designed to meet the needs of those currently employed in the field, those seeking employment in criminal justice, or as a step toward obtaining a higher academic degree in the field of criminal justice.

Job Description

The Criminal Justice curriculum graduate is prepared to be a more knowledgeable and effective law enforcement, corrections, or private security employee or prepared to transfer at an advanced level to a four-year academic institution in pursuit of a baccalaureate degree in criminal justice.



CRIMINAL JUSTICE — GENERAL CURRICULUM

	Quarter Hours Credit
Required Criminal Justice Courses	
LCJ 101, 102, 103, 105, 108, 202, 209, 211	39
Required English Courses	
ENG 101, 102 and 103 OR 104, 105, and 108, and 204	12
Required Biology Courses	
BIO 201, 202	10
Required Math Course	
MAT 108 or 110	4/5
Required Sociology Courses	
SOC 101, 203 or 210	6
Required Psychology Courses	
PSY 101, 202 or 204	6
Required Political Science Courses	
POL 102, 103	6
Required Business Course	
BUS 109	1
Required Physical Education Course	
PED 111	4
Required Electives	
*Criminal Justice	20
Others	12
Total Required Hours	120/121

Note: *Students in the Law Enforcement concentration must take LCJ 104, 210 and 208 while students in the Correction's concentration must take LCJ 106, 107 and 112.

Criminal Justice—Co-op Option:

Qualified students may elect to take up to 9 credit hours of Cooperative Education in place of 9 hours elective credit.

DENTAL ASSISTING

Purpose of Curriculum

In an effort to meet an ever-increasing demand for dental health services, the team concept of dental service is being practiced. In this concept, the dental assistant makes a significant contribution to increased productivity by working with the dentist as a "second pair of hands." Furthermore, in specified procedures, she/he assumes responsibility for direct intra-oral treatment. Assumption of the latter responsibilities requires formal training. Hence, the current demand for trained dental assistants for expansion and replacement purposes greatly exceeds the supply.

Job Description

The primary function of the dental assistant is to serve as an extra pair of hands for the dentist. He or she plays an integral role in dental procedures by preparing the patient for treatment, mixing restorative materials, keeping the operative field clear, and sterilizing, organizing, and transferring instruments to the dentist during operative procedures.

DENTAL ASSISTING CURRICULUM

	Quarter Hours Credit
Required Dental Courses	
DEN 1002, 1004, 1011, 1012, 1014, 1015, 1021, 1023, 1025, 1026, 1031, 1032, 1033, 1034, 1041	57
Required Biology Courses	
BIO 1005, 1013	3
Required English Courses	
ENG 1102, 1103	6
Required Psychology Course	
PSY 1101	3
Total Required Hours	69

DENTAL HYGIENE

Purpose of Curriculum

The dental hygienist has long been a recognized auxiliary member of the dental profession. Only a relatively small number of hygienists have graduated each year as there were few training programs until recently when the Council on Dental Education encouraged establishment of the curriculum in recognized educational institutions offering college level education and training in technical institutes and community colleges. The number of schools of dental hygiene has grown rapidly in recent years as the dental profession has recognized the contribution that the dental hygienist can make to the extension of services to the public.

Job Description

The role of the dental hygienist is to function as a member of the dental health team, with the primary purposes of providing preventive care and oral hygiene education, under the direction and supervision of a dentist. The dental hygienist is both a clinical practitioner and an oral health educator using scientific methods of control and prevention of oral diseases, promoting maintenance of optimum health, and using public relations skills in instruction of patients and the public. The duties and functions assigned to the dental hygienist by the dental profession are viewed as essentially professional in nature.

DENTAL HYGIENE CURRICULUM

	Quarter Hours Credit
Required Dental Courses	
DEN 111, 112, 113, 116, 121, 122, 131, 133, 141, 211, 212, 213, 214, 215, 221, 222, 223, 224, 225, 231, 232, 233, 298	82
NUT 101	3
Required Biology Courses	
BIO 106, 107, 108, 110	22
Required English Courses	
ENG 104, 105, 108, 204	12
Required Psychology Course	
PSY 101	3
Required Sociology Course	
SOC 101	3
Total Required Hours	125

DENTAL LABORATORY TECHNOLOGY

Purpose of Curriculum

The Dental Laboratory Technology curriculum is designed to prepare students who have a high degree of manual dexterity, good color perception and enjoy detailed work. Students are trained in the art and sciences of fabricating artificial dental restoration and other dental appliances according to the dentist's prescriptions or work request. The objectives of this program are to prepare students to perform basic or general techniques and procedures in all aspects of dental laboratory technology. In addition, the curriculum will prepare students to perform proficiently in two or more of the following specialties: complete denture prosthodontics and removable partial prosthodontics, fixed prosthodontics (crown and bridges), ceramics, and orthodontics/pedodontics. Dental technology courses include classroom study and laboratory time for manipulative application.

Upon satisfactory performance and graduation, students will receive a designation of "recognized graduate" for the National Board for Certification in Dental Laboratory Technology. The "recognized graduate" must then perfect his/her skills in job-related experiences for a period not to exceed four years to become eligible to take the written and practical examination in his/her specialty, at which time he/she would be awarded a Certified Dental Technician status in that specialty.

Job Description

The occupational objectives of this program include employment opportunities in commercial or public dental laboratories and in dental offices.

DENTAL LABORATORY CURRICULUM

	Quarter Hours Credit
Required Dental Courses	
DEN 101, 102, 104, 106, 107, 108, 109, 110, 114, 117, 118, 201, 202, 203, 204, 205 or 206, 207, 208, 209	90
Required English Courses	
ENG 104, 105, 204	9
Required Math Course	
MAT 110	4
Required Psychology Course	
PSY 101	3
Required Sociology Course	
SOC 101	3
Required English Elective	
One of the following:	
ENG 106, 107, 209, 210 or 211	3
Total Required Hours	112

DEVELOPMENTAL STUDIES PROGRAM

The Developmental Studies Program is an integrated student-centered program of instruction designed to increase the likelihood of success for students who enter this Institute with academic deficiencies. The goal of this program is to develop the academic ability of every entering student to the extent that he/she has an above-average likelihood of success in one of the several regular curricular areas.

Students are initially assigned to courses appropriate to their desires, to their tested abilities, and as deemed proper by their counselors. As students progress, they are permitted to develop at their own speed, in classes which are within their level of competence.

Each student is encouraged to progress to his/her utmost capability and, upon completion of the program, is permitted to select a curriculum consistent with his/her proven performance.

The Developmental Studies courses combine academic courses and laboratory/shop instruction to provide students with integrated theory-procedures and practical application of the subject matter requisite to regular curricular success.

Students may spend from one quarter to three quarters, or more, in the Developmental Studies Program. However, normally, the student will stay in the program for three quarters (one academic year). All academic regulations are applicable to this phase of college study. Courses are provided at two or more levels in English (reading, grammar, composition, and speech), mathematics, natural science, social science and curricula-related shops and laboratories.

During each quarter, a student will take a course in English, math, and natural science. In addition to these, he/she may select an elective from the Business, General, Vocational, Technical or Health Education area.

DEVELOPMENTAL STUDIES PROGRAM

	Quarter Hours Credit
Required English Courses	
ENG 91, 92, and 93	12
Required Mathematics Courses	
MAT 91, 92 and 93 (Vocational and Business Students) or MAT 94, 95 and 96 (GEAD Students) or MAT 95, 96 and 97 (Engineering Technology Students) or MAT 98 (ADN Students)	12
Required Science Courses	
PHY 91, 92 and 93 (Vocational and Business Students) or PHY 94, CHM 93, and PHY 95 or CHM 96 (Technical, Health, GEAD Students) or BIO 92, 93 and 94	12
Electives	
Three electives drawn from Developmental Studies including EDU 80	12
Total Hours Required	48

PRELIMINARY DEVELOPMENTAL STUDIES CURRICULUM

To provide access to levels of instruction within their capabilities, preliminary Developmental Studies courses are available to students. These courses are characterized by a rudimentary level of instruction, concentrated attention, small class size, and special-purpose audio-visual equipment.

	Quarter Hours Credit
Required English Course	
ENG 50	8
Required Math Course	
MAT 50	8
Total Required Courses	16

DRAFTING

Purpose of Curriculum

"Drafting for industry" training provides instruction and information on drafting techniques and theory from fundamental skills through theory and practice in industrial applications. Each course is prepared to enable an individual to advance rapidly in drafting skills and proficiency upon entering the field of work. Although instruction is basically oriented toward machine and manufacturing drafting, several other areas of industrial drafting are introduced, such as pipe drafting, plant layout drafting, steel fabrication drafting and related areas he/she may encounter in industry.

Job Description

Industrial drafting includes preparing accurate working drawings for manufacturing or construction. Draftsmen usually work as a detailer or in layout design drafting, from both specifications, sketches and other design information. Other duties include making changes or adjustments in drawings as deemed necessary by engineers or designers. Of much importance is the utilization of theory and practice in visualizing objects in the preparation of drawings.

DRAFTING CURRICULUM

	Quarter Hours Credit
Required Drafting Courses	
DFT 1125, 1170, 1171, 1172, 1173, 1190, 1191, 1192, 1193, 1194, 1195	32
Required English Courses	
ENG 1101, 1102	6
Required Math Courses	
MAT 1102, 1104	8
Required Machinist Courses	
MEC 1108, 1110, 1111, 1160, 1161	16
Required Physics Courses	
PHY 1101, 1103	8
Required Psychology Course	
PSY 1101	3
Total Required Hours	73

ELECTRICAL INSTALLATION AND MAINTENANCE

Purpose of Curriculum

The electrical installation and maintenance curriculum provides a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction which is designed to give the student practical knowledge and application experience in the fundamentals taught in class.

Job Description

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice and will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He/she 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 and will use 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 upgrading courses offered in the center.

ELECTRICAL INSTALLATION AND MAINTENANCE CURRICULUM

	Quarter Hours Credit
Required Electrical Courses	
ELC 1112, 1113, 1124, 1125	37
BMS 1133	4
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1113	4
Required Electronic Courses	
ELN 1118, 1119	10
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1110	4
Required Physics Course	
PHY 1102	4
Required Psychology Course	
PSY 1101	3
Total Required Hours	75

ELECTRONIC DATA PROCESSING

Purpose of Curriculum

The use of computers for electronic data processing in the field of business applications is growing rapidly. The Electronic Data Processing curriculum is designed to prepare a student to enter the business programming field. The graduate will be trained to process programs dealing with business applications.

The curriculum is developed on three general levels of depth. The first level is introductory including courses in computer logic, accounting, and an introduction to data processing. The second level is programming languages and their applications including courses in Cobol, Assembler, RPG II, Pascal and Basic. The third level includes systems analysis, operating systems, data base management, and an applied project. Analysis and solution decision making are taught to the student to prepare him/her as a programmer-analyst trained to solve business and industry problems from inception to completion. Successful completion of the prescribed courses leads to the award of an Associate Degree of Applied Science in Electronic Data Processing.

Job Description

As a programmer-analyst in the business environment, the graduate will be capable of handling problems at the system level rather than simply coding the solution. Analysis of the entire problem, logical determination of the proper solution, coding of the programs to solve the problem in the appropriate computer language, testing the completed system for accuracy, and working with all levels of management are some of the tasks for which the graduate of the Electronic Data Processing curriculum is prepared.

ELECTRONIC DATA PROCESSING CURRICULUM

	Quarter Hours Credit
Required Electronic Data Processing Courses	
EDP 103, 104, 109, 110, 114, 204, 212, 216, 221, 223	44
Electronic Data Processing Electives Selected From	
EDP 102, 105, 116, 207, 208, 210, 230, 231	24
Required Business Courses	
BUS 102 or 103, 115, 120, 121, 122, 123, 282	33
Required Economics Course	
ECO 102	3
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 106, 107	8
Total Required Hours	124

Electronic Data Processing—Co-op Option:
Qualified students may elect to take up to 9 credit hours of Cooperative Education in place of 9 hours elective credit.

ELECTRONICS ENGINEERING TECHNOLOGY

Purpose of Curriculum

The field of electronics is one of the fastest developing engineering disciplines. Communications was the first and still is an important and expanding area within the field. As new electronic devices evolve, more branches are generated such as data processing, automatic industrial control, and collection and analysis of business and political information.

Job Description

The electronic engineering technician may find opportunities in research, design, development, production, maintenance or sales. His/her training prepares him/her to meet the problems of the practical implementation of the engineering concept. His/her knowledge of circuitry and devices as well as measurement equipment and methods prepares him/her to analyze problems and results.

ELECTRONICS ENGINEERING CURRICULUM

	Quarter Hours Credit
Required Electronics Courses	
ELC 101, 103	9
ELN 102, 103, 104, 106, 110, 206, 207, 209, 211, 214, 215, 220, 235, 240	55
Required Drafting Course	
DFT 101	3
Required Chemistry Course	
CHM 101	4
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 101, 102, 103, 286	18
Required Physics Courses	
PHY 101, 102, 104	12
Required Psychology Course	
PSY 206	3
Total Required Hours	119

EMERGENCY MEDICAL SCIENCE

Purpose of Curriculum

The Emergency Medical Science program is an intensive, fast-paced, demanding curricular program addressing those who have never functioned medically in a pre-hospital setting as well as those with previous education and experience. The comprehensive curriculum is structured to allow for the training of Emergency Medical Technicians (EMT), Emergency Medical Technician-Intermediate (EMT-I), and Emergency Medical Technician-Paramedic (EMT-P). The program emphasizes the didactic and practical material necessary in administering advanced trauma and medical care in the pre-hospital setting, this based on a sound knowledge of physiologic and pathophysiologic concepts. It also emphasizes the system concepts that illustrate the overall functioning of the EMS system, the EMT-Paramedic's role within the system, and the professional attributes that facilitate the development of the EMT-Paramedic, a professional operating in a demanding profession.

Students will receive clinical and field training at various sites in North Carolina. The EMS didactic and clinical experiences are conducted mostly during the days; the field experience will be in the evenings and on weekends. This will be coordinated, as much as possible, with the student's work schedule.

The program of instruction fulfills the requirements for confirmation of the Associate Degree in Applied Science and meets the training requirements for the National Registry of EMT and the N.C. Office of Emergency Medical Service's certification examination for the EMT (Basic), EMT-Intermediate and EMT-Paramedic levels.

Job Description

After successful completion of the Emergency Medical Technician-Paramedic exam, the individual is eligible to function in the pre-hospital setting as a paramedic, shift supervisor, ambulance service director or training officer in a rescue, ambulance, fire medical provider, or in an industry setting. Paramedics are also employed in instructional roles. Many graduates continue on to receive a bachelors degree or Physician Associate Certificate.

EMERGENCY MEDICAL SCIENCE CURRICULUM

	Quarter Hours Credit
Required Emergency Medical Science Courses	
EMS 101, 102, 103, 104, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208	53
Required English Courses	
ENG 104, 105, 108, 115, 204	15
Required Biology Courses	
BIO 105, 106, 107	16
Required Pharmacology Courses	
PHM 101, 102, 103	15
Required Psychology Courses	
PSY 101, 202, 204, 208	12
Required Business Courses	
BUS 119, 272	9
Required Sociology Course	
SOC 101	3
Required Electives	
EDU 250	3
Physical Education (except First Aid)	1
Total Required Courses	127

FOOD SERVICE MANAGEMENT

Purpose of Curriculum

The Food Service Management curriculum is developed for the training of students on the supervisory of "middle management" level in food service with particular emphasis on institutional food service. This program offers a second-year option in supervision management to the student completing the one-year food preparation specialist curriculum.

Job Description

A food service manager interprets company policies, plans production schedules, maintains records, prepares menus, purchases food and equipment, analyzes and resolves work problems, and initiates or suggests plans to motivate workers to achieve work goals.

FOOD SERVICE MANAGEMENT CURRICULUM

	Quarter Hours Credit
Required Food Service Courses	
FSO 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 117, 122, 202, 203, 204, 205, 206, 207, 210, 211, 212	83
Required Business Courses	
BUS 235, 272	6
Required English Courses	
ENG 101, 102, 103, 204	12
Required Psychology Course	
PSY 206	3
Required Electives	
Two Social Science Electives	6
Two Business Electives	6
Total Required Hours	116

Food Service Management—Co-op Option:
Qualified students may elect to take 3 credit hours if substituted for business electives or take 6 additional Cooperative Education hours for extra credits beyond the required curriculum courses.

FOOD SERVICE SPECIALIST

Purpose of Curriculum

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

Job Description

A food service specialist follows the principles of food preparation and cooking procedures that include preparation of salads, stocks, soups, sauces, gravies, and beverages. The duties may include those of assistant cook, short order cook, chef's assistant, baker or pastry cook.

FOOD SERVICE SPECIALIST CURRICULUM

	Quarter Hours Credit
Required Food Service Courses	
FSO 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 117, 122	51
Required English Courses	
ENG 1101, 1102, 1103	9
Required Psychology Course	
PSY 1106	3
Required Elective	
One Social Science	3
Total Required Hours	66

FUNERAL SERVICE EDUCATION

Purpose of Curriculum

The Funeral Service Education curriculum is a two-year college-level program leading to the associate in applied science degree. The curriculum is designed to support the "whole-man, total-funeral concept." The student is provided with the opportunity to acquire the knowledge and skills necessary to practice both embalming and funeral directing. The student learns both through lecture and laboratory the basic funeral service skills which include embalming techniques and restorative art practices.

Job Description

The graduate is qualified to take the National Board Examination, which is produced by the Conference of Funeral Service Examining Boards. Licensees may practice funeral service by gaining employment at a funeral home. They may become funeral home owners or salespersons of funeral supplies. The graduate may elect to continue work on a funeral service baccalaureate degree at a four-year institution.

FUNERAL SERVICE EDUCATION CURRICULUM

	Quarter Hours Credit
Required Funeral Service Education Courses	
FSE 101, 115, 121, 206, 209, 210, 211, 212, 213, 214, 215, 224, 225, 257, 268, 280, 282	55
Required Biology Courses	
BIO 103, 104, 105	14
Required Business Courses	
BUS 115, 116, 119	14
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 104, 105, 204	9
Required Psychology Courses	
PSY 101, 208	6
Required Sociology Courses	
SOC 101, 203	6
Required Electives	
One approved elective from the following:	
BUS 234, PSY 204, BUS 235, SOC 210, PSY 260	3/5
One English elective from the following:	
ENG 106, 107, 209, 210, 211, 206	3
Total Required Hours	114/116

Funeral Service Education—Co-op Option:
Qualified students may elect to take 3 credit hours if substituted for FSE 121 or take 5 credit hours of Cooperative Education in place of 5 hours elective credit.

GENERAL EDUCATION ASSOCIATE DEGREE

Purpose of Curriculum

The General Education Associate Degree program offered at Fayetteville Technical Institute is for the student who is basically interested in two years of education beyond the high school level.

The program is principally designed for students wanting only two years of higher education; however, the required and elective courses in the program are equivalent to four-year college courses and may permit the application of these courses toward senior college degree programs.

When the student has completed basic general education requirements and has accumulated additional satisfactory work to a minimum total of 96 quarter hours credit, he/she will be granted a General Education Associate Degree (GEAD).

GENERAL EDUCATION ASSOCIATE DEGREE CURRICULUM

			Minimum Credit Hours Required
English Composition			9
World Literature			9
Biological Science			
BIO 201 and 202			10
Mathematics—one of the following combinations:			
MAT 108 & 109 or MAT 108 & 105 or MAT 109 & 111 or MAT 109 & 112			10
Social and Behavioral Sciences			
Western Civilization	9		
Philosophy & Logic	6		
Art Appreciation	3		
Music Appreciation	3		
Electives: Two courses must be selected from among the following discipline areas: history, political science, psychology, sociology	6		27
		Total Required	65
Electives—non-duplicating courses from General Education, Business, Health, Public Service, or Technology Curricula			31
		Total Degree Requirements	96

General Education—Co-op Option:

Qualified students may elect to take up to 9-credit hours of Cooperative Education in place of 9 hours elective credit.

GENERAL OFFICE TECHNOLOGY

Purpose of Curriculum

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.

Job Description

The graduate of the General Office Technology curriculum may be employed as an administrative assistant, accounting clerk, assistant office manager, bookkeeper, 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 CURRICULUM

	Quarter Hours Credit
Required General Office Courses	
BUS 102, 104, 105, 110, 112, 183, 184, 204, 205, 210, 211, 214, 261, 262, 270, 290	63
Other Required Business Courses	
BUS 115, 120, 185, 248, 271	19
Required Economics Course	
ECO 102	3
Required English Courses	
ENG 101/104, 102/105, 103, 110, 204, 207	20
Required Math Course	
MAT 110	4
Required Electives	
Social Science	6
Total Required Hours	115

HORTICULTURE BUSINESS TECHNOLOGY

Purpose of Curriculum

The Horticulture Business curriculum is designed to help students acquire the knowledge, understanding, and ability in the broad field of horticulture production and management. It combines the knowledge of horticulture with business accounting, supervision, and sales principles to prepare the graduate for many of the employment opportunities in horticulture which include greenhouse management, garden center management, landscape installation and maintenance, nursery management, small engine business, tree service, and golf course management.

Job Description

As horticulture business firms increase in number and size, the demand for technically trained business-oriented personnel becomes greater. Horticulture businesses are experiencing rapid changes in technologies of production, sales, and management; therefore, future employees of such firms must be prepared to understand these changes and adapt themselves easily. The broad-based business training offered in the curriculum, coupled with on-the-job training, should enable the graduate to advance rapidly to a managerial position with high-level responsibility.

HORTICULTURE BUSINESS CURRICULUM

	Quarter Hours Credit
Required Horticulture Courses	
HOR 151, 152, 153, 200, 201, 204, 205, 228, 254, 258, 299	51
Required Agriculture Courses	
AGR 104, 157, 170, 185, 201	24
Required Business Courses	
BUS 115, 119, 123, 185, 228, 285	24
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Course	
MAT 110	4
Required Electives	
Two Social Science from the following:	
PSY 101, 206; SOC 101, 102; SSC 205	6
Total Required Hours	125

INDUSTRIAL MAINTENANCE

Purpose of Curriculum

This curriculum provides training in the basic knowledge, fundamentals, and industrial practices in the maintenance of equipment, machinery and physical plant within industrial complexes. With the industrial growth of North Carolina and the wide variety of machinery and equipment used throughout the average manufacturing plant, qualified maintenance specialists who have a basic knowledge of general repair, maintenance and servicing practices in several areas and systems are in demand.

Job Description

The maintenance specialist works on assignments in which a high degree of manipulative skill, knowledge of tools and their uses are required. He/she has the ability to follow precise and detailed instructions which are required in the successful completion of the job. These jobs include removing, servicing, disassembling, reassembling, and installing components and accessories of various equipment or systems routinely found in a manufacturing industrial or physical plant layout.

INDUSTRIAL MAINTENANCE CURRICULUM

	Quarter Hours Credit
Required Electrical Courses	
ELC 1104, 1105, 1106, 1107	17
Required Air Conditioning Course	
AHR 1120	8
Required Automotive Course	
PME 1158	4
Required Drafting Course	
DFT 1110	2
Required English Courses	
ENG 1101, 1102, 1103	9
Required Mathematics Course	
MAT 1101	4
Required Machine Shop Course	
MEC 1112	3
Required Plumbing Course	
PLU 1110	10
Required Welding Courses	
WLD 1120, 1121	15
Total Required Hours	72

INDUSTRIAL MANAGEMENT

Purpose of Curriculum

This program develops the individual's abilities in the art of communicating with his fellow worker by providing training in business and industrial management, psychology, production methods, and the general and social education that broadens one's perspective. This training provides 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.

Job Description

The supervisor or foreman coordinates the activities of workers in one or more occupations. His/her duties may encompass interpreting company policies to workers involving planning of production schedules, estimating man-hour requirements for job completion, establishing or adjusting work procedures, analyzing and resolving work problems, and initiating or suggesting plans to motivate workers to achieve work goals.

INDUSTRIAL MANAGEMENT CURRICULUM

	Quarter Hours Credit
Required Industrial Management Courses	
ISC 102, 120, 202, 205, 220, 221, 232, 235, 236, 240, 241	39
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 123, 185, 234, 239, 247	39
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Math Course	
MAT 110	4
Required Electives	
Two Social Science	6
Electives (any technical courses approved by department chairperson or advisor)	8
Total Required Hours	120

INSURANCE

Purpose of Curriculum

The purpose of this curriculum is to provide the student with a broad understanding of the general fields of insurance with which he/she should be acquainted as a professional within the insurance industry. The student will become familiar with the economic foundation upon which insurance is based, the legal aspects of insurance contracts, business applications of insurance, and the role of insurance in planning for future economic security through wise financial planning.

Job Description

Employment opportunities in insurance are available in a variety of specialties including agents, underwriters, rate analysts, actuaries, and others related to the insurance process. The insurance industry also provides significant opportunities in other specialty areas such as marketing, advertising, accounting, investments, and public relations. Graduates completing the program may want to apply for the examination prerequisite to the Chartered Life Underwriter (CLU) designation. Individuals employed in the insurance industry are encouraged to enter this program.

INSURANCE CURRICULUM

	Quarter Hours Credit
Required Insurance Courses	
INS 220, 221, 222, 223, 224, 225, 226, 228, 230, 231	30
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 185, 234, 239, 247	30
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103	9
Required Math Course	
MAT 110	4
Required Electives	
Social Science	3
Approved electives	23
Total Required Hours	108

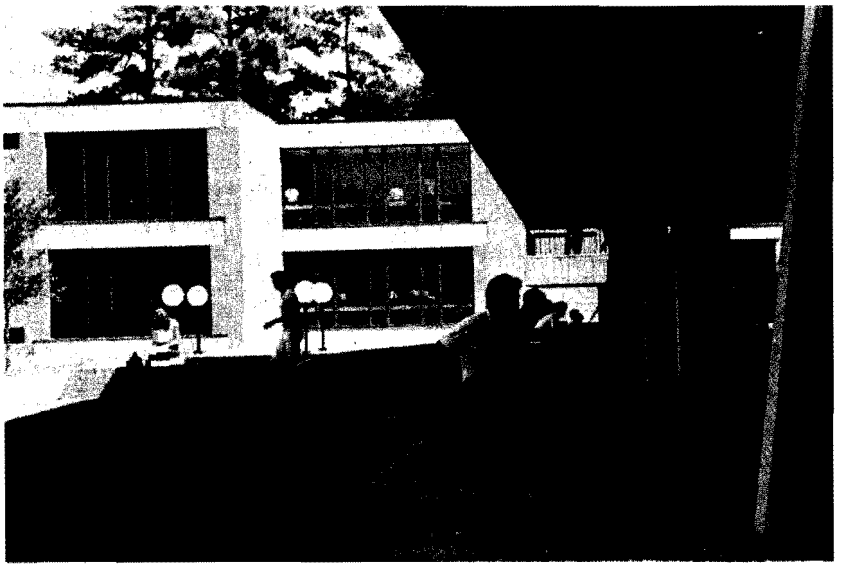
Note: The prerequisite of BUS 247 for CLU courses will be waived for students who have matriculated with the American College.

THE INSURANCE LICENSING INSTITUTE

Fayetteville Technical Institute has been granted the authority by the North Carolina Insurance Commissioner's office to offer certain prescribed insurance courses which, upon successful completion, will waive the present state licensing exams. This course of study is entitled The Insurance Licensing Institute.

The program consists of Part I, General Principles, and either Part II, Life, Accident & Health and/or Fire & Casualty. In order to qualify for the licensing exam waiver, the student must successfully complete Part I and either Part II or Part III. These courses exempt the prospective agent from taking the written exam, but do not exempt the individual from any other licensing requirements.

		Quarter Hours Credit
INS 214	General Principles	2
INS 215	Life, Accident & Health	2
INS 216	Fire and Casualty	2
	Total Hours	6



MACHINIST

Purpose of Curriculum

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

Job Description

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. He/she is trained and experienced in turning out a machined product and in switching readily from one kind of product to another. A machinist is able to select the proper tools and material required for each job and to plan the cutting and finishing operations in their proper order so that he/she can complete the finished work according to blueprint or written specifications. He/she makes standard shop computations relating to dimensions of work, tooling, feeds, speeds of machining, and uses precision measuring instruments such as micrometers and gages to measure the accuracy of work to thousandths of an inch.

MACHINIST CURRICULUM

	Quarter Hours Credit
Required Machinist Courses	
MEC 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1180, 1181, 1182, 1183, 1184	58
Required Drafting Courses	
DFT 1180, 1181, 1281	11
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1101, 1102, 1123, 1180	16
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	115

MARKETING AND RETAILING

Purpose of Curriculum

The marketing and retailing fields concentrate on finding and supplying the needs and desires of consumers. This curriculum is designed to give students theoretical as well as practical knowledge of the field enabling them to advance to mid-management jobs. Marketing background provides the skills needed for jobs in advertising, promotion, sales, transportation and distribution in wholesaling, manufacturing, and service industries. As a specialized area of marketing, retailing emphasized skills in merchandising, buying, selling, display, fashion and retail management for use in retail establishments.

Job Description

The graduate of the Marketing and Retailing curriculum may enter a variety of career opportunities from beginning sales to management trainee or assistant. Many job opportunities exist in this field for a vast number of different talents and skills.

MARKETING AND RETAILING CURRICULUM

	Quarter Hours Credit
Required Marketing and Retailing Courses	
BUS 239, 243, 245, 249, 285, 291	28
Required Marketing and Retailing Electives Selected From	
BUS 122, 124, 246, 247, 251, 260, 272, 282, 286, 287, 288, COE 101-109	21
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 123, 185, 234	37
Other Required Business Courses	
MAT 110, ECO 102, 104, EDP 104	13
Required General Education Courses	
ENG 101, 102, 103, 204, 206, PSY 206, Social Science Elective (3 hrs)	21
Total Required Hours	120

Marketing & Retailing—Co-Op Option:

Qualified students may elect to take up to 9 credit hours of Cooperative Education in place of 9 hours elective credit.

CERTIFICATE IN MASONRY

Purpose of Curriculum

Masons are the craftsmen in the building trades that work with artificial stone, brick, concrete masonry units, stone, and the like. During the past decade, 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 is designed to train the individual to enter the trade with the knowledge and basic skills that will enable him to perform effectively. He must know the methods used in laying out a masonry job with specific reference to rigid insulation, refractories, and masonry units specified for residential, commercial, and industrial construction.

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

Job Description

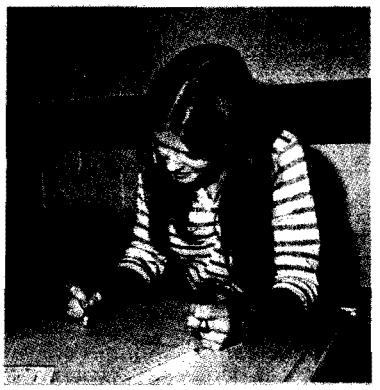
Most masons are employed by contractors in the building construction fields to lay brick and blocks made of tile, concrete, glass, gypsum or terra cotta. Also, they construct or repair walls, partitions, arches, sewers, furnaces, and other masonry structures.

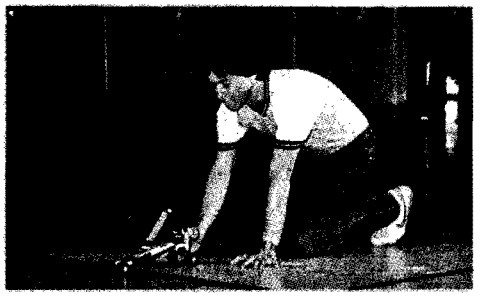
After gaining experience in the various types of the masonry trade along with leadership training, it is possible for the tradesman to become a foreman, inspector, and eventually a contractor.

CERTIFICATE IN MASONRY CURRICULUM

	Quarter Hours Credit
Required Masonry Courses	
MAS 1106, 1107, 1108, 1109	64


HEALTH
ENERAL
DUCATIO
DEVELOPMENTAL
STUDIES





PARALEGAL TECHNOLOGY

Purpose of Curriculum

Paralegals are highly trained lawyers' assistants capable of performing many law-related tasks to save lawyers' time. Paralegals facilitate the more efficient and less costly delivery of legal services to a wider segment of the population. This program is designed to train this new professional in substantive law as well as in procedures and practical applications of law. Emphasis is on professional ethics and responsibility, on individual organizational skills, and on competent, personable management of the law office.

Job Description

Under the supervision and direction of an attorney, a paralegal will interview clients and witnesses, investigate crime scenes, verify data, do library research and write legal briefs, prepare documents, and file them in appropriate court offices. The paralegal may never give legal advice or present a case before a court.

PARALEGAL CURRICULUM

	Quarter Hours Credit
Required Paralegal Courses	
LEG 101, 113, 117, 132, 135, 140, 204, 214, 215, 217, 224, 225, 290	56
Required Business Courses	
BUS 102, 115, 116, 119, 228	20
Required English Courses	
ENG 101, 102, 204, 206	12
Required Electives	
Math	4-5
Paralegal	8-10
Social Science	6
Total Required Hours	106-109

PHARMACY TECHNOLOGY

Purpose of Curriculum

This program is designed to provide the educational requirements and skills for an individual to become a Pharmacy Technologist. The program combines technical and general education with clinical education in regional pharmacy environments including community hospitals and retail pharmacies. All clinical components of the curriculum are conducted under the direction and supervision of a registered pharmacist.

Satisfactory completion of this two-year program fulfills the educational requirements for confirmation of the Associate Degree in Applied Science (AAS).

Job Description

As pressures center upon the cost of health care delivery in the U.S. by both the government and private sectors, logically those same pressures apply to the profession of pharmacy. This curriculum is designed to train persons to assist the pharmacist in the delivery of prescribed medication. Included are courses which provide knowledge and experience to persons who in turn become the "extra hands" of the pharmacist. Pharmacy technologists may be employed by hospitals, nursing care centers, private and chain community pharmacies, wholesale drug houses, and by the pharmaceutical industry both in manufacturing and sales. The student is prepared by the curriculum to continue his/her education at higher levels in college and university settings.

PHARMACY TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Pharmacy Courses	
PHM 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 120	57
Required Biology Courses	
BIO 106, 107, 108	18
Required Business Course	
BUS 102	3
Required Chemistry Courses	
CHM 101, 102, 103	12
Required Economics Course	
ECO 102	3
Required English Courses	
ENG 104, 105, 108	9
Required Math Course	
MAT 105	5
Required Electives	
One English	3
Other electives approved by chairperson	9
One Math	5
Total Required Hours	124

PHYSICAL THERAPY ASSISTANT

Purpose of Curriculum

This program is designed to prepare the student to fill the role of technical assistant working under the supervision of a licensed physical therapist in providing quality physical therapy care. After the physical therapist evaluates and plans a program for the patient, the physical therapist assistant will provide direct patient care in such activities as ambulation, gait training with crutches/canes/walkers, assist and teach patient specific exercise routines (to retain strength, range of motion, endurance), apply heat, massage, electrical stimulation, hydrotherapy to relieve pain and promote relaxation. Employment settings include hospitals, rehabilitation centers, home health agencies, public schools, private clinics, and public health clinics.

Job Description

The graduate physical therapist assistant is qualified to provide therapeutic care in all basic patient categories under the supervision of a qualified physical therapist.

This job category is recognized officially and accepted by the American Physical Therapy Association and the North Carolina Chapter of that Association.

PHYSICAL THERAPY ASSISTANT CURRICULUM

	Quarter Hours Credit
Required Physical Therapy Courses	
PTH 101, 102, 103, 104, 105, 106, 110, 201, 202, 210, 215, 298	62
Required Biology Courses	
BIO 103, 104	10
Required Business Course	
BUS 102	3
Required English Courses	
ENG 103, 104, 105, 115, 204	15
Required Math Course	
MAT 108	5
Required Physical Education Course	
PED 111	4
Required Psychology Courses	
PSY 101, 202, 210	9
Required Sociology Course	
SOC 101	3
Required Elective	
Physical Education Course	1
Total Required Hours	112

PLUMBING

Purpose of Curriculum

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 effective performance. 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 are provided to assist the individual in occupational growth.

Job Description

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

PLUMBING CURRICULUM

	Quarter Hours Credit
Required Plumbing Courses	
PLU 1110, 1111, 1112, 1120, 1121, 1123, 1125, 1126	44
BMS 1134	4
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1115	4
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1110	4
Required Psychology Course	
PSY 1101	3
Required Welding Course	
WLD 1180	3
Total Required Hours	71

POSTAL SERVICE TECHNOLOGY

Purpose of Curriculum

The postal service degree curriculum is an intensive college-level program. The curriculum is designed to prepare present and future employees for advancement in the United States Postal Service. The immediate principal objective is that the program will afford all students the opportunity to become aware of and knowledgeable in the functional complexities of the system. Thus, the students will better understand the relationships of various job duties and divisions, they will be prepared to function effectively within a variety of positions, and they will have received excellent training to facilitate achievement of their career development goals.

Job Description

The ultimate objective of the postal service degree program is excellence in job performance. The graduate will, if already employed by the U.S. Postal Service, be more eligible to progress to a management position which will include a variety of responsibilities within the postal system.

POSTAL SERVICE CURRICULUM

	Quarter Hours Credit
Required Postal Courses	
POS 101, 103, 105, 201, 202, 203, 205, 207, 208	27
Required Business Courses	
BUS 102, 115, 116, 120, 121, 125, 229, 234, 260, 272	42
Required Economics Courses	
ECO 102, 104, 201, 205	13
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Math Course	
MAT 110	4
Required Physical Education Course	
PED 111	4
Required Psychology Course	
PSY 206	3
Required Social Science Course	
SSC 205	3
Required Elective	
Any approved elective	3
Total Required Hours	117

PRACTICAL NURSE EDUCATION

Purpose of Curriculum

The practical nurse is a vital and integral segment of the health team. He/she bridges the gap between that which the individual can provide for himself and that which requires the complexity of skills given by professional members of the health team; his/her place is at the patient's bedside fulfilling needs requiring basic nursing skills and assisting with activities dependent upon more complex skills. The practical nurse works under the supervision of the registered nurse.

Job Description

Practical nursing students are prepared, through correlated theory and clinical practice, to give direct nursing care to patients to meet immediate safety and comfort requirements; to assist the registered nurse in the care of patients in crisis or changing status; and to report and record the nursing care rendered and the patient's response to that care. Communication skills and mental health concepts are integrated into the total curriculum.

PRACTICAL NURSE CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PNE 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1113, 1115, 1116	69
Required English Course	
ENG 1101	3
Required Math Course	
MAT 1105	3
Total Required Hours	75

RADIOLOGIC TECHNOLOGY

Purpose of Curriculum

This program is designed to provide the educational needs and skills to an individual to become a radiologic technologist. The course of study combines technical and general education courses. The clinical education is planned and correlated with the classroom instruction and is provided by the hospitals and community facilities available. This clinical education is conducted under the direction and supervision of a physician radiologist.

Job Description

Radiologic technologists are in demand in research laboratories, industry, and government agencies in addition to health clinics, hospitals, nuclear medicine, radiation therapy, and special procedures departments. He/she is the primary assistant for the radiologist with diagnosis of disease or abnormality.

RADIOLOGIC TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Radiologic Courses	
RDT 101, 102, 103, 111, 112, 113, 114, 204, 205, 206, 215, 216, 217, 218	94
Required Biology Courses	
BIO 103, 104, 208	13
Required English Courses	
ENG 104, 105, 108, 204	12
Required Math Course	
MAT 105	5
Required Physics Courses	
PHY 120, 121	6
Required Psychology Courses	
PSY 101, 202	6
Required Electives (Suggested)	
Sociology, History, Principles of Supervision, First Aid and Safety	9
Total Required Hours	145

REAL ESTATE

Purpose of Curriculum

The specific objectives of the Real Estate curriculum are to develop the following competencies: (1) an understanding of the principles of organization and management in the real estate industry, (2) an understanding of our economy through a study and analysis of the role of the purchase, development, and sale of real estate, (3) a knowledge in specific elements of accounting, finance, law, sales, market trends, land development and property management.

Job Description

The graduate of the Real Estate curriculum may enter a variety of career opportunities from beginning sales person or office clerk, to manager or manager trainee. The duties and responsibilities of this graduate vary in different firms. These duties might include preparing and filing sales reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, and assisting managers in supervising. Positions are available in real estate such as advertising, mortgage banking, credit, finance, retailing, brokerage, and insurance.

REAL ESTATE CURRICULUM

	Quarter Hours Credit
Required Real Estate Courses	
RLS 209, 216, 221, 231, 286, 292, 296	32
Required Business Courses	
BUS 102/103, 110, 115, 116, 120, 121, 185, 229, 234, 239, 247, 272	50
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Paralegal Course	
LEG 214	3
Required Math Course	
MAT 110	4
Required Psychology Course	
PSY 101/206	3
Required Electives	
Social Science	3
Other approved	3
Total Required Hours	122

RECREATIONAL VEHICLE AND EQUIPMENT REPAIR

Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills required to inspect, diagnose, repair, or adjust recreation vehicles. A thorough understanding of the variety of recreation vehicles, such as boats, motorcycles, golf carts, and all other mechanical recreational equipment will be presented in class assignments, discussion, demonstration, and shop practice.

Job Description

Recreational vehicle mechanics maintain and repair mechanical, electrical, and body parts of the recreational vehicle to include motorcycles, outboard engines, small gasoline engines, and other mechanical recreational equipment. Mechanics inspect, test, diagnose, and repair faulty operations of the recreational vehicle.

RECREATIONAL VEHICLE AND EQUIPMENT REPAIR CURRICULUM

	Quarter Hours Credit
Required Vehicle and Equipment Repair Courses	
PME 1011, 1018, 1104, 1109, 1151, 1158, 1160	39
Required Business Course	
BUS 1103	3
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1101	4
Required Physics Courses	
PHY 1101, 1102	8
Required Psychology Course	
PSY 1101	3
Required Welding Course	
WLD 1180	3
Total Required Hours	66

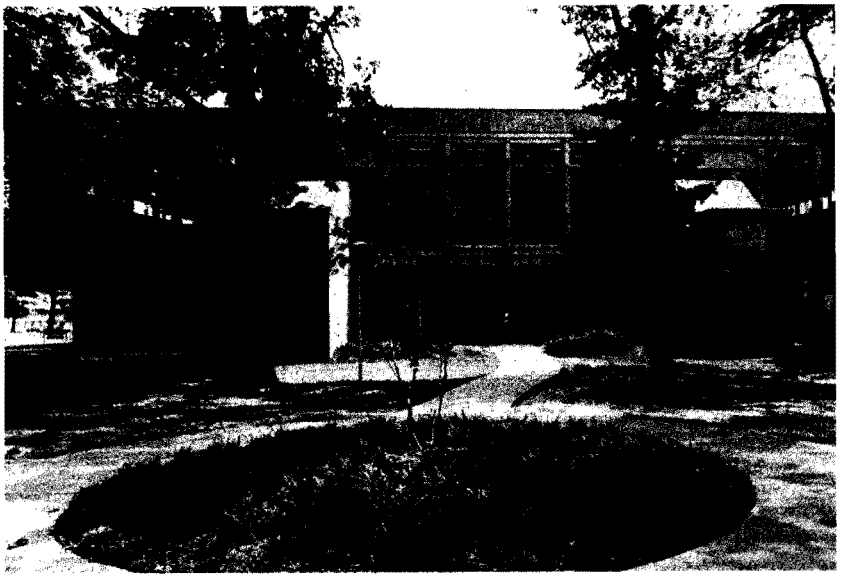
RECREATION ASSOCIATE

Purpose of Curriculum

The Recreation Associate program is designed to train young men and women to plan, implement, and supervise recreational activities for all age groups in a variety of settings. The curriculum provides each student with the skills and abilities needed to operate on both a one-to-one and group basis. In addition to classroom instruction, much emphasis is placed on specific skills-training, as well as on-the-job experience in the community.

Job Description

A variety of career opportunities are available to graduates of the Recreation Associate curriculum. Jobs within the public, private, commercial, and therapeutic sectors are all open to graduates. Playground and center supervisors, program managers, industrial recreation coordinators, camp counselors, private resort directors and commercial managers are a few of the jobs to be occupied by graduates. Therapeutic opportunities include activity specialists, special population supervisors, recreation therapists and aides, and special education assistants. All graduates receive an Associate of Applied Science degree, while Therapeutic graduates receive an additional certificate verifying their option. Today, recreation professionals are becoming acutely aware of the ever-increasing gap being filled by two-year graduates from programs such as these.



RECREATION ASSOCIATE CURRICULUM

	Quarter Hours Credit
Required Recreation Courses	
REC 109, 110, 111, 112, 119, 120, 121, 201, 204, (207, 208, or 209), 211, 220, 221, 225, 231, 235, 250, 299	62
Required Audio Visual Course	
AVA 201	3
Required Business Course	
BUS 272	3
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, or 104, 105, 108	9
Required Math Course	
MAT 110	4
Required Physical Education Course	
PED 111	4
Required Psychology Courses	
PSY 101, 104	6
Required Sociology Course	
SOC 101	3
Required Electives	
Art or Physical Ed or REC	6
Business or Physical Ed or REC	6
English or others by Departmental Approval	3
Total Required Hours	112

THERAPEUTIC OPTION—RECREATION ASSOCIATE

Therapeutic Option

Students enrolled in this curriculum may enter the Therapeutic Recreation option during their third quarter. The area of study is designed for those students interested in working with the ill, disabled, and elderly. Emphasis is placed on adaptive measures and programs needed to implement adapted recreation programs within specialized settings.

	Quarter Hours Credit
Required Recreation Courses	
REC 109, 111, 112, 119, 121, 201, 202, 205, 206, 210, 211, 212, 213, 214, 221, 223, 225, 231, 250, 299	67
Required Audio Visual Course	
AVA 201	3
Required Business Course	
BUS 272	3
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, or 104, 105, 108	9
Required Math Course	
MAT 110	4
Required Physical Education Course	
PED 111	4
Required Psychology Courses	
PSY 101, 104	6
Required Sociology Course	
SOC 101	3
Required Electives	
Art or Physical Ed or REC	6
Business or Physical Ed or REC	3
English or other by Departmental Apporval	3
Total Required Hours	114

RESPIRATORY THERAPY

Purpose of Curriculum

This program is designed to provide a sound learning environment for individuals seeking an education in respiratory therapy by preparing them for entry level positions as respiratory therapists. Through didactic and clinical preparation, graduates of the program are able to enter their chosen profession with the necessary skills and knowledge.

Job Description

The therapist's scope of patient care includes but is not limited to intermittent positive pressure breathing (IPPB), humidity/aerosol therapy, medical gas administration, bronchopulmonary drainage, continuous ventilation, airway management, emergency care, pulmonary function testing, cardiorespiratory rehabilitation, infection control, and cardiorespiratory drug administration.

RESPIRATORY THERAPY CURRICULUM

	Quarter Hours Credit
Required Respiratory Therapy Courses	
RTH 105, 106, 111, 112, 151, 213, 241, 242, 243, 251, 252	75
Required Biology Courses	
BIO 106, 107, 108, 208	21
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 104, 105, 115	9
Required Math Course	
MAT 105	5
Required Physics Course	
PHY 101	4
Required Psychology Course	
PSY 101	3
Required Sociology Course	
SOC 101	3
Total Required Hours	124

SECRETARIAL SCIENCE

Purpose of Curriculum

The secretarial curriculum is designed to offer the students the necessary secretarial skills in typing, word processing, office machines, microcomputers, dictation, transcription, and terminology for employment. Specialized courses in secretarial subjects are supplemented by related courses in mathematics, English, accounting, business law, and personality development to provide training in the accepted procedures required by the business world and to enable a person to become proficient soon after accepting employment in the business office. With today's office so profoundly influenced by the impact of automation, the students are acquainted with equipment and procedures which affect their secretarial duties. In addition to skill development, special emphasis is placed on grooming habits and proper attitudes for the office situation.

Job Description

The graduate may be employed as a stenographer or a secretary in a variety of offices, such as insurance companies, banks, and financial institutions, marketing firms, medical and health organizations, federal and state governmental agencies, and legal offices. Intensive training in this curriculum would also provide the background for jobs as office managers and administrative assistants.

SECRETARIAL SCIENCE

	Quarter Hours Credit
Required Secretarial Courses	
BUS 102, 104, 105, 106, 107, 108, 112, 183, 184, 204, 205, 206, 207, 208, 210, 211, 214, 262, 270, 271, 290	85
Other Required Business Courses	
BUS 110, 115, 120, 185, or ECO 102, BUS 248	19
Required English Courses	
ENG 101, 110, 204, 207	14
Required Electives	
Two Social Science electives	6
Total Required Hours	124

BUS 102—Credit will be given if high school grade is "C" or better.
BUS 106—Credit will be given if high school grade is "B" or better.

SURGICAL TECHNOLOGY

Purpose of Curriculum

This is an introductory course provided to meet the psychological as well as the physical needs of the surgical patient. The curriculum is devoted (1) to providing instruction in the basic sciences; (2) to developing an understanding of the principles of operating room technique; (3) to acquiring fundamental skills essential to assisting in the operating; (4) and to provide essential psychological support for the individual facing surgery. Instruction includes environmental and personal orientation, terminology, anatomy and physiology, microbiology, pharmacology, patient care concepts, asepsis and the surgical environment, fundamental procedural techniques, and surgical procedures.

Job Description

The surgical technologist works with the surgeon, anesthesiologists or anesthetist, and professional registered nurse as a member of the direct patient care team during surgical intervention. When scrubbed, the technologist will assist the surgeon during operative procedures by passing instruments, sutures, and other supplies in a prescribed manner. Duties outside the sterile field will include opening sterile supplies, assisting the anesthesiologists or anesthetists when requested, assisting with positioning, performing the scrub prep, and taking part in sponge, needle, and instrument counts. Other responsibilities will include ordering and stocking supplies, preparing instruments and supplies for sterilization, operating sterilizers, and assisting in safe transportation of the patients to and from the department. The surgical technologist works under the supervision of a registered nurse.

SURGICAL TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PML 1080, 1085, 1090, 1091, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102	55
Required Biology Course	
BIO 1092	4
Required English Course	
ENG 1101	3
Required Sociology Course	
SOC 203	3
Total Required Hours	65

TOOL AND DIE

Purpose of Curriculum

Complexity of new tools in industry increases each year due to new engineering, scientific discovery, and the space age need for closer tolerances. This complexity is reflected first in the tools, dies, gages, and molds that must be built by the tool and die maker. This curriculum provides a basis from which the students may equip themselves with the knowledge, techniques, and skills to meet this great challenge and critical need.

Job Description

Tool and die makers are responsible for the accuracy of thousands of parts because the jigs, fixtures, dies, molds, and gages which are the basic tools of mass production are built by the tool and die men. They must be able to proficiently operate all the basic shop equipment, be able to read precision measuring instruments and interpret complicated engineering drawings, and have the know-how to reproduce these drawings in the form of finished metal parts.

TOOL AND DIE CURRICULUM

	Quarter Hours Credit
Required Machinist Courses	
MEC 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1151, 1152, 1153, 1154, 1155, 1156, 1158, 1159, 1170, 1171, 1172, 1180, 1181, 1182, 1183, 1184	103
Required Drafting Courses	
DFT 1180, 1181, 1281	11
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1101, 1102, 1123, 1151, 1152, 1180	22
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	166

WATER AND WASTEWATER PLANT OPERATORS PROGRAM

Purpose of Curriculum

Our ever-increasing population and industrial expansion carries with it the demand for many services with one of the most vital of these services being the production and safeguarding of our water supply. To meet the increasing demand for cleaner water and to handle the complexity of pollutants from new products, technology has created more sophisticated and complicated systems for water purification and wastewater treatment. These technological advances have created a growing demand for highly trained personnel who can analyze, operate, and control industrial water purification and wastewater treatment facilities, whether it be public or private.

Job Description

The graduate of this program will have a knowledge of laboratory procedures and skill in performing many types of tests on water and wastewater. He/she will have a knowledge of the purpose, construction, operation, and maintenance of many processes and of equipment incidental to effective operation of water purification and wastewater treatment plants. Also, to give the operator a basic knowledge of the entire plant operation with application of laboratory results to optimize plant performance is stressed.

WATER AND WASTEWATER CURRICULUM

	Quarter Hours Credit
Required Environmental Courses	
ENV 1100, 1101, 1102, 1103, 1104, 1105, 1107, 1108, 1109, 1110, 1111	40
Required Chemistry Course	
CHM 1101	4
Required Drafting Course	
DFT 1180	4
Required English Courses	
ENG 1101, 1102	6
Required Math Courses	
MAT 1101, 1102	8
Required Psychology Course	
PSY 1101	3
Total Required Hours	65

WELDING

Purpose of Curriculum

This curriculum was developed to fill the tremendous need for welders in North Carolina. 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.

Job Description

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.

WELDING CURRICULUM

	Quarter Hours Credit
Required Welding Courses	
WLD 1112, 1120, 1121, 1122, 1123, 1124, 1125	39
Required Drafting Courses	
DFT 1104, 1117, 1118	7
Required Electrical Course	
ELC 1180	3
Required English Courses	
ENG 1101, 1102	6
Required Machinist Courses	
MEC 1104, 1112	7
Required Math Courses	
MAT 1101, 1103	7
Required Psychology Course	
PSY 1106	3
Total Required	72

COURSE DESCRIPTIONS

Agricultural Courses

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AGR 101 Farm Tractors I 1 0 3 2

A study of farm tractors including gas and diesel engines. Emphasis is placed on combustion engines and electrical systems. Prerequisite: None.

AGR 102 Farm Tractors II 1 0 3 2

A course designed to continue the study of gas and diesel farm tractors. Emphasis will be placed on learning the operation and maintenance of diesel tractors, including their power trains and operational systems. Prerequisite: None.

AGR 104 Introduction to Agricultural Economics 3 2 0 4

An introduction to economics, the functions of the economic system and role of agriculture in the economy. A review of the functions of the manager and an introduction to the principles he/she uses in making decisions to adjust to changing conditions. An analysis of factors which affect change in agricultural firms. Prerequisite: None.

AGR 106 Techniques of Welding 1 0 3 2

This course will cover arc and gas welding, the safe and correct methods of assembling, and the operation of welding equipment. The application of welding to mechanical repair work and steel fabrication will be emphasized. Care, maintenance and selection of welding equipment and supplies are applied in the course. Prerequisite: None.

AGR 108 Beef Cattle Production 2 0 0 2

A study of the principles of selecting, feeding, breeding, and management of beef cattle. Emphasis will be placed upon cow-calf and feeder cattle operations. Prerequisite: None.

AGR 109 Soil Management, Terracing, & Draining 2 2 0 3

The application of soil science principles to the mechanics of soil management, terracing and drainage. Soil types will be related specifically to terracing and drainage. Prerequisite: None.

AGR 112 Small Engine Repair 1 0 3 2

A study of two- and four-cycle, one cylinder gasoline engines and their power trains. The student will be taught preventive maintenance, troubleshooting and repair of the typical auxiliary engine on the farm. Prerequisite: None.

AGR 114 Farm Electrification 1 2 0 2

An introduction to the practical application of farm electric wiring. The major phases of the study include the basic wiring techniques according to the current Electrical Code and applying the practices to practical use. Prerequisite: None.

AGR 118 Feed Grain Crops 3 0 0 3

A study of the scientific methods and the application of approved practices to the production of corn, oats, barley, sorghum, and millet. Varieties, soils, fertilization, cultivation, harvesting and utilization are included. Prerequisite: None.

AGR 121 Weed Identification & Control 3 0 0 3

A study of the identification and control of annual and perennial weeds of economic importance in North Carolina. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AGR 122 Farm Machinery Repair & Maintenance 1 3 0 2

This course emphasizes the proper care, service and management of farm machinery. All kinds of farm machinery will be utilized to develop skills needed to repair farm machinery and to maintain them properly. Prerequisite: None.

AGR 124 Plant Reproduction 2 0 0 2

A study of the various methods of scientific reproduction in the greenhouse and in field situations. Special attention is given to the propagation of plants and shrubs for the farm and home landscape. Prerequisite: None.

AGR 125 Animal Science 5 2 0 6

Animal Science covers dairy and beef cattle, swine, poultry, sheep, horses and ponies. It provides an introduction to and a survey of the total animal industry, from the basis for genetic improvement to meat, milk, egg, and wool utilization trends. Prerequisite: None.

AGR 126 Farm Forest Management 2 0 0 2

The fundamentals of forestry and farm forestry problems, including planting, thinning and harvesting timber production and the marketing of forestry products. Prerequisite: None.

AGR 127 Animal Nutrition 2 0 0 2

A study of the composition of feeds, feed additives, and the nutritional requirements of livestock. Principles used in the formulation of practical and economical livestock rations are employed. Prerequisite: None.

AGR 128 Farm and Home Construction 2 3 0 3

This course deals with the fundamentals of farm building layout and selection of appropriately designed structures to meet farm enterprise needs. Emphasis is placed on foundations, carpentry construction, pole-type structures, block and concrete construction and fencing. Field trips will be used to study farm structures. Prerequisite: None.

AGR 131 Soybean Production 2 0 0 2

A study of crop characteristics, varieties, approved production practices; the effects of environmental factors, rotation, fertilizers, pests and disease upon the profitable production of soybeans. Prerequisite: None.

AGR 133 Farm Water and Plumbing Systems 2 0 0 2

A study dealing with the farm water needs and waste disposal. Attention is given to planning and installing the system, and its proper care and maintenance. Prerequisite: None.

AGR 136 Agricultural Math 2 0 0 2

This course stresses the fundamental mathematical operations and their application to farm business problems and situations. Management problems dealing with pricing, payrolls, interest and discount, commission and taxes are also given consideration. Prerequisite: None.

AGR 138 Farm Records & Taxes 3 0 0 3

This study deals with the kinds of farm records needed and how they should be kept in order to have an adequate farm accounting system. Exercises involving procedures of tax computation skills will be used for income tax filing. Prerequisite: None.

AGR 141 Surveying 2 3 0 3

Theory and practice of elementary plane surveying, measurements, differential and profile leveling; the use of transits and tapes in layout-out farm buildings, grading for proper tile drain, installation of open ditches, and the laying-out of terraces. Prerequisite: None.

AGR 142 Agricultural Finance 2 0 0 2

Analysis of the capital structure of modern commercial agriculture with emphasis on the sources of credit; lending institutions, credit instruments and repayment schedules. Practice in the procedure of evaluating farm resources with attention to information needed for valuation will be provided. Prerequisite: None.

AGR 154 Swine Production 2 0 0 2

A study of the scientific methods of selecting, breeding, feeding, and management of swine. Special attention will be given to housing and marketing. Prerequisite: None.

AGR 155 Plant Diseases 3 0 0 3

A course dealing with the nature and symptoms of disease of crops; characteristics, causal agents, cause, identification and control of the major plant diseases of the area. Prerequisite: None.

AGR 157 Small Equipment Repair Maintenance and Operation 1 4 0 3

A study involving the repair of small engines, principles of operation and maintenance of small types of equipment in an approved manner. It includes the actual operation of types of small motorized equipment and attachments normally used in agriculture and horticulture businesses. Prerequisite: None.

AGR 170 Plant Science 5 2 0 6

An introductory general botany and a study of fundamental principles in crop production. The application of these principles to the major and minor field and horticultural crops in North Carolina. The elements of plant identification, crop grading and judging. Prerequisite: None.

AGR 183 Poultry & Egg Production 2 0 0 2

Poultry and Egg Production is designed to introduce the various aspects of poultry production with emphasis placed upon the business know-how and the trends in the future of poultry production. Business principles will be incorporated in class presentation concerning nutrition, care and marketing of poultry products. Prerequisite: None.

AGR 185 Soil Science & Fertilizer 5 2 0 6

A course dealing with the basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil, and the conservation of soil fertility. Prerequisite: None.

AGR 186 Soils & Fertilizers 4 2 0 5

This course is designed for the student engaged in agriculture production, with emphasis upon the evaluation of soil types in relation to their productive capability. The appropriate use of fertilizers and green manure crops for the conservation of the soil, and the profitable production of crops is dealt with in depth. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AGR 190 Greenhouse Production and Management 3 2 0 4

A study of the principles involved in the operation of a greenhouse on a commercial basis. Class instruction will be basic to student assignments in greenhouse operations. Construction of facilities to the greatest advantage will be emphasized. Prerequisite: None.

AGR 200 Chemical Pest Control 2 2 0 3

A study of farm chemicals, their importance, ingredients, formulation, and farm application with emphasis on the effective and safe farm utilization of chemicals in agricultural pest control. Prerequisite: None.

AGR 201 Agricultural Chemicals 4 2 0 5

A study of farm and horticulture chemical pesticides, their ingredients, formulation and application with emphasis upon the effective use of chemicals in agricultural pest control. Prerequisite: CHM 101 or equivalent.

AGR 204 Farm Business Management 4 4 0 6

A review of the functions of the manager of a business firm and the problems he/she faces. Development of the concept of planning by both partial and complete budgeting. Review of the concepts of costs and the length of run in production. Practice in preparing enterprise budgets as an aid in choosing what to produce, use and analysis of input-output potentials in the development of a farm management plan that results in an efficient farm operation. Prerequisite: AGR 104.

AGR 205 Agricultural Marketing 5 0 0 5

An analysis of the functions of marketing in the economy and a survey of the problems marketing faces. A review of the market structure and the relationship of local, terminal, wholesale, retail and foreign markets. Problems in the operations of marketing including buying and selling, processing, standardization and grading, risk taking and storage, financing, efficiency and cooperation. Discussion of procedures of marketing such commodities as grain, cotton, livestock, and tobacco. Prerequisite: AGR 104 or equivalent.

AGR 208 Marketing Farm Products 3 0 0 3

A review of the market structure including local, terminal, wholesale, and retail markets. Problems involving the operation of marketing firms, buying, selling, processing, standardizing and grading, risk taking, storage, and financing are considered. Emphasis is placed on the marketing of grain, tobacco, cotton, soybeans, swine, beef animals, poultry and dairy products. Prerequisite: None.

AGR 213 Farm Enterprise Management 2 2 0 3

A course dealing with the functions of a manager, production costs, length of run in production, partial and complete budgeting of enterprises for complete farm planning and operation. Exercises will be provided for practice and the development of skill in developing least cost, analysis of production data for the selection of the most desirable enterprise, and production factors in relation to the size, type and income of a farm. Prerequisite: None.

AGR 218 Farm Mechanization 3 2 0 4

A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed grinders and mixers, storage facilities, harvester and materials handling systems. Prerequisite: None.

AGR 228 Livestock Diseases and Parasites 3 2 0 4

A course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis on the cause, damage, symptoms, prevention and treatment of parasites and diseases, and management factors relating to disease and parasite prevention and control. Prerequisite: AGR 125.

AGR 238 Farm Mechanization 3 0 0 3

A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed graders, mixers, storage facilities, harvesters and materials handling systems. Prerequisite: None.

AGR 240 Fruit & Vegetable Production 2 2 0 3

This course includes the selection of fruit and vegetable enterprises as cash crops; the selection of varieties, soil preparation, propagation, cultivation disease and insect control, harvesting and marketing of these crops. Prerequisite: None.

AGR 243 Farm Income 2 0 0 2

Consideration of new areas of production that are not in practice in the student's present farming program. The farm enterprise system is analyzed and new enterprises are suggested. Prerequisite: None.

AGR 245 Crop Insects 2 0 0 2

A study of common local crop insects, their economic importance, identification, cycle and hosts. Field trips will be utilized as a means of noting insect damage and identifying the causative insects. Prerequisite: None.

AGR 256 Crop Production 4 2 0 5

A course dealing with the production of agricultural crops. A study of the characteristics, adaptability and productivity of different crops and how soil management, cultivation, fertilization and other factors affect the yield and ultimately the profitability of the crop. Prerequisite: AGR 170.

AGR 257 Livestock Production 4 2 0 5

A course dealing with the feeding, breeding and management of beef and dairy cattle, horses, swine, and poultry. Special emphasis is placed upon the application of sound principles and practices which make for profitable production in each type of animal production unit. Prerequisite: AGR 125.

AGR 272 Tobacco Production 3 2 0 4

This course includes the production practices relevant to flue-cured tobacco in North Carolina. Topics covered include plant bed practices, field production practices including the use of machinery in cultivation, fertilization and harvesting of tobacco, and the preparation of tobacco for marketing. Prerequisite: None.

AGR 274 Pastures & Forages 3 2 0 4

A review of the major grasses and legumes of economic importance utilized for pastures, hay or silage. Attention is given to establishing pastures and in the production of forage crops of high nutrient value in keeping with livestock needs. Prerequisite: None.

AGR 296 Agricultural Programs and Agencies 3 0 0 3

A review of the public agricultural programs and agencies that provide services, including financial aid for agricultural production and the organization, objectives, functions, and services of these organizations. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AGR 299 Cooperative Training 1 15 0 6

This course is designed to provide the student with an opportunity to pursue and be involved in, under faculty supervision, work experience in a specialty field. The student may choose employment involving either/or a combination of production, processing, manufacturing, distributing, marketing, or inspecting agricultural products, or the provision of a type of agricultural service. Prerequisite: Minimum of 35 quarter hours credit in curriculum courses.

Air Conditioning, Heating, and Refrigeration Courses

AHR 95 Shop Practice 2 0 3 3

A practical course including the elemental refrigerator cycle, copper tubing tools and processes, fans and air flow and basic electricity. Instruction emphasizes an introduction to metal shop and metal equipment. Prerequisite: None.

AHR 1120 Air Conditioning and Heating Maintenance 4 0 12 8

Introduction to the terminology used in the trade, principles of heating and refrigeration, use and care of tools and equipment, and the identification and function of component parts of heating and air conditioning systems. The student has an opportunity to work with refrigeration tools, sheet metal equipment and basic electrical test equipment. Standard operating procedures and safety measures are stressed in the use of special tools or equipment and refrigerants. Throughout the course, emphasis is placed on troubleshooting, minor repair, control devices, assembling and disassembling and overall service and preventive maintenance practices. Prerequisite: None.

AHR 1121 Fundamentals of Refrigeration 5 0 6 7

Terminology used in the trade, principles of refrigeration; identification of basic system components; introduction to and practice with tools and shop equipment found in the field today. Standard procedures and safety measures are included. Prerequisite: None.

AHR 1122 Commercial Refrigeration 4 8 0 7

A follow-up in basic refrigeration utilizing theory, procedures, tools and equipment relative to commercial refrigeration. Emphasis is placed upon mechanical problems and their solutions prevalent in the medium and low temperature range. Prerequisite: AHR 1121.

AHR 1125 Principles of Air Conditioning 3 2 0 4

Review of the refrigerant cycle and characteristics of mechanical cooling equipment: sensible and latent heat loads; air mixtures and dehumidification; system capacity and air distribution; pipe schematics and component symbols. Prerequisite: AHR 1145.

AHR 1127 Refrigeration Equipment Application 1 2 0 2

A course designed to complement course AHR 1122 to provide for proper commercial refrigeration equipment selection in its various applications, and the installation, and service procedures for correct equipment performance. Prerequisite: AHR 1122.

AHR 1129 Air Conditioning Shop Practice I 3 0 6 5

A continuation of practice on all shop procedures encountered by the student to this point; work on air conditioning compressors, central installations and trouble-shooting; sheet metal duct fabrication and installation; also duct insulation materials and procedures. Prerequisite: AHR 1136 and 1146.

AHR 1130 Heat Pumps 3 0 3 4

Basic principles, coefficient of performance; reversing valves, unit controls, defrosting, heat capacity limits, supplementary strips, balance points and comparative cost of operation. Prerequisite: AHR 1125.

AHR 1132 Hot and Chilled Water Systems 3 0 3 4

Principles of hot and chilled water systems, components application, and service. Prerequisite: AHR 1146.

AHR 1133 Air Conditioning Shop Practice II 3 0 6 5

Emphasis on pipe work and water circuits with boilers and chillers; emphasis on control work with heat pumps, chillers and direct expansion air conditioning systems; fabrication and installation of motorized dampers automatically operated; strengthen all manipulative skills through practice. Prerequisite: AHR 1129.

AHR 1135 Sheet Metal Layout & Fabrication I 1 2 0 2

Work is divided between the classroom and the metal shop. Layout procedures are learned as patterns are developed for elementary fittings. Good shop practice is applied as these fittings are fabricated and installed in air conditioning duct systems. Prerequisite: None.

AHR 1136 Sheet Metal Layout 7 Fabrication II 0 0 3 1

A continuation of AHR 1135. Layout skills are more fully developed with more complicated projects. Greater experience is utilized as advanced work is completed. Prerequisite: AHR 1135.

AHR 1139 Heating, Ventilating, and Air Conditioning Proportional Control Systems 2 2 0 3

A study of automated control systems for commercial and industrial buildings' heat, ventilation, and air conditioning equipment; pneumatic, electronic and electric control devices, their principle of operation, application, and service. Also, functions that computers provide for building automated control are discussed. Prerequisite: None.

AHR 1141 Control Systems I 2 0 3 3

Review of basic electricity and simple circuitry for controls. System components for special applications. Thermostats, solenoid valves, pressure switches, oil failure controls. Installation and service practice. Prerequisite: AHR 1145.

AHR 1142 Control Systems II 3 0 3 4

A continuation of the study of controls for automatic operation of mechanical systems. Motor controllers and starters. Motorized dampers and valves. Electric and pneumatic operations. Prerequisite: AHR 1141.

AHR 1145 Heating Systems I 5 4 6 9

Introduction to warm air systems burners, fans, ducts, humidifers. Systems are installed, operated, checked and adjusted. Prerequisite: AHR 1122.

AHR 1146 Heating Systems II 4 0 6 6

Warm air test instruments, service procedures, equipment selection. Prerequisite: AHR 1145.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
AHR 1149 Blueprint Reading and Estimating	**5**	**6**	**0**	**8**

Interpretation of blueprints and specifications common to the mechanical contracting industry. Take off procedures; cost calculation; job pricing and bids. Prerequisite: AHR 1146.

AHR 1199 Cooperative Training	**1**	**0**	**15**	**6**

Work in the field with local contractors and service organizations. Prerequisite: Must have completed the first year of school curriculum.

American Institute of Banking Courses

AIB 110 Teller Training	**4**	**0**	**0**	**4**

To allow the student to gain necessary knowledge and skills which will benefit the student in gaining active employment or improving his/her present employment practices as a bank teller. Prerequisite: None.

AIB 120 Accounting I	**4**	**0**	**0**	**4**

A basic course in accounting principles and procedures. Coverage includes analysis of transactions, the accounting cycle, special journals and ledgers, payroll and control systems, payables and receivables, taxes and accruals. AIB 120 and 121 are equivalent to BUS 120. Prerequisite: None.

AIB 121 Accounting II	**4**	**0**	**0**	**4**

This course builds upon the foundation developed in Accounting I. The student learns more advanced concepts and techniques including departmentalized accounting, the partnership accounting cycle, branch and home office accounting, manufacturing and cost accounting, budgeting and statement analysis. Prerequisite: AIB 120. AIB 120 and AIB 121 are equivalent to BUS 120.

AIB 123 Financial Business Enterprises	**4**	**0**	**0**	**4**

Basic financial management including the study of the nature of financial management and financial analysis, planning and control; long-term investment decisions; and valuation and financial structure. This course is taught from the standpoint of the banking institution. Prerequisite: None.

AIB 202 Principles of Bank Operations	**4**	**0**	**0**	**4**

Principles of Bank Operations is a course designed to provide the student with an overview of basic functions of the banking system. The course defines the many services that banks provide for the depositors. The course is broken down into subject areas that relate to the different phases of the banking system. It explains what takes place in banking operations and why these procedures are followed. Prerequisite: None.

AIB 203 Bank Investments	**4**	**0**	**0**	**4**

This course is designed to help acquaint the student with the role of investments by banks in the free-enterprise economy, and the problems of commercial banks as investors. Encompassed in the course are the different types of securities held by banks, the considerations weighed in choosing the right form of investment, primary and secondary reserves, market fluctuations, and other factors which influence investment policy. Prerequisite: None.

AIB 204 Effective English 4 0 0 4

This course seeks to impress upon the student the need to consider both the purpose of the communication and the person who will receive it: the fundamental principles underlying effective use of the English language. It points out the ways in which communication may be heightened by proper use of the techniques of language. It also is concerned with the mastery of language through wide reading, an interest in words, and practice in writing. Prerequisite: None.

AIB 205 Bank Management 4 0 0 4

This course is designed to provide the student, new and experienced banker, with a practical working knowledge of bank management. Incorporated into this course is a look at the nature and objectives of banking. The basic structure of organizational planning coupled with staffing and management contracts offer a complete guideline to the experienced banker and student. A complete explanation of bank funds, investments, trusts, and current bank issues is presented. The success or failure of any bank depends on the quality of its management. Clearly, resourceful and able managers are prerequisite to achieving these aims. This course will enable the student to become aware of these problems and will assist him/her in reaching solutions. Prerequisite: None.

AIB 206 Bank Letters and Reports 4 0 0 4

This course is designed to aid the student in developing a mastery of the written language as it deals particularly with the everyday workings of the bank. Stress will be placed on the organization of ideas in a logical order, and to present them in a consistent and easily understood manner. Communication between the writer and recipient must carry ideas clearly from one mind to another and therefore the written language must ensure understanding. This course will stress clear and concise communication by letter, report, memorandum, and telephone. Prerequisite: None.

AIB 207 International Banking 4 0 0 4

This course begins with a definition of the world in which the international banker lives. International banking has become a most dynamic growth area dealing with the transfer of money from one country to another, the financing of trade, what exactly constitutes international agencies and how money is changed from one currency to another. The course discusses various credit instruments, basic principles of international lending and international credit agencies that supply funds. Prerequisite: None.

AIB 209 Installment Credit 4 0 0 4

In this course the techniques of installment lending are presented concisely. Emphasis is placed on establishing the credit, obtaining and checking information, servicing a loan and collecting the amounts due. Topics discussed are inventory financing, special loan programs, and public relations aspect of installment lending. Prerequisite: None.

AIB 210 Money and Banking 4 0 0 4

This course deals with the many aspects of the money and banking system. After completing the course requirements, the student will have a better understanding of the problems facing the money and banking system. In this course the student will learn of such problems as the limitations of our central banking control, the different types of spending, about our government and economic role here and abroad, and how they are affecting our money and banking system. This course describes the what and the why of our money and banking system. The modern banker must understand the system clearly if he is to identify clearly his industry's role in the American economy. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AIB 211 Federal Reserve System 4 0 0 4

In 1913, when the Federal Reserve Act was enacted, the economic problems of the world seemed relatively simple and economic systems relatively stable. Governmental intervention in economic life was minimal. Prior to World War I, the Federal government took little action to mitigate cyclical fluctuations or to relieve the hardships of depression. Changing economic conditions and the depression of the 1930's brought about problems which have been ameliorated through actions of Federal Reserve System. The Federal Reserve Bank continues to play an important part in the American economic scene. This course defines and discusses the many functions, effects, and organization of the Federal Reserve Bank as it influences commercial banking. Prerequisite: None.

AIB 213 Trust Functions and Services 4 0 0 4

This course describes the different types of trust functions and the duties of the trust officer. Variations in the trust laws among the states are stressed. The business and legal aspects of trust functions are kept clear and distinct and exclude detailed treatment of such matters that belong in a more specific study of law. Prerequisite: None.

AIB 214 Effective Speaking 4 0 0 4

In this course, Effective Speaking, students are given an opportunity to study all phases of speech situations. Having studied the basic principles involved in organizing and presenting a speech, the student is given suggestions to aid him in developing his speaking ability. The classroom is the forum in which each student is given an opportunity to use his skills in communicating with others. Prerequisite: None.

AIB 216 Introduction to Commercial Bank Lending 4 0 0 4

This is a new introductory course for bankers who wish to develop their skills and expand their knowledge in the field of lending to businesses. Major topics will be commercial lending; the lending process; portfolio management; and regulations and business development. Prerequisite: None.

AIB 219 Credit Administration 4 0 0 4

This course has been designed to assist in the training of lending officers and bank credit administration. It stresses the importance for a banking institution to develop and follow sound lending and credit administration policies. Methods of credit investigation and analysis, credit techniques, specific credit problems, and regular as well as unusual types of loans are presented and discussed. No attempt is made, however, to show the student when to grant or when to refuse a loan. Credit granting is more an art than a science and can only be developed by patience and practice, which is emphasized by this course. Prerequisite: None.

AIB 220 Business Financial Management 4 0 0 4

This course has the primary objective of acquainting the student thoroughly with the principles of finance as applied to the operations of a profit-seeking (non-bank) firm. Active participation in the process of financial administration and decision-making teaches the student to use the tools and techniques necessary for the efficient financial management of a modern business enterprise. An up-to-date overview of the activities of the modern business financial manager is provided. Prerequisite: None.

AIB 225 Home Mortgage 4 0 0 4

This course approaches the subject from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. A picture of the mortgage market is presented first, then the acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan processing and servicing, and finally the obligations of the mortgage loan officer in all overall portfolio management. Prerequisite: None.

AIB 227 Management of Commercial Bank Funds 4 0 0 4

This course deals with those necessary principles from which the student can derive an adequate philosophy of funds management. Differences between practices in large banks and smaller institutions are defined. The importance of funds management as the catalyst that brings together policies in the areas of loans, deposits, investments and capital, and relates each to the other is stressed. Prerequisite: None.

AIB 231 Savings and Time Deposit Banking 4 0 0 4

This course is designed to acquaint the student with the historical development of savings institutions and awareness of the basic economic function of the savings process. Different types of financial savings are reviewed to give a better understanding of deposit-type savings and other time accounts. The student, after completion of the course, will be familiar with problems and policies with respect to the current operation of savings institutions such as asset management, operations and control, supervision, examination, liquidity and marketing of savings services. Prerequisite: None.

AIB 232 Agricultural Finance 4 0 0 4

Reflecting the rapid growth of the off-farm agri-business sectors (the suppliers of farm inputs), this course emphasizes general principles associated with the evaluation of management resources which are more closely aligned with agricultural production. An understanding of agricultural finance should help the banker in satisfying the credit needs of modern agriculture. Prerequisite: None.

AIB 233 Analyzing Financial Statements 4 0 0 4

A primary function of banking is the extension of credit. To know how to extend credit soundly and constructively, a banker must be able to understand and interpret financial statements. This course has been carefully designed to give a thorough understanding of financial statements and their interpretation. It is soundly based on what actually occurs in the industry. Prerequisite: BUS 120.

AIB 239 Marketing for Bankers 4 0 0 4

This course is directed toward students and bank personnel who are unfamiliar with marketing principles as they pertain to the banking industry. Some of the topics covered in the course are fundamental concepts and philosophies of marketing; marketing information and research; production distribution, promotion and pricing strategies, and marketing planning. Prerequisite: None.

AIB 259 Law and Banking 4 0 0 4

The object of this course is to present simply but accurately the rules of law which underlie banking. Certain basic legal principles must be understood before any successful attempt can be made to master the commercial laws that support and control the banking industry. American commercial law is essentially now under the Uniform Commercial Code. The course, although broadly presenting commercial law principles, concentrates its attention on the Uniform Commercial Code as it deals with banking. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

Architectural Drafting Courses

ARC 1112 Architectural Estimating 3 0 0 3

The study of estimating tasks involved in architectural construction including approximate and detailed estimates. Instruction will be given in the areas of materials, cost, labor cost, plant and equipment cost, overhead cost, profit, and bid and contract procedures. Prerequisite: ARC 1265.

ARC 1145 Specifications and Contracts 3 0 0 3

A study of building codes and their effect in relation to specifications and drawings. The purpose and writing of specifications will be studied along with their legal and practical application to working drawings. Contract documents will be analyzed and studied for the purpose of client-architect-contractor responsibilities, duties, and mutual protection. Prerequisite: None.

ARC 1226 Graphic Communications I 3 0 3 4

The study of systems of graphic communications including orthographic projection and including the pictorial group; axonemetric, oblique, perspective; shades and shadows. Prerequisite: None.

ARC 1227 Graphic Communications II 3 0 3 4

A continuation of ARC 1226 (Graphic Communications I). See course description ARC 1226. Prerequisite: ARC 1226.

ARC 1228 Graphic Communications III 3 0 3 4

A continuation of ARC 1227. See course description ARC 1227. Prerequisite: ARC 1227.

ARC 1231 Architectural Drafting and Design I 3 2 6 6

The study of methods of drafting architectural working drawings; the design process and their relationship to each other. Also instruction will be given in drafting room organization and operation in conjunction with the architectural office. Prerequisite: None.

ARC 1232 Architectural Drafting and Design II 3 2 6 6

A continuation of ARC 1231 (Architectural Drafting and Design I). See course description ARC 1231. Prerequisite: ARC 1231.

ARC 1233 Architectural Drafting and Design III 3 2 6 6

A continuation of ARC 1232 (Architectural Drafting and Design II). See course description ARC 1231. Prerequisite: ARC 1232.

ARC 1238 Architectural Environmental Systems I 3 0 3 4

The study of architectural environmental systems with emphasis upon a comparison of different types of heating, air conditioning and electrical systems, their implications for architectural drafting room production of mechanical drawings. Prerequisite: ARC 1265.

ARC 1239 Architectural Environmental Systems II 3 0 3 4

A continuation of ARC 1238 (Architectural Environmental Systems I). See course description ARC 1238. Prerequisite: ARC 1238.

ARC 1241 Architectural Presentations I 3 2 6 6

The study of methods of production of architectural presentations. Instruction will be given in architectural delineation and architectural models. Prerequisite: None.

ARC 1242 Architectural Presentations II 3 2 6 6

A continuation of ARC 1241 (Architectural Presentations I). See course description ARC 1241. Prerequisite: ARC 1241.

ARC 1250 Site Surveying and Site Development 3 2 3 5

A study of site improvement methods including basic surveying instrumentation and topography, analysis and control of storm drainage, traffic flow and vehicular access, site design and landscaping. Prerequisite: ARC 1233.

ARC 1264 Materials and Methods of Architectural Construction I 4 0 6 6

Materials used in architectural construction will be studied. Their limitations as affected by the nature of the material, economic values, and codes will be stressed. Instruction will also be given in methods of residential and commercial construction. Prerequisite: None.

ARC 1265 Materials and Methods of Architectural Construction II 2 2 3 4

A continuation of ARC 1264 (Materials and Methods of Architectural Construction I). See course description ARC 1264. Prerequisite: ARC 1264.

Art Courses

ART 100 Freehand Sketching 5 0 0 5

Freehand Sketching introduces simple basic principles and techniques of drawing. To take the course, a student need only have an interest in learning to draw. As the course progresses, the student is guided step-by-step through graduated levels of skill. Prerequisite: None.

ART 101 In Our Own Image 5 0 0 5

This course focuses on people and the arts—what they care about and how they see things—and some basic notions about the fine arts, how they are created, the ways in which they communicate to people, and the criteria upon which they are judged. This course uses painting and sculpture, music, dance, theater, and film to explore the human arts experience. Prerequisite: None.

ART 102 Drawing and Composition I 1 2 0 2

This drawing course is designed for beginning students. The student will be introduced to various techniques and methods of drawing as well as problems of composing a picture. Still life, nature, and student models will be the subject matter. Prerequisite: None.

ART 103 Drawing and Oil Painting 1 2 0 2

This course is an introductory, first course in oil painting. It includes the study of color including the color wheel and its application in the use of oil pigments. Other major subjects are choice of subject for painting, composition, drawing on the prepared canvas, and techniques including underpainting, glazing, impacts, and varnishes, the care of colors, brushes, and palettes, and other basic oil painting techniques and practices. Prerequisite: ART 102.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ART 104 Art Appreciation 3 0 0 3

Art Appreciation is designed to establish an understanding of art, to develop an appreciation for the relationship between art and man, and to study art in a cultural environment. Prerequisite: None.

ART 105 Ceramics I 1 2 0 2

This is a basic course in the hand-building processes of ceramics as a fine art. Prerequisite: None.

ART 106 Ceramics II 1 2 0 2

Ceramics II is a continuation of Ceramics I with an emphasis on technique and an introduction to the pottery wheel. Prerequisite: ART 105.

ART 110 Pottery I 1 2 0 2

This course is designed to help develop basic skills and knowledge in wheel-thrown pottery and continues with advanced hand-building techniques. Prerequisite: ART 105 and ART 106.

ART 111 Pottery II 1 2 0 2

Pottery II is an advanced continuation of skills and knowledge developed in Pottery I in both wheel-throwing and hand-building techniques as well as the development of a working knowledge of pottery as a profession. Prerequisite: ART 110.

ART 112 Sculpture I 1 2 0 2

This course is designed to help develop basic skills and knowledge in various techniques and media in sculpture, and to help develop basic concepts of shape and form integration. Prerequisite: None.

ART 113 Sculpture II 1 2 0 2

This second course in sculpture is designed to help refine and improve basic skills and techniques already developed in Sculpture I and to explore new media on an individual basis. Prerequisite: ART 112.

ART 201 Applied Sketching Techniques 5 0 0 5

Applied Sketching Techniques is a college level course designed to review the fundamentals of freehand drawing, and introduce the student to the more advanced techniques and concepts of the art. The student will be given an opportunity to develop the ability to progress to more difficult and interesting forms of drawing. A previous art course is not required. Prerequisite: None.

ART 202 Drawing and Composition II 1 2 0 2

The purpose of this course is to teach the student good design and composition through drawing and the use of design principles. The student will also be introduced to new techniques and increase his/her skill with techniques introduced in ART 102. Prerequisite: ART 102.

ART 203 Painting 1 2 0 2

This is a continuation of ART 103 with greater emphasis on color and individual style. Prerequisite: ART 103.

ART 220 Drawing and Composition III 1 2 0 2

This course is a continuation of ART 202. This course offers the opportunity for advanced study of design and composition through various drawing techniques. Structure and color are also studied. Prerequisite: ART 202.

Audio-Visual Courses

AVA 201 Audio-Visual Aids 2 2 0 3

This course is designed to teach students the various types of audio-visual aids in planning activities. Included are equipment (projectors, cameras, etc.), bulletin boards, and photography. Prerequisite: None.

Biology Courses

BIO 92X Fundamental Biology Lab 3 0 0 4

An introduction to biological science, including chemical concepts necessary for a basic understanding of biology, and a study of cell origin, structure, and function. Enzymes will also be covered as well as the process of metabolism. Prerequisite: None. Corequisite: BIO 92Y.

BIO 92Y Fundamental Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 92X. Prerequisite: None. Corequisite: BIO 92X.

BIO 93X Fundamental Biology II 3 0 0 4

A continuation for Biology 92. An introduction to general principles and concepts of biology: cell structure, chemistry and function; differentiation; inheritance and genetics. Prerequisite: BIO 92. Corequisite: BIO 93X.

BIO 93Y Fundamental Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 93X. Prerequisite: BIO 92. Corequisite: BIO 93X.

BIO 94X Fundamental Biology III 3 0 0 4

An introduction to the general principles and concepts of ecology, with emphasis on man's role in his environment. Prerequisite: BIO 93. Corequisite: BIO 94Y.

BIO 94Y Fundamental Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 94X. Prerequisite: BIO 93. Corequisite: BIO 94X.

BIO 103X Human Structure and Function I 3 0 0 5

A general study of the structure and normal function of the human body with man identified as a living organism composed of living cells, tissues, organs, and systems. Included are the basic anatomical and functional aspects of the integumentary, muscular, skeletal and nervous systems. Prerequisite: High school biology or equivalent. Corequisite: BIO 103Y.

BIO 103Y Human Structure and Function Lab 0 4 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in 103X. Prerequisite: High school biology or equivalent. Corequisite: BIO 103X.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BIO 104X Human Structure and Function II 3 0 0 5

A continuation of the study of the structure and function of man as a living organism. Emphasis is placed on the special senses of vision and hearing and upon the circulatory, respiratory, digestive, reproductive, urinary and endocrine systems, and fluid and electrolyte balance. Prerequisite: BIO 103. Corequisite: BIO 104Y.

BIO 104Y Human Structure and Function Lab 0 4 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 104Y. Prerequisite: BIO 103. Corequisite: BIO 104X.

BIO 105X Basic Microbiology 3 0 0 4

An elementary course in microbiology introducing special terminology and the disciplines covered in the study of microbiology. Emphasis is placed on microbiological equipment and procedures, characteristics of microbes, specific microbial organisms such as bacterial cells, rickettsia, chlamydia, viruses, fungi, and protozoans, etc. Special treatment is given to microbial control, its purpose and its varied agents. Also included in microbial ecology of air, water, milk, food, and man. Microbial interactions with man with regard to normal flora and pathogenicity are covered. Prerequisite: High school biology or equivalent. Corequisite: BIO 105Y.

BIO 105Y Basic Microbiology Lab 0 2 0 0

Laboratory exercises emphasizing the ubiquity of microorganisms and their control. Basic microbiological laboratory techniques are developed by the student as well as basic microscopy techniques. Prerequisite: High school biology or equivalent. Corequisite: BIO 105X.

BIO 106X Human Anatomy and Physiology I 5 0 0 6

A course in anatomy and physiology of the human body with special emphasis on the morphological and physiological aspects of the body as an integrated whole, including cellular biology, and the cardiovascular, respiratory, skeletal and muscular systems. Laboratory experiments are integral parts and exist as vital support components to the lecture material. Prerequisite: BIO 93 or BIO 202 and CHM 96 or CHM 102 or equivalent. Corequisite: BIO 106Y.

BIO 106Y Human Anatomy and Physiology Lab 0 3 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 106X. Prerequisite: BIO 93 or BIO 202 and CHM 96 or CHM 102 or equivalent. Corequisite: BIO 106X.

BIO 107X Human Anatomy and Physiology II 5 0 0 6

The student will cover the nervous, digestive, urinary, reproductive, and endocrine systems. Laboratory experiments are integral parts and exist as vital support components to the lecture material. Prerequisite: BIO 106. Corequisite: BIO 107Y.

BIO 107Y Human Anatomy and Physiology Lab 0 3 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 107X. Prerequisite: BIO 106. Corequisite: BIO 107X.

BIO 108X Microbiology 5 0 0 6

A general study of microbiology differentiating microbes and other organisms. Emphasis will be placed on microbial metabolism and structure, including energy production and usage. The variety and ubiquity of microbes are also covered with a discussion of control measures. Special emphasis is given to microbial interactions with man, the balance between virulence and resistance, and the major microbial diseases of man by portal of entry. Prerequisite: BIO 202 or BIO 106 and CHM 96 or CHM 102. Corequisite: BIO 108Y.

BIO 108Y Microbiology Lab 0 3 0 0

A basic course in laboratory methods and techniques as they relate to the supporting instructional materials in Biology 108 lecture. Prerequisite: BIO 202 or BIO 106 and CHM 96 or CHM 102. Corequisite: 108X.

BIO 110X Biological Chemistry for the Health Sciences 3 0 0 4

An elementary course in biological chemistry as it relates to the allied health technologies. Emphasis will be placed on basic inorganic and organic chemistry as they relate to the biological sciences. Special treatment will be given to biochemistry stressing the major classes of biochemical molecules and their involvement in basic physiological processes. Prerequisite: CHM 96 or CHM 102. Corequisite: BIO 110Y.

BIO 110Y Biological Chemistry for the Health Sciences Lab 0 3 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to supporting instruction taking material of CHM 110X. Prerequisite: CHM 96 or CHM 102. Corequisite: BIO 110X.

BIO 201X Biology I 4 0 0 5

An introduction to principles and concepts of biology; a study of the chemical and cellular basis of life with a general and comparative review between plants, invertebrate, and vertebrate animals. On the systems level, emphasis is placed on man and the higher plants. Prerequisite: None. Corequisite: BIO 201Y.

BIO 201Y Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the support instructional materials in BIO 201 lecture. Prerequisite: None. Corequisite: BIO 201X.

BIO 202X Biology II 4 0 0 5

A continuation of Biology 201 with emphasis on plant and animal reproduction and development, genetics, evolution, and ecology. Prerequisite: BIO 201. Corequisite: BIO 202Y.

BIO 202Y Biology II Lab 0 2 0 0

The primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in Biology 202 lecture. Prerequisite: BIO 201. Corequisite: BIO 202X.

BIO 208 Pathology for Paramedical Personnel 3 0 0 3

An introductory course of pathology of various systems. Radiographs will be used when pathology is demonstrated on film. Most frequent and serious problems, major manifestations and specific diseases of the various systems will be discussed. Case studies from clinical education will be used as part of this course requirement. Prerequisite: RDT 205 and 216.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BIO 1005 Anatomy and Physiology 0 2 0 1

This course is a survey of general anatomy and physiology to acquaint the dental assisting student with basic body structure and function, particularly as it relates to the general and oral health of the patient. Topics to be covered include cell structure and function, tissue types, organs and systems. Prerequisite: None.

BIO 1013 Microbiology 2 0 0 2

This course is designed to provide dental assisting students with a basic background in the classification and characteristics of microorganisms. To be included are host-parasite relationships and control of microorganisms by physical and chemical agents. Prerequisites: BIO 1005 and DEN 1011.

BIO 1092 Microbiology 3 2 0 4

A course designed to provide the student with a basic understanding of microbiology. Instruction includes a survey of microbes of medical importance, bacterial morphology, physiology, growth requirements, and special emphasis on transmission and control. Prerequisite: None.

Building Maintenance Codes Courses

BMS 1133 Building Codes and Laws 4 0 0 4

Building code requirements pertaining to residential and commercial structures. General study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Reading and interpretation of local, state and national codes. Prerequisite: None.

BMS 1134 Building Codes and Laws—Plumbing 4 0 0 4

Building code requirements pertaining to residential and commercial structures. General study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Reading and interpretation of local, state and national codes. Prerequisite: None.

BMS 1135 Electrical Code and Law Review 4 0 0 4

This course is a review of the National Electric Code for the purpose of going to take the State Contractor's License. It covers Articles 210, 215, 220, 230, 240, 250, 300, 310, 370, 410, 430, and 500 of the National Electrical Code.

Business Courses

BUS 85 Typewriting I 2 3 0 3

Introduction to the touch system of keyboarding with emphasis on correct techniques and keyboard familiarization. Problems involve centering, simple letters, and tabulation. Prerequisite: None.

BUS 86 Typewriting II 2 3 0 3

Instruction emphasizes the development of keyboarding with further mastery of correct typewriting techniques. These skills and techniques are applied in typing tabulation, manuscript, and personal and business correspondence problems. Prerequisite: BUS 85 or equivalent.

BUS 94 Bookkeeping I 3 2 0 4

An introductory bookkeeping course designed to give an overview of the complete bookkeeping cycle in its simplest form. Prerequisite: None.

BUS 95 Bookkeeping III 3 2 0 4

The course continues the expansion of basic bookkeeping principles begun in BUS 98. It covers the use of special journals and many of the non-routine transactions most businesses encounter, such as notes and interest, sales tax, fixed assets, depreciation and others. It also introduces those aspects of partnership and corporation accounting which differ from the sole proprietorship. Prerequisite: BUS 98.

BUS 98 Bookkeeping II 3 2 0 4

A continuation of the basic bookkeeping course, designed to cover the bookkeeping problems of a merchandising business including payroll and payroll taxes. Prerequisite: BUS 94.

BUS 99 Consumer Economics 3 2 0 4

A study of the economic principles involved in the personal and family problems of earning an income, wise management of money and savings, protection from loss through insurance, and the procurement of a home. Prerequisite: None.

BUS 101 It's Everybody's Business 5 0 0 5

This course is designed as an introduction to business, covering the range of operations which constitute the contemporary business scene and presents the latest business theories. Prerequisite: None.

BUS 102 Typewriting 2 3 0 3

Introduction to the touch system of keyboarding with emphasis on correct techniques, keyboard mastery, simple business correspondence, tabulation, and manuscripts. Prerequisite: None.

BUS 103 Typewriting 2 3 0 3

Instruction emphasizing the development of speed and accuracy with further mastery of correct keyboarding. Skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 102 or equivalent.

BUS 104 Typewriting 2 3 0 3

Emphasis on keyboarding technique improvement and production typing. Attention given to the development of the student's ability to produce mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 102.

BUS 105 Typewriting 2 3 0 3

Emphasis on technique improvement and production typing. Attention focused on the development of the student's ability to function as a word processor producing mailable copy measured by office standards. Production input modes cover arranged, unarranged, handwritten, rough draft, and incomplete copy. Prerequisite: BUS 104.

BUS 106 Shorthand 3 2 0 4

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 106A Shorthand 2 1 0 2

The first half of BUS 106. Course divided into two parts to provide additional preparation time for night students who hold full-time jobs. Refer to BUS 106 for course description. Prerequisite: None.

BUS 106B Shorthand 1 1 0 2

The final half of BUS 106. Course divided into two parts to provide additional preparation times for night students who hold full-time positions. Refer to BUS 106 for course description. Prerequisite: BUS 106A.

BUS 107 Dictation and Transcription 5 2 0 6

Review of shorthand theory and the introduction of the mailable letter and the speed take on new-matter dictation. Minimum dictation rate of 60 words per minute required for five minutes on new material. Prerequisite: BUS 106 or equivalent and BUS 102 or equivalent. Corequisite: ENG 110.

BUS 108 Dictation and Transcription 3 2 0 4

Continued review of theory and further emphasis on the transcription of mailable copy. Minimum dictation rate of 80 words per minute for five minutes on new material. Prerequisites: BUS 107 and BUS 104.

BUS 109 Introduction to Desk-Top Computers 0 2 0 1

A basic course for students who wish to gain hands-on experience in the use of microcomputers, learn how to enter data and run a program, learn the basic logic of flowcharting and learn how to write simple programs. Prerequisite: None.

BUS 110 Business Math with Calculators 2 3 0 3

A beginning course emphasizing the touch operation on ten-key electronic calculators. Students receive instructions in computing interest; calculating percent of increase or decrease; calculating payroll records; reconciling bank statements; calculating selling price, cost, and markup; calculating installment purchases; discounting notes; computing chain discounts; computing prorating and sequential math problems; and computing various depreciation problems. Prerequisite: None.

BUS 111 Shorthand Speed Building 0 5 0 2

A course designed to reinforce shorthand theory and to develop the ability to construct new outlines under the stress of dictation. Minimum dictation rate of 60 words per minute for five minutes on new material. Prerequisites: BUS 106 or equivalent and BUS 102 or equivalent.

BUS 112 Filing 3 0 0 3

A study of the entire records management cycle which stresses the fundamentals of indexing and filing, combining theory and practice through the use of a practice set. Alphabetic, numeric, geographic, and subject filing are emphasized. Electronic storage and retrieval equipment and procedures are discussed. Prerequisite: None.

BUS 113 Business-Oriented Computer Programs 2 2 0 3

A course for students who wish to develop skills in the use of business-oriented computer programs and their application for business and personal uses. The course is especially useful for students who want to be able to use microcomputers without the necessity of learning a computer language. Prerequisite: BUS 109.

BUS 115 Business Law I 3 2 0 4

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, real property, and wills. Prerequisite: None.

BUS 116 Business Law II 3 2 0 4

Includes the study of laws pertaining to sales, negotiable instruments, bailments, and agency. Prerequisite: BUS 115.

BUS 119 Accounting for Non-Business Majors 5 3 0 6

A study of the mechanics of accounting. The students analyze, record, summarize and report information for service and mercantile enterprises. A study of payroll, checking account records, and cash control is included. This course is designed for those students who are required to take only one quarter of accounting. It will not be accepted in lieu of BUS 120 or BUS 121 nor does it meet the prerequisite requirement for BUS 121. Prerequisite: None.

BUS 141 Medical Terminology and Vocabulary 3 2 0 4

To provide students with knowledge of medical terms in order that they may carry out the duties required by doctors, hospitals, clinics, etc. Prerequisite: None.

BUS 183 Terminology and Vocabulary I 5 0 0 5

A course designed to increase and improve the student's vocabulary and spelling ability for word processing. Special emphasis is placed on business and professional vocabularies. Prerequisite: None.

BUS 184 Terminology and Vocabulary II 5 0 0 5

A continuation of the study to increase and improve the student's vocabulary and spelling ability for word processing. Emphasis is placed on business and special vocabularies as well as a review of grammar, punctuation, and basic business information in preparation for employment testing. Prerequisite: BUS 183.

BUS 185 Business Organization 3 0 0 3

Designed to provide the student with an understanding of the general concepts of business. Basic materials are presented which will provide an understanding of both the major facets of the business world and the interrelationships of these facets. Cases are provided which allow feedback from the students thereby increasing their retention of information, class participation, ego involvement, and understanding of application of business principles and knowledge. Topics covered include the foundations of responsibilities of business, management of the business firm, human factors in management, financing the business firm, quantitative aids of the business manager, marketing and distribution, and legal, governmental, and social environment. Prerequisite: None.

BUS 204 Word Processing Applications I 2 6 0 5

The secretarial science and general office students are involved with applications utilizing word processing equipment. These applications include a review of letter styles, manuscripts, and statistical reports. Emphasis is placed on increasing individual production rates in planning and typing mailable office copy. Prerequisite: BUS 211.

BUS 205 Word Processing Applications II 2 6 0 5

An accumulation of skills and techniques in typing from rough-draft material in a simulated office approach. Stress is placed upon the student's ability to make decisions, use initiative, place priorities upon work, and produce mailable copy in form and content using word processing equipment. Prerequisite: BUS 204.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 206 Dictation and Transcription I 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy and word processing skills is further stressed. Individual dictation speeds are satisfied in lab and speed-building exercises. Minimum dictation rate of 90 words per minute for five minutes on new material. Prerequisites: BUS 105 and BUS 108.

BUS 120 Accounting I 5 3 0 6

The basic principles of bookkeeping including the analysis and recording of transactions; preparation of work sheets and financial statements. The theory and recording of notes, interest, inventories, fixed assets and depreciation, and accruals and deferrals. Prerequisite: None.

BUS 121 Accounting II 5 3 0 6

This course includes a study of cash control systems including use of a bank account and voucher system; a payroll system with controls, documentation and reports; also the basic concepts and theories applied to the recording of transactions. Transactions affecting partnership capital and corporation capital stock, retained earnings, bonds and investments are studied in detail. Prerequisite: BUS 120.

BUS 122 Managerial Accounting 5 3 0 6

Accounting for control and decision making purposes including departmental and branch accounting, cost accounting and budgeting. Also, includes managerial reporting and analysis as well as preparation of funds and cash flow statements. Prerequisites: BUS 120 and BUS 121.

BUS 123 Business Finance 2 2 0 3

Basic financial management including the study of the nature of financial management and the business environmental financial analysis, planning and control; long-term investment decisions; and valuation and financial structure. Prerequisite: BUS 120.

BUS 124 Business Finance 2 2 0 3

A continuation of BUS 123 including the study of working capital management, long-term financing and valuation in mergers and corporate readjustment. Prerequisite: BUS 123.

BUS 125 Personal Finance 3 0 0 3

A course designed to enable the student to analyze and direct his/her own or family's financial affairs. The student is given a general overview in the areas of money management, borrowing, investment principles, and retirement. Prerequisite: None.

BUS 126 Personal Finance and Money Management 5 0 0 5

A general course that covers the subjects of work and income; creating workable budgets and spending plans; income taxes and recent tax reform laws; housing transactions; insurance, laws affecting credit and borrowing; investments and financial planning for later years. Prerequisite: None.

BUS 127 Financial Analysis with Computers 2 4 0 4

A course for students who wish to develop skills in the use of microcomputers while, at the same time, expanding their knowledge in the field of financial management. Prerequisites: BUS 123 and BUS 124.

BUS 207 Dictation and Transcription II 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy and word processing skills are further stressed. Individual dictation speeds are satisfied in lab and speed-building exercises. Minimum dictation rate of 100 words per minute for five minutes on new material. Prerequisite: BUS 206.

BUS 208 Dictation and Transcription III 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy and word processing skills are further stressed. Individual dictation speeds are satisfied in lab and speed-building exercises. Minimum dictation rate of 110 words per minute for five minutes on new material. Prerequisite: BUS 207.

BUS 210 Information Processing Concepts 3 0 0 3

A course designed to introduce the student to information processing history, principles, management, and terminology. Input, processing and storage, output, and distribution technologies are discussed. Prerequisite: None.

BUS 211 Word Processing and Reprographics 2 6 0 5

The secretarial science and general office students receive instruction in the manipulation of the proportional spacing typewriter and word processing equipment. Extensive training in the preparation of materials for the use of various duplicating equipment is included. Prerequisites: BUS 105 and BUS 210.

BUS 214 Secretarial Procedures 3 2 0 4

A course designed to help the secretary become a more productive and valuable employee as either an administrative or correspondence secretary. Personality development and efficient work habits are stressed. Semi-executive duties involving secretarial decision-making and planning are included to promote job enhancement. Prerequisite: BUS 211.

BUS 221 Intermediate Accounting I 3 2 0 4

Review of the accounting process and a thorough understanding of the valuation procedures for balance sheet presentation of current assets. Prerequisites: BUS 120 and BUS 121.

BUS 222 Intermediate Accounting II 3 2 0 4

Review of the accounting process and a thorough understanding of the valuation procedures for balance sheet presentation of fixed and intangible assets, and current liabilities. Prerequisite: BUS 221.

BUS 223 Intermediate Accounting III 3 2 0 4

Review of the accounting process and a thorough understanding of balance sheet presentation of long-term liabilities, paid in capital, and retained earnings. Also, calculating earnings per share and preparation of Statement of Changes in Financial Position. Prerequisite: BUS 222.

BUS 224 Advanced Accounting 5 3 0 6

Advanced accounting theory and principles as applied to special accounting problems, bankruptcy proceedings, estates and trusts, consolidation of statements, partnership accounting, and parent and subsidiary accounting. Prerequisite: BUS 223.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 225 Cost Accounting 5 3 0 6

The nature and purpose of cost accounting; accounting for direct materials, labor and factory overhead; job cost, process cost and standard cost procedures. Accumulation, recording and reporting of cost data. Prerequisite: BUS 122.

BUS 227 Managerial Accounting 5 3 0 6

The student will use accounting data to prepare various reports used by management for planning and control including, but not limited to, budgets, gross profit and departmental profit analysis, break-even analysis, cost-volume-profit analysis, differential and comparative cost analysis, capital expenditure planning, and opportunity cost analysis. The student will also be introduced to the use of linear programming for planning and decision making. Prerequisite: BUS 225.

BUS 228 Personal Income Taxes 2 2 0 3

A study of the Internal Revenue Code as it applies to income tax for individuals. Prerequisite: None.

BUS 229 Federal Income Taxes 3 4 0 5

A study of the Internal Revenue Code as it applies to income tax for individuals, partnerships and corporations. Prerequisite: BUS 121.

BUS 233 Personnel Management 4 0 0 4

A study of the important traditional, current, and emerging practices to help the student develop a practical, realistic, and modern view of personnel management. Consideration is given to key problems in the areas of employee selection, hiring, and placement; training; wage and salary administration; promotion, transfer and separation; and personnel services. Prerequisite: None.

BUS 234 Business Management 5 0 0 5

A course designed to introduce the student to the basic principles of management including planning, organizing, staffing, directing, and controlling, and to provide the student with the necessary skills and insights necessary to make a more efficient transition into a managerial position. Cases are provided to help supplement the text material, to provide knowledge of actual situations, and to encourage maximum student participation. Prerequisite: None.

BUS 235 Small Business Management 3 0 0 3

This course prepares the student to initiate and manage a small business. The course is applicable for any student who is contemplating going into business, is in the process of setting up a business, or who is already operating a business. Topics covered include small business environment, managerial functions, initiating a business, marketing, financial controls, administrative controls, and governmental controls. Prerequisite: None.

BUS 239 Marketing 5 0 0 5

The introductory course is designed to emphasize key concepts and issues underlying the modern practice of marketing. Modern-day illustrations are used in order to provide better examples of how certain concepts work within the total marketing system. The four main decision areas in marketing—products, distribution, promotion, and pricing are covered as well as the interactions of marketing and society. Prerequisite: None.

BUS 243 Advertising 5 0 0 5

The course is a presentation of the management, planning, creation, and use of advertising in a non-technical manner in order to provide the students with an understanding and background that will allow them to continue their study in this area. Changes in the advertising field and things that have influenced these changes are discussed. The concepts and materials of advertising that have proven to be successful through the years are also discussed in the course. Prerequisite: None.

BUS 245 Retailing (Principles & Practices) 5 0 0 5

The course is an introductory course to the retail field and how it functions in our economic system. Included are the retail structure, functions performed, and principles governing effective operation and managerial problems which will enable the student to make retail decisions based on the principles and practices of retailing as well as social and economic trends. Prerequisite: None.

BUS 246 Textiles 3 0 0 3

Introductory course to bring language of the field and provide the basic information for decision-making about the selection, care and use of textiles as applied to marketing and retailing. Prerequisite: None.

BUS 247 Business Insurance I 3 0 0 3

A presentation of the basic principles of life, health and accident insurance and their application. Also included are the principal topics on which State examinations for licenses as life and/or health and accident agents will be based. Prerequisite: None.

BUS 248 Insurance Principles & Procedures 3 0 0 3

A presentation of the basic principles of life, health, property, and automobile insurance. Emphasis is placed on the role of the secretary in the specialized office as well as in the multiple-line agency offices. Prerequisite: For Secretarial Science & General Office Students only.

BUS 249 Buying and Merchandising 2 2 0 3

Buying and Merchandising addresses the problems encountered by retail buyers in a decision-making approach. Techniques are introduced for buying merchandise control, pricing and operating analysis. Prerequisite: BUS 245.

BUS 251 Consumer Behavior 3 0 0 3

The study of consumer behavior is necessary for the marketer to succeed in a highly competitive market environment. Management must be sensitive to unmet consumer needs in order to respond with profitable products and services. This course examines consumer motivation and behavior, giving a clearer understanding of the marketing environment. Prerequisite: BUS 239.

BUS 257 Business Insurance II 3 0 0 3

A presentation of the business uses of life and health insurance, including proprietorship, partnership and corporation continuation problems, and their solutions through the use of buy-sell agreements properly funded to preserve and distribute business values. Other business uses of life and health insurance, such as a key-man insurance, non-qualified deferred compensation plans and split-dollar plans are covered as well as corporate recapitalizations, professional corporations and business use of property and liability insurance. Prerequisite: BUS 247.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 260 Government and Business 2 2 0 3

A course dealing with political trends and government activity which affect business. Major topics covered are the distribution of powers within our multi-unit system of government, the constitutional limitations that restrict government in regulating business, the different powers of the governments and the regulations that have been imposed under their authority, and the actual problems of administration of government regulations.

BUS 261 Introduction to Machine Transcription 2 5 0 4

A course that acquaints the student with dictation-transcription equipment. The student is introduced to mailable transcription, which involves correct spelling and punctuation. Prerequisite: BUS 104. Corequisite: ENG 110.

BUS 262 Machine Transcription 2 3 0 3

This course develops the skill of direct transcription from oral dictation to mailable typewritten form. Word processing decisions in editing, punctuation, spelling, and formatting are emphasized. Prerequisites: BUS 105 and ENG 110, and BUS 261 for General Office students.

BUS 263 Payroll Taxes 3 0 0 3

An examination of federal, State, and local laws as they pertain to payroll taxes. Includes a review of the record-keeping needs to meet the information demand of the taxing authority. Also gives insight into the different payroll systems and accounting procedures used in relation to payroll taxes. Prerequisite: None.

BUS 269 Auditing 3 2 0 4

The auditing standards and auditing procedures that are necessary in order for the auditor to be able to express an opinion as to the fairness of financial statements prepared by the client. Prerequisites: BUS 223 and BUS 115.

BUS 270 Office Practice Seminar 3 0 0 3

This course is designed to further involve students in projects and duties that will be encountered on the job. A review of office procedures and attitudes encountered in the internship is also analyzed. Prerequisite: Permission of Instructor.

BUS 271 Office Management 2 2 0 3

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and solving office problems. Also, includes on-site visitations to cross-section of actual office situations. Prerequisite: BUS 206. Corequisite: BUS 214.

BUS 272 Supervision 3 0 0 3

Introduces the basic responsibilities and duties of the supervisor and his relationship to his supervisors, subordinates, and associates. Its major emphasis is in the area of human relations, but it does provide the student with a good deal of practical advice in such areas as communications, evaluation, grievance procedure, and personal growth. More than this, it attempts to work on attitudes of people about people while retaining the necessary amount of flexibility that is required in a course of this nature. Prerequisite: None.

BUS 275 Production Management 4 0 0 4

A study of the production system and its functions. Emphasis is placed upon the interaction aspects of the goods fabrication function with the related elements of manufacturing and service organizations. Prerequisite: None.

BUS 276 Marketing Management 4 0 0 4

A study of the management of the total marketing function in modern businesses. Emphasis will be on product planning and development, promotion planning, pricing, marketing organization, sales forecasting, managing sales personnel, and customer servicing. Prerequisite: None.

BUS 277 Financial Management 4 0 0 4

A study of the nature of financial management and how finance relates to the other functions of the business firm. Emphasis is placed on working capital management, intermediate and long-term financing, capital budgeting and cost of capital, and major financial management problems such as merger and reorganization plans. Prerequisite: None.

BUS 279 Stocks and Bonds 3 0 0 3

Focuses on the development of a coherent and logical framework of thought for coming to decisions about investment policy. Selection and management of stock and bond portfolios of individual investors and the formulation of suitable portfolio policies and their revisions to meet changing conditions are emphasized. Prerequisite: None.

BUS 282 Business Statistics I 5 0 0 5

An introductory course to general statistical principles which will be found useful to all individuals regardless of their fields of specialization. Emphasis will be oriented toward business and industrial concepts. The course presents clear statements or pertinent definitions, theorems and principles, followed by problems drawn from actual business statistical situations. Prerequisite: One year high school algebra or equivalent.

BUS 285 Salesmanship 5 0 0 5

The course is designed to emphasize the necessity of selling skills in a modern business career. Emphasis is placed on industrial selling, legal aspects of selling, and the techniques involved in various types of sales situations. The selling process is given a thorough step-by-step treatment in order to expose the student to vital concepts with which he/she must be acquainted. Prerequisite: None.

BUS 286 Contemporary Business and Economic Problems 3 0 0 3

A course designed to identify and analyze significant national and local business economic problems. The student will evaluate the historical, economic, technological, and sociological causes. The ability of the student to relate his personal value system and his philosophy of management to potential solutions is stressed. Prerequisite: None.

BUS 287 Commercial Design and Display 2 4 0 3

The course provides background in design as applied to commercial display. Included are demonstrations, creations and observations of displays encouraging the student to obtain a well-rounded knowledge of commercial display. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 288 Fashion in Retailing 2 2 0 3

The course is designed to meet the needs of virtually all students in the field of marketing and retailing whether they intend to gain a career in fashion merchandising or not. The principles and concepts involved in the field of fashion merchandising are presented in such a manner as to provide the students with the skills needed to fulfill their job requirements. The course covers the history and movement of fashion apparel and accessories, fashion buying and planning, and fashion promotion and coordination. Prerequisite: None.

BUS 290 Secretarial Internship 1 15 0 6

This course provides on-the-job secretarial work experiences. The employer and the type of work experience must be approved by the advisor. Internship may be waived if the student can submit a statement from previous employers showing at least two years' experience in the profession verifying the student's proficiency in the prescribed experience factors for BUS 290. Prerequisite: Consent of Advisor and 1.85 QPA.

BUS 291 Distribution Management 5 0 0 5

This course will divide the study of distribution management into two parts. Students will be introduced to the major topics of both physical distribution management and traffic/transportation management. Case studies will be included to develop seasoned judgment in these areas. Prerequisite: BUS 239.

BUS 1103 Small Business Operations 3 0 0 3

An introduction to business with emphasis placed on basic business law, business forms and records, financial problems, employer-employee relations, and problems of starting and operating a small business. Prerequisite: None.

Carpentry Courses

CAR 1101 Carpentry 5 0 15 10

A brief history of carpentry and present trends of the construction industry. The course will involve operation, care, and safety of carpenter's hand tools and power tools in cutting, shaping, and joining construction materials used by the carpenter. Major topics of study will include theoretical and practical applications involving materials and methods of construction, preparation of the building site, building layout, footings and foundation wall construction. Prerequisite: None.

CAR 1102 Carpentry: Framing 5 0 15 10

Instruction is given in the principles and practices of frame construction beginning with the foundation sills and including floor joist, bridging, subflooring, wall framing, roughing in of window and door openings, ceiling joist, rafters, bracing, and sidewall and roof sheathing. Selection and application of all materials are included. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction and truss construction. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as electrical, air conditioning, heating and plumbing. Prerequisites: CAR 1101 and DFT 1110.

CAR 1103 Installation of Millwork and Cabinetry **5 0 15 10**

Installation of cabinetry and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment will be emphasized in learning methods of installation of millwork and cabinetry. Basic construction practices of cabinetmaking will include measuring, layout and installation of base and wall cabinets, door and window frames, stairs, and interior and exterior cornice and trim. Materials and finishes will also be studied. Prerequisites: CAR 1102 and DFT 1111.

CAR 1104 Carpentry: Finishing **5 0 15 10**

Exterior and interior trim and finish carpentry will complete the general carpentry program. Included will be materials and application methods used in finish carpentry such as exterior siding, exterior cornice and moldings, finish flooring, paneling, door frames and trim, doors, window trim, molding, interior trim, installation of hardware, installation of built-in equipment and cabinets. Prerequisites: CAR 1103, CAR 1113.

CAR 1106 Basic Woodworking **3 0 3 4**

This course provides the knowledge necessary to attain success in woodworking projects attempted by the homeowner, hobbyist, and apprentice. An explanation of the basic rules governing the safe use of hand tools and power tools is given. This is accomplished through classroom instruction, shop demonstration, and hands-on experience. An introduction is given to the various materials and their uses. The student is required to construct a suitable project to demonstrate proficiency in the proper use of tools and materials. Prerequisite: None.

CAR 1107 Advanced Woodworking **3 0 3 4**

A continuation of CAR 1106. The student is introduced to joints, and the art of jointery is examined in depth, along with some of the many applications of the various joints. A study of projects of more complex design is also stressed. Emphasis is upon construction of a suitable project. Prerequisite: CAR 1106.

CAR 1113 Carpentry Estimating **3 0 3 4**

A practical course in quantity take-off from prints of jobs performed by the carpenter and in figuring the quantities of materials needed, and cost of building various components and structures. Prerequisites: DFT 1111 and MAT 1110.

CAR 1114 Carpentry Building Codes **3 0 0 3**

A study is made of building codes and the minimum requirements for local and State construction regulations. This involves safety, sanitation, mechanical equipment and materials. Also, a review is made of the minimum property requirements of the Federal Housing Administration and the North Carolina State Code. Prerequisite: CAR 1103. Corequisite: CAR 1104.

Commercial Art Courses

CAT 1108 Sketching, Drawing and Composition **2 0 6 4**

An introduction to the basic techniques and materials of sketching and drawing. Emphasis will be placed on drawing mediums, surfaces, and problems relating to the art of combining parts to produce the harmonious whole. Encouragement will be given in graphic expression. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

CAT 1111 Reproduction Processes I 3 0 6 5

The study of methods and techniques of reproduction including diazo, black and white photographic processes, microfilm process, and use of electrostatic type equipment. Prerequisite: None.

CAT 1112 Reproduction Processes II 3 0 6 5

A continuation of Reproduction Processes I including instruction in color photographic processes. Prerequisite: CAT 1111.

CAT 1113 Reproduction Processes III 3 0 6 5

A continuation of Reproduction Processes II including instruction in advanced methods and techniques of photographic processes. Prerequisite: CAT 1112.

CAT 1114 Presentation Techniques 3 2 0 4

This course is an introduction to basic presentation techniques. Included are drawings (informal and formal), verbal and three-dimensional techniques.

CAT 1115 Fundamentals of Photography I 1 2 0 2

Introduction to the principles governing image formation. Light, optics, camera mechanics, latent image, development, and basic densitometry are studied to establish the technical relationship of subject and photographic image. Assignments stress consistent exposure and darkroom techniques. Prerequisite: None.

CAT 1116 Fundamentals of Photography II 1 2 0 2

A continuation of CAT 1115, Fundamentals of Photography I. Basic laboratory methods and photographic processes are stressed. Prerequisite: CAT 1115.

CAT 1120 Creative Problem Solving 2 0 6 4

The study of basic skills and related information required to solve problems by organizing the thought processes, planning, and application of available and appropriate resources. Prerequisite: None.

CAT 1121 History of Graphics and Art 4 0 0 4

An introduction to the basic concepts and philosophies that govern the development of art. Prerequisite: None.

CAT 1126 Lettering and Type 1 0 3 2

Hand-lettering equipment and materials, type and copy-fitting. Emphasis is placed on the use of type and lettering as an element of visual communications. Prerequisite: None.

CAT 1201 Commercial Art I 3 0 9 6

An introduction to basic layout and design fundamentals and principles. Emphasis placed on line, two and three dimensional shapes, letter indication, sketching, equipment and materials of the art and design profession. Prerequisite: ARC 1128.

CAT 1202 Commercial Art II 3 0 9 6

Advanced material in drawing, basic design, lettering equipment and materials. Emphasis is placed on 2 and 3-dimensional form, perspective, sketching rough and finished lettering. Laboratory consists of assigned graphical problems with critique by class participation. Prerequisite: CAT 1201.

CAT 1203 Commercial Art III 3 0 9 6

Layout and design for printing. Lab exercises consist of comprehensive art form for presentation on magazine covers, book covers, textile designs, furniture designs, fashion figures, displays and exhibits, assigned problems with critique by class. Prerequisite: CAT 1202.

CAT 1211 Graphic Arts I 1 0 3 2

An introduction to preparing art for printing. The student is acquainted with the nature, function, and elements of mechanical art, tools, and materials required for its execution and related terminology. Prerequisite: CAT 1112.

CAT 1212 Graphic Arts II 1 0 3 2

Practice in preparing art for printing is continued with greater emphasis on mechanical proficiency and accuracy of work. Prerequisite: CAT 1211.

CAT 1213 Graphic Arts III 1 0 3 2

Experience includes the introduction and practice of preparing art for multicolor printing and the principles and techniques of mechanical color separation. Students will undertake more complex mechanical art problems. Prerequisite: CAT 1212.

CAT 1221 Life Study I 3 0 6 5

A study of body structure. Emphasis on proportioning masses and movement through graphic interpretation and response. Prerequisite: CAT 1110.

CAT 1222 Life Study II 3 0 6 5

Continuation of Life Study I using the figure as our environmental element in daily activities. Distortion of the figure in the form of cartoon, illustrations and other experimental use. Prerequisite: CAT 1221.

CAT 1231 Advertising Illustration I 4 4 0 6

Concentration on the illustrative aspect of graphic design. A comprehensive approach to tools, equipment, materials and utilization of illustration. Prerequisite: CAT 1201 and CAT 1211.

CAT 1232 Advertising Illustration II 4 4 0 6

Assigned problems in advanced illustration. Emphasis placed on originality and readiness of student. Prerequisite: CAT 1231.

CAT 1251 Advertising Principles 5 0 0 5

A comprehensive survey of the history and development of advertising including economic and social values. An introduction to advertising media and current publications in the field. Prerequisite: None.

CAT 1260 Resume and Portfolio Production 3 2 3 5

Preparation of the student for employment including portfolio, resume, speech, self-presentation and professional procedures. Prerequisites: CAT 1203, CAT 1213, and CAT 1232.

Chemistry Courses

CHM 93 Chemistry, Level I 4 0 0 4

Introduction of the physical and chemical properties of substances, chemical changes, elements, compounds, chemical bonds, the periodic law, atomic structure, chemical formulae and equations, the gas laws and molecular composition of gases and the concentration of solutions. This course should meet the various curricular requirements for an introductory course in chemistry. Prerequisite: None. Corequisite: Algebra or equivalent.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

CHM 96X Chemistry, Level 2 3 0 0 5

A continuation of Chemistry 93 with special emphasis placed upon solutions, concentrations of solutions, influence of concentrations on the freezing-point depression and the boiling-point elevation, ionization, strong and weak electrolytes, hydrolysis of salts, calculations involving the pH of acids, bases and salts, buffer solutions, titrations, ionization constants, solubility of weak acids, colloidal suspensions and absorption. A brief introduction to the types of organic compound's suspensions and absorption. A brief introduction to the types of organic compounds and the nomenclature of the important compounds. Laboratory experiments selected will correspond to the material covered during this course. Prerequisite: CHM 93. Corequisite: CHM 96Y.

CHM 96Y Chemistry Level 2 Lab 0 4 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in CHM 96X. Prerequisite: CHM 93. Corequisite: CHM 96X.

CHM 101X Chemistry I 3 0 0 4

An introduction to chemical principles of inorganic compounds. Emphasis is on atomic structure and bonding, properties of gases, chemical reactions, stoichiometric calculations and the chemistry of the elements in terms of the periodic table. Prerequisite: Algebra. Corequisite: CHM 101Y.

CHM 101Y Chemistry I, Laboratory 0 2 0 0

An introductory laboratory program such as presentation of certain chemical principles in the form of concrete examples; illustration of the methods of an experimental science; development of skills in laboratory techniques; and training in scientific observation and systematic recording of data. Prerequisite: None. Corequisite: CHM 101X.

CHM 102X Chemistry II 3 0 0 4

Inorganic chemistry, elementary, physical and chemical properties of liquids and solids, ionization, solutions, acids and bases, pH, oxidation and reduction, chemical equilibrium and ionic equations. A brief introduction to the types of aliphatic, aromatic, and substituted hydrocarbons and the nomenclature of some of the important compounds. Laboratory work will consist of various inorganic test and experiments. Prerequisite: CHM 101 or equivalent. Corequisite: CHM 102Y.

CHM 102Y Chemistry II Lab 0 2 0 0

The laboratory exercises selected in this course are continuations of the laboratory work done in CHM 101Y. The objectives of the laboratory exercises selected are to develop: (a) an appreciation of precision, accuracy and error in scientific measurement, (b) an understanding in the derivation of conclusions from experimental observations, (c) both confidence and skepticism concerning the observation. Prerequisite: CHM 101 or equivalent. Corequisite: CHM 102X.

CHM 103X Chemistry III 3 0 0 4

Topics such as ionic equilibrium, electrochemistry, solubility product, common ion effect, radioactive isotopes and chemical kinetics are studied. Qualitative analysis is introduced with a brief study of the separation and identification of some cations and anions. Methods and techniques of quantitative analysis are introduced using volumetric titrations. Prerequisite: CHM 102. Corequisite: CHM 103Y.

CHM 103Y Chemistry III Lab 0 2 0 0

Laboratory work in this course will include a selection of exercises such as determination of an unknown chloride, determination of the solubility product constant, determination of an ionization constant, determination of an ionization constant of an acid, and the determination of the half-life of a radioactive isotope. The students will synthesize organic compounds, measure voltaic cells in oxidation—reduction reactions and identify cations and anions. Prerequisite: CHM 102. Corequisite: CHM 103X.

CHM 201 Organic Chemistry I 3 2 0 4

Nomenclature, structure, preparation, properties, and reactions of aliphatic organic compounds. Laboratory work emphasizes techniques. Prerequisite: CHM 102.

CHM 202 Organic Chemistry II 3 6 0 5

The nomenclature, structure, preparation, properties, and reactions of aromatic organic compounds. Laboratory work emphasizes techniques and involves preparation and analysis of selected organic compounds. Prerequisite: CHM 201.

CHM 203 Organic Chemistry III 3 6 0 5

Methods of preparation, separation and identification of selected organic compounds using techniques and instrumentation introduced in prerequisite courses will be used to continue comprehension of the scope of organic chemical analysis. Prerequisite: CHM 202.

CHM 211 Qualitative Chemical Analysis 3 6 0 5

A course based on general principles involved in the separation and identification of selected cation and anion combinations. Introduction of procedure and precautionary steps for successfully obtaining the desired data will be emphasized. The laboratory portion will be used to test and perfect the proper techniques in sample analysis. Prerequisite: CHM 103.

CHM 212 Instruments 3 6 0 5

A course designed to introduce and familiarize the student with chemical concepts detectible by using the appropriate instrumentation. Laboratory time will be used to develop the concepts and test their validity and application. Prerequisite: CHM 103.

CHM 213 Quantitative Chemical Analysis 3 6 0 5

The more complex types of quantitative analysis. Special emphasis on the theory of oxidation-reduction and gravimetric analysis. Instrumental analysis is introduced and use of modern analytical devices is stressed. The student will become familiar with the principles of redox reactions, ionization constants of pH of solutions. Stress is placed on the stoichiometric calculations of quantitative chemical analysis. Classroom work complements quantitative determinations in the laboratory. Prerequisite: CHM 211.

CHM 214 Physical Chemistry 3 3 0 4

Atomic theory, states of matter, chemical thermodynamics, molecular properties of solutions, equilibria, phase role, electrochemistry, kinetics, surface chemistry, and photochemistry constitute major areas of study. Prerequisites: CHM 211 and CHM 212.

CHM 215 Industrial Chemical Analysis I 3 6 0 5

An industrial laboratory situation is simulated. Principles and techniques learned in previous quarters are utilized in solution of problems common to local industry. Prerequisite: CHM 214.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

CHM 216 Industrial Chemical Analysis II 3 6 0 5

An industrial laboratory situation is maintained and the emphasis on instrumentation is expanded. Problems of industrial quality control. Plant visitations. Prerequisite: CHM 215.

CHM 217 Water Technology 3 6 0 5

An introduction to some of the specific analytical tests utilized in the operation of water and wastewater treatment facilities. Lectures will be used to discuss the parameters and their importance in water quality and stream pollution abatement. Laboratory assignments will be quantitative and related to quality control as well as proper facility operation. Prerequisites: CHM 203 and CHM 215.

CHM 1101X Chemistry 3 0 0 4

An introductory course for beginning students covering topics such as scientific methods, metric system, states of matter, elements, mixtures, compounds, physical and chemical properties of matter and atomic theory with special emphasis on electronic configuration, periodic table, stoichiometry, formula writing, balancing chemical reactions by trial and error, and oxidation-reduction equations, general gas laws, study of acids, bases and salts. Laboratory experiments selected to meet the needs of the subject matter and students. Prerequisite: None. Corequisite: CHM 1101Y.

CHM 1101Y Chemistry Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in CHM 1101X. Prerequisite: None. Corequisite: CHM 1101X.

Civil Engineering Technology Courses

CIV 101 Surveying I 2 6 0 4

Care and use of instruments; theory and practice of plane surveying including taping, differential and profile leveling, transit, stadia, and transit-tape surveys. Prerequisite: None. Corequisite: MAT 121 or MAT 101.

CIV 102 Surveying II 2 6 0 4

Triangulation of ordinary precision; use of plane table; calculation of areas of land; land surveying; topographic surveys and mapping. Prerequisite: CIV 101. Corequisite: MAT 122 or MAT 102.

CIV 103 Route Surveying 2 6 0 4

Route surveys by ground and aerial methods; simple, compound, reverse, parabolic and spiral curves; geometric design of highway; highway surveys and plans including mass diagrams. Prerequisite: CIV 101. Corequisite: MAT 123.

CIV 107 Civil Engineering Computations 2 2 0 3

The use and manipulation of portable electronic calculators and the set-up and programming of "mini" computers (Monroe Surveyor, Wang, and HP 9815) for solving civil engineering problems. Computer programming logic using FORTRAN IV as the programming language will be introduced by practical application through writing programs to solve engineering problems. The school computer facilities and the NCR Century computer will be visited to observe procedures and equipment. Prerequisite: CIV 103.

CIV 108 Hydraulics 4 3 0 5

A basic study of closed conduit and open channel flow, including stream flow, subterranean flow, runoff, pump head and wave action. Prerequisites: MAT 123 or MAT 103 and PHY 102.

CIV 110 Construction Planning Methods and Equipment 3 2 0 4

Excavating methods and equipment used in building and highway construction; pile driving; construction safety; operation analyses; construction scheduling; project control and supervision; and practical application of Critical Path Method (CPM) for planning and scheduling. Prerequisite: None.

CIV 112 Construction Estimates and Costs 2 6 0 4

Interpretation of working drawings of timber, structural steel, and reinforced concrete structures and highways; preparation of material and labor quantity surveys from plans and specifications; approximate and detailed estimates of costs; bidding procedures and preparation of bids. Prerequisite: CIV 110.

CIV 114 Statics 5 0 0 5

Forces, resultants, and types of force systems; moments, equilibrium of co-planar forces by analytical methods; stresses and reactions in simple structures; equilibrium of forces in space, static and kinetic friction. Prerequisite: PHY 102. Corequisite: MAT 123 or MAT 103.

CIV 202 Properties of Soils 4 3 0 5

Study of soil types and their physical properties; classification of soils and testing methods; soil structure; compressibility and shearing strength; soil stress analysis; earth slopes and embankments; spread foundations; pile and caisson foundations; highway subgrade and pavement design; soil compaction and consolidation; sub-surface investigation. Prerequisites: PHY 101 and MAT 123 or MAT 103.

CIV 204 Surveying IV 2 6 0 4

Applications of aerial surveys; building and road construction surveying; lines and grades for foundation layout, building construction, bridge layout, sewer and pipe line surveys; solar and stellar observations; and electronic distance measuring devices; study and application of State plane grid coordinate systems. Prerequisite: CIV 102.

CIV 219 Strength of Materials 4 3 0 5

Fundamental stress and strain relationships, torsion; shear and bending moments; flexural unit stresses in beams; connections-welded joints, riveted and bolted joints; shear and bending moment diagrams; beam design and selection of commercial available beams; beam deflection. Testing of the properties of ferrous and nonferrous metals, load and strain measurements; behavior of materials under load; nondestructive test. Prerequisites: MAT 123 or MAT 103 and CIV 114.

CIV 221 Reinforced Concrete 5 0 0 5

Analysis and design of reinforced concrete beams, floor systems, and columns. Introduction to ultimate strength design. Field inspection trips. Prerequisite: CIV 219.

CIV 227 Subdivision Design 1 6 0 3

Instruction and use of engineering drafting machine. Preparation of property plat using metes and bounds. Interpretation of topographic field notes and location of contour lines on property plat. Analysis of owner criteria and state and local statutes of subdivison design. Preparation of subdivision plat showing streets and lot data. Prerequisite: CIV 107.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Hrs.

CIV 229 Municipal Engineering 3 3 0 4

The application of basic hydraulic principles to engineering problems in the collection, distribution and disposal of water wastes, flood control and water supply. An introduction into the organization of municipal services. Prerequisites: CIV 108 and CIV 227.

CIV 230 Design of Roads and Pavements 3 0 0 3

The study and evaluation of modern highway and pavement design practices with emphasis on highway planning and design, including the practices of the AASHO, highway surveys, plans and computations; geometric design, traffic engineering and highway safety; highway drainage; highway economy; in addition, the usual topics of construction and maintenance are integrated when necessary to enhance the practice of design. Prerequisites: CIV 103 and CIV 202.

CIV 231 Portland Cement and Asphalt Concretes 3 3 0 4

Study and testing of the composition and properties of cement and asphalt concretes, including cement, asphalt, admixtures and air-entrainment; design and proportioning of cement concrete mixes; design and proportioning of asphalt concrete mixes; methods of placing and curing; standard control tests. Prerequisite: MAT 121 or MAT 101.

CIV 271 City & Regional Planning 3 0 0 3

A course to provide a framework for better understanding of current urban and regional problems, as well as to train the student and practicing engineer to solve the complex, ever-changing problems through the art and science of city planning. Prerequisite: None.

Cooperative Education Courses

COE 111-142* Cooperative Education **10-40 Variable Credit**

Cooperative Education Internship is a practicum in which a student works in a position related to his/her curriculum or career interest and for an employer selected and/or approved by the Institute. The course provides an introduction and orientation to experiential education. The student is provided the opportunity to apply classroom theory to the actual work situation.

The student is supervised periodically by the Institute's Cooperative supervisor. Normal credit hours for the cooperative program are determined by dividing the average number of hours worked per week during the quarter by 10 and rounding to the nearest whole number. A student may receive a maximum of four credit hours during one quarter and maximum of nine credit hours toward degree requirements. Prerequisite: Completion of six quarter hours.

*Variable credit from 1 hour to 4 hours.

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Cosmetology Courses

COS 1101 Introduction to Cosmetology Theory **7 0 0 7**

This course is designed to introduce the student to the theory and practice of cosmetology as it is practiced in the State of North Carolina. Instruction will include basic fundamentals of hair styling, hair shaping, hygiene and good grooming, visual poise, personality development, and professional ethics. The student will also study the basics of shampooing and its effects, conditioners and cold waves. Emphasis will be placed on the proper use and application of various cosmetic products and equipment, and the applicable laws and regulations governing the field of cosmetology. Prerequisite: None. Corequisite: COS 1102.

COS 1102 Mannequin Practice **3 0 18 9**

A beginning level course designed to provide the student with an opportunity to gain "hands-on" experience. Through the use of mannequin practice, the student will become familiar with basic parting techniques, sectioning, forward and reverse shaping, pin curling, proper rolling and combing. In this course the student will be introduced to and will develop basic skills in hair designs, manicuring, shampooing, scalp treatments, permanent waving and tinting applications. Prerequisite: None. Corequisite: COS 1101.

COS 1103 Cosmetology Theory I **9 0 0 9**

A continuation of the cosmetology theory presented in COS 1101. In this course the student will be given the opportunity to develop a deeper and more advanced understanding of previously acquired cosmetic knowledge. Instruction will include hair shaping, hair styling, finger waving, permanent waving, hair coloring, caring and styling of wigs, and chemical hair relaxing. The cosmetology student will also receive instruction in thermal hair straightening and waving, curling, and blow-dry styling. In this course the student will also learn when and how to apply these services, as well as the potential problems associated with each. Prerequisites: COS 1101 and COS 1102. Corequisite: COS 1104.

*Variable credit from 1 hour to 4 hours.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

COS 1104 Cosmetology Skills I 3 0 25 11

In this course the student is given opportunities in a clinical setting to develop skills and knowledge acquired in other cosmetology courses. Under supervision, working on live models, the student will continue to build skills in hair shaping, permanent waving, hair coloring, chemical relaxing, thermal waving and hair straightening. Also the student will begin to develop personal skills in dealing with the "customer" in a professional setting. Emphasis will be placed on customer relations, interpersonal communication and relationships. Prerequisites: COS 1101 and COS 1102. Corequisite: COS 1103.

COS 1105 Cosmetology Theory II 9 0 0 9

This course offers continued study of cosmetic theory presented in earlier training. In addition, the student will receive instruction in the manicuring of nails and disorders associated with nails; the theory of massage, to include facials, facial make-up, false eyelashes, superfluous hair removal, human cells, the skin and related disorders, hair and scalp and related disorders, and anatomy and electricity and light therapy. In this course the student will also be introduced to the business opportunities and income potential associated with the successful cosmetology operation. Prerequisites: COS 1103 and COS 1104. Corequisite: COS 1106.

COS 1106 Cosmetology Skills II 3 0 25 11

This course is designed to provide the student with a clinical opportunity to develop or broaden skills, both in terms of numbers and quality of services provided. Continuing emphasis will be placed on upgrading student skills in manicuring, facials, make-up, massage, false eyelashes, and superfluous hair removal. This course will also provide the student with opportunities to recognize and identify disorders associated with the skin, hair, scalp, and nails in a real life cosmetology setting. In this course the student will be able to expand on all other cosmetic skills acquired in previous courses. Prerequisites: COS 1103 and COS 1104. Corequisite: COS 1105.

COS 1107 Advanced Cosmetology Theory 9 0 0 9

In this course the advanced cosmetology student will bring together instructional materials presented in previous theory courses. Additional instruction will be provided in chemistry, salon management, business practices and applicable state laws and regulations governing the field of cosmetology. The student will undergo an intensive review program designed to prepare the student to take and pass the North Carolina State Cosmetic Arts Examination. Emphasis will be placed on practice examinations, designed to show students and instructors areas of potential weaknesses. Prerequisites: COS 1105 and COS 1106. Corequisite: COS 1108.

COS 1108 Advanced Cosmetology Practice 3 0 25 11

This course is designed to provide the student with continued opportunities to further develop those skills acquired in previous courses and to help prepare the student for future employment within the industry. Advanced cosmetology students will be expected to provide high quality service and professionalism as they deal with patrons on a day-to-day basis. Under supervision the student will make decisions and recommendations relating to services to be provided, cuts, styles, corrective cosmetology, etc. This course is also designed to allow for the student to develop confidence as he or she "fine-tunes" cosmetic skills. The student will also receive concentrated instruction and practice in those skill areas required to successfully pass the state examination. Prerequisites: COS 1105 and COS 1106. Corequisite: COS 1107.

DEN 101 Dental Anatomy and Physiology 3 6 0 6

An introduction to anatomy of the head and neck, physiology of occlusion with special emphasis on anatomy of the individual teeth and surrounding tissues and their relationship to fabrication of dental restorations, prostheses and appliances to correct, restore and maintain occlusal functions. The laboratory portion includes accurate scale drawings of each tooth, from central incisors through the second molar on one side of the upper and lower arches. Fourteen teeth are carved in wax to scale with special emphasis on reproducing natural tooth anatomy. Prerequisite: None.

DEN 102 Physical Science of Dental Materials 5 2 0 6

A study of the basic physical and chemical principles encountered in work with dental materials. Included are introductory inorganic and organic chemistry with special emphasis on the metallic elements and those compounds with physical properties advantageous to dental work. Physical principles include those which cause stress, strain, distortion, or potential stability or instability in dental materials. Prerequisite: None.

DEN 104 Dental Materials 2 4 0 4

A study of the composition, properties, and uses of nonmetallic dental materials such as gypsum products, impression materials, plastics, waxes and duplicating materials. The laboratory exercises are designed to illustrate the properties and uses of the materials studied and the results of proper and improper manipulation. Prerequisite: None.

DEN 106 Complete Denture Techniques 1 0 6 3

A study of the basic techniques for complete denture construction. Laboratory phase includes pouring alginate impressions, cast trimming, construction of base plates and occlusion rims and mounting complete denture casts on an adjustable articulator, and completing a maxillary trial wax-up on a denture base. Prerequisite: None.

DEN 107 Complete Denture Techniques 1 0 9 4

A continuing study of the fabrication of complete dentures using anatomic teeth on an adjustable articulator. Emphasis is placed on balanced articulation. Procedures for repair, relining and rebasing dentures are included. Prerequisite: DEN 101, DEN 104, and DEN 106.

DEN 108 Partial Denture Techniques 1 0 12 5

A study of basic techniques used in fabrication of cast removable partial dentures frameworks utilizing chrome-nickle alloys. Laboratory phases include practical exercises in the fundamentals of surveying the master model and designing, constructing refractory casts, forming the wax pattern, investing and casting the frameworks. The frameworks are finished, polished and seated on the master model for evaluation; partial denture is then processed and fabricated. Various procedures for repair are also included. Prerequisite: DEN 101, DEN 104, and DEN 110.

DEN 109 Orthodontic and Pedodontic Appliances 2 0 12 6

A continuing study of the fabrication of various types of removable appliances used primarily in orthodontics and pedodontics including wrought-metal, laboratory procedures including bending and assembling wrought clasps, and the fabrication of combination wrought and cast metal frameworks as various types of holding (space maintaining) and positioning appliances. Prerequisite: DEN 108.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DEN 110 Dental Metallurgy 2 2 0 3

A study of the physical and mechanical properties of precious and non-precious metal alloys and their application to dentistry. Course content will include study of physical and mechanical properties, crystalline and wrought structures, solidification process, investments, methods of casting, soldering, heat treatment, and metallurgical testing of specific brands of alloys used in dentistry to produce accurate castings. Prerequisite: DEN 104.

DEN 111 Dental Hygiene I 4 3 0 5

A course offering an understanding of the role a professional dental hygienist should assume, as well as the factors influencing his/her patient's care. In addition, the preparation needed for dental hygiene appointments, aspects of patient evaluation including the extraoral and intraoral examinations, topics of prevention emphasizing plaque control, fluorides, and sealants, and instrument introduction and sharpening will be thoroughly examined in this course. Prerequisite: None.

DEN 112 Dental Anatomy and Physiology 3 3 0 4

A study of the anatomy of the oral cavity including development, form and function, identification of individual teeth in the permanent and decidous dentitions, and functional occlusal relationships. Laboratory exercises are designed to develop three dimensional perception. Prerequisite: None.

DEN 113 Histology and Embryology 3 0 0 3

Study of the embryonic development of the face and oral cavity; the structures and functions of the primary tissues and the histology of the teeth and supporting tissues. Emphasis is given throughout to clinical consideration as related to dental hygiene practice. Prerequisite: BIO 106.

DEN 114 Cast Inlay and Crown Techniques 2 0 12 6

Introduction to fixed prosthodontics restorations. The student will practice techniques for fabricating cast restorations and an introduction to terminology specific to inlays and crowns. Casts and dies are prepared from impressions on which simple and complex inlays, full and three-quarter cast crowns are constructed. Emphasis is placed on identifying margins, trimming dies using various types of articulators. Prerequisites: DEN 102 and DEN 104.

DEN 116 Dental Emergency Care 2 0 0 2

A basic study of the symptoms and treatment of the more common emergencies which can occur in a dental environment. Components of an adequate dental office emergency kit are discussed and students learn when and how each item in the kit is used, including competency in the use of oxygen. In addition, upon completion of the course, the students are qualified for CPR certification. Prerequisite: DEN 131.

DEN 117 Crown and Bridge Techniques 1 0 12 5

This course is a study of the techniques used in fabricating cast gold fixed bridges utilizing various abutment and pontic forms. All techniques learned in DEN 114 will be critically evaluated. Prerequisite: DEN 114.

DEN 118 Crown and Bridge Techniques 1 0 9 4

This course is a study of the various techniques used for fabricating gold crowns and bridges. The laboratory phase utilizes the various acrylic veneering materials, flatback facings, temporary restorations, telescoping crowns, transfer copings and parallel copings to provide abutments for receiving an overdenture. Prerequisites: DEN 114 and DEN 117.

DEN 121 Dental Hygiene II 3 0 6 5

This course will emphasize a continuing internalization of the theories and procedures utilized in DEN 111. The students will continue to apply the principles and techniques of the oral prophylaxis. Clinic sessions will be employed to continue the student's awareness of correct instrument sharpening, polishing techniques, and correct instrumentation techniques. Lectures will include instrument sharpening techniques, successful patient care through scaling and planning, gingival curettage, and polishing techniques with the motor-driven handpiece and porte polisher. Discussions will include the care of a patient with hypersensitive teeth as well as the importance of evaluation and recall to maintain the oral health of a patient. Prerequisite: DEN 111.

DEN 122 Head and Neck Anatomy 2 0 0 2

A detailed study of the structures of the head and neck regions and their functions. Emphasis will be placed on the musculature, bones, blood, nerve and lymphatic systems, attention is directed to the relationship of head and neck anatomy to dental hygiene practice. Prerequisites: DEN 112, DEN 113.

DEN 131 Clinical Dental Hygiene III 2 0 9 5

This course will expand upon the didactic and clinical materials and experiences received in DEN 111 and 121. The students will begin performing the oral prophylaxis and fluoride treatment on patients in the dental hygiene clinic. Lectures will be presented on the use of the cavitron and porte polisher on patients who require its use as well as introduce student handling of special patient problems; i.e., Anug, mental retardation, epilepsy, paralyses, etc. This course will emphasize that certain patients have problems peculiar to their age group and/or unusual health factors which may complicate the routine care generally provided. Prerequisites: DEN 111 and DEN 121.

DEN 133 Radiology 3 3 0 4

This course is designed to give the dental hygiene student an in-depth view of dental radiology. The principles and techniques of exposing, processing, mounting, storing and evaluating intraoral and extraoral radiographic films are included. Also covered are the characteristics of film, film selection for various radiographic techniques, and care of equipment and facilities. Special emphasis is placed on radiation safety for the protection of a patient, operator, and others who may be exposed to radiation in the dental office. Prerequisite: DEN 112.

DEN 141 Dental Hygiene Summer Session 0 0 6 2

Continuation of opportunities to apply knowledge and skills learned in previous quarters to development of competency for the rendering of clinical dental hygiene services and supportive procedures. Emphasis is placed upon providing total patient care which includes decision making and utilizing the sonic scaling instrument. Prerequisites: DEN 131 and DEN 214.

DEN 201 Advanced Complete Denture Techniques 1 0 6 4

A study of complete denture techniques that include utilization of the facebow transfer and central bearing devices. Included in this phase are the principles and procedures for immediate denture construction and refitting of complete dentures. Prerequisite: DEN 107.

DEN 202 Ceramic Techniques 2 0 12 6

An introductory course in ceramic and ceramo-metal dental restorations, crowns and fabricating of ceramic veneer restorations. Laboratory phase includes the preparation of dies, adaption of platinum matrix, firing, glazing, and personalization and variations in techniques involved in fabrication of precious and semi-precious ceramo-metal crowns. Prerequisites: DEN 101, DEN 104, DEN 110, and DEN 207.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DEN 203 Dental Laboratory Business Management 3 0 0 3

A practicum in Dental Laboratory Management. Course design allows the student to gain knowledge through seminars, guest lectures, consultants, and off-campus training in commercial, public and private dental laboratories with whom we may affiliate. Prerequisites: DEN 101, DEN 104, DEN 106, and DEN 108.

DEN 204 Advanced Partial Denture Techniques 1 0 6 3

This course is a continuing study of removable partial denture techniques that include articulating casts through the use of various jaw relationship records, selecting teeth, setting-up teeth and forming the wax denture base. Further exercises include flasking the wax denture base, processing, and finishing and polishing the removable partial denture. All completed partial dentures are evaluated for accuracy and appearance. Prerequisite: DEN 109.

DEN 205 Specialized Removable Prosthodontics Techniques 1 0 15 6

This course is designed to give the student specialized experience in interpretation of the written work authorization as well as fabrication of removable prosthetic appliances. Advisement and supervision will be given by the instructors. Class structure will be as near the structure of a commercial dental laboratory as possible, with emphasis placed on the dentist-laboratory techniques and relationships. Students will be required to put into actual practice the various techniques and procedures for fabricating removable dental appliances using impressions and prescriptions supplied by various legal sources. Prerequisite: DEN 204.

DEN 206 Specialized Ceramic and Crown and Bridge Techniques 1 0 15 6

This course is designed to give the student specialized practical experience in interpretation of the written work authorization as well as fabrication of crown and bridge and ceramo-metal appliances. Advisement and supervision will be given by the instructors. Class structure will be as near the structure of a commercial dental laboratory as possible, with emphasis placed on the dentist-laboratory techniques and relationships. Students will be required to put into actual practice the various techniques and procedures for fabricating removable dental appliances using impressions and prescriptions supplied by various legal sources. Prerequisite: DEN 202.

DEN 207 Advanced Orthodontic and Pedodontic Appliances 1 0 12 5

This course is designed to give the student specialized practical experience in interpretation of the written work authorization as well as fabrication of advanced orthodontic and pedodontic appliances. Advisement and supervision will be given by the instructors. Class structure will be as near the structure of a commercial dental laboratory as possible, with emphasis placed on the dentist-laboratory techniques and relationships. Students will be required to put into actual practice the various techniques and procedures for fabricating removable dental appliances using impressions and prescriptions supplied by various legal sources. Prerequisite: DEN 109.

DEN 208 Advanced Dental Laboratory Practice 1 0 21 8

Student offered a practicum in a second specialty of dental laboratory work or a continuation of his selected specialty (DEN 205 or DEN 206) as the needs of the student dictate. Further experience is gained under the preceptorship of a full-time dental laboratory instructor, designed to strengthen the student's skill and knowledge by experience in utilization of advanced techniques and analysis and correction of problem areas related to dental laboratory techniques. In addition, the student will gain further practice in fabrication of advanced appliances from casts and prescriptions supplied by dentists and Schools of Dentistry with whom we may affiliate. Continued emphasis on ethical dentist-laboratory relations. Prerequisite: DEN 205 or DEN 206.

DEN 209 Jurisprudence and Ethics Seminar 3 0 0 3

This course is a study of the history of the dental profession and the dental laboratory industry, the legal and ethical aspects of the industry, and the dentist-laboratory relationships, including an in-depth study of the certification and licensure issues. Prerequisite: None.

DEN 211 Dental Hygiene IV 2 0 12 6

Continuation of opportunities to apply skills learned in previous quarters to the development of competency and proficiency for the rendering of clinical dental hygiene services and supportive procedures. Emphasis is placed upon providing total patient care which includes decision making and exercising judgment. Seminar hours provide an opportunity to develop treatment cases as well as exposure to the theory of selected expanded dental hygiene duties. Prerequisite: DEN 131.

DEN 212 Community Dental Health 3 3 0 4

This course is a study of community oral health, including use of systems analysis, research evaluation, community organization, epidemiology, biostatistics, indices, purposes and functions of public health agencies, financing and purchasing of dental care, dental manpower resources, and relationships of dental health to total health in the community. Field experiences in providing dental health education in schools and in conducting workshops are included. Prerequisites: DEN 215 and DEN 211.

DEN 213 General and Oral Pathology 6 0 0 6

General Pathology—provide the students with a general knowledge of the pathological processes of structural and functional change affected by selected diseases as a basis to relate to the oral manifestations, pathogenesis and treatment of these diseases. The knowledge will enable the student to relate and interact with other members of the health care team in their area of specialization. Oral—provide the students with the specialized knowledge of etiology, oral manifestations, and pathogenesis of selected diseases associated with the oral cavity as required to enable them to function as members of the oral health teams. Emphasis will be placed on clinical differentiation between normal and abnormal tissues and the dental hygienist's role in prevention and treatment of these diseases. Prerequisites: BIO 106, BIO 107, BIO 108, and DEN 214.

DEN 214 Periodontology 3 0 0 3

The course includes a review of the basic histology, anatomy and physiology of the jaws and periodontium; the basic introduction to oral pathology, including etiologies and inflammatory, immunity and allergic responses; and a detailed study of prevention and treatment of periodontal disease. Particular emphasis is placed on the dental hygienist's role as a member of the dental health team. Students will be expected to apply this knowledge during their clinical patient treatments. Prerequisites: BIO 106, BIO 107, DEN 112, DEN 113, and DEN 121.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DEN 215 Dental Health Education 3 0 0 3

A study of preventive dentistry to prepare future dental hygienists for their role as dental health educators both in private practice and community dental health programs. The course will expose the student to oral hygiene instruction, methods of motivation and learning, concepts and methods of teaching, utilization of educational media, fluoridation as a preventive measure, nutritional counseling concepts and techniques, and treatment planning. Prerequisites: DEN 211, DEN 214 and NUT 101.

DEN 221 Clinical Dental Hygiene V 1 0 16 6

Student continues to apply the learned knowledge and psychomotor skills gained in previous clinical quarters for the development of competence in rendering clinical dental hygiene services and supportive procedures. Prerequisite: DEN 211.

DEN 222 Dental Materials 3 3 0 4

The physical properties and sources of various materials used in dentistry are discussed. The dental hygiene student learns to manipulate these materials for any of the routine procedures performed in the dental office. Prerequisites: DEN 112 and DEN 122.

DEN 223 Dental Pharmacology and Anesthesiology 3 0 0 3

The course offers a basic understanding of the properties of drugs; drug terminology; the general principles of drug actions; dosages, routes of administration, adverse reactions and the basic principles of anesthesiology. Emphasis is placed on the drugs most commonly used in the practice of dentistry and the modifications of their use based on the general health and other drug usage of each patient. Prerequisites: BIO 106, BIO 107, BIO 108 and BIO 110.

DEN 224 Office Management 1 0 0 1

Introduction to all phases of dental office administration including appointment control, patient records, inventory control, billing, filing and banking. Prerequisite: DEN 211.

DEN 225 Chairside Assisting 1 2 1 2

This course is designed to provide the dental hygiene student with knowledge concerning four-handed dentistry techniques and procedures. Laboratory and clinic sessions will be provided to allow sufficient practice for students to gain knowledge in a variety of chairside assisting procedures. Prerequisite: DEN 222.

DEN 231 Clinical Dental Hygiene VI 1 0 16 6

This course is a continuation of opportunities to apply knowledge and to develop competency for the rendering of clinical dental hygiene services and supportive procedures. Opportunities for complete patient care are introduced whereby each student develops and provides a comprehensive dental hygiene treatment program for approved patients. Prerequisite: DEN 221.

DEN 232 Ethics and Jurisprudence 1 0 0 1

This course provides the student with coverage of professional ethics, laws and regulations related to the practice of dentistry and dental hygiene. Topics include the code of ethics, philosophies of ethics, applying for employment, preparing a curriculum vitae and professional liability. Prerequisite: DEN 221.

DEN 233 Dental Specialties 3 0 0 3

An in-depth study of the special fields of dentistry. Lectures by dental specialists concerning endodontics, periodontics, prosthedontics, pedodontics, orthodontics and oral surgery enable students to relate dental hygiene to all phases of dentistry. Prerequisite: DEN 221.

DEN 298 Dental Hygiene Seminar 2 0 0 2

Seminar hours designed to review the basic and dental sciences studied up to the fifth quarter to prepare the student for the National Board Examination. Prerequisite: DEN 211.

DEN 1002 Dental Materials I 2 3 0 3

Designed to provide opportunities for the student to learn about dental materials and to develop beginning skills in manipulating various types of dental materials commonly used in the dental office. Prerequisite: None.

DEN 1004 Dental Anatomy 4 0 0 4

This course is designed to familiarize the dental assisting student with all phases of dental anatomy including structures of the mouth, tooth morphology, eruption, and exfoliation of permanent and primary teeth, head and neck anatomy, and histology. Prerequisite: None.

DEN 1011 Clinical Procedures I 2 2 0 3

This course is designed to introduce the student to the dental assisting profession and to basic procedures he/she will be expected to perform in a modern dental office. Topics to be discussed include the history of dentistry, the dental team, ethics and jurisprudence, dental equipment and sterilization. Laboratory sessions will be utilized to prepare the student to assist the dentist in basic chairside and supportive procedures. Prerequisites: DEN 222 and DEN 1002.

DEN 1012 Dental Materials II 2 3 0 3

This course is a continuation of DEN 1002. Identification of dental restorative materials, characteristics of each, evaluation of quality and principles and procedures related to manipulations and storage of these materials. Prerequisite: DEN 1002.

DEN 1014 Dental Roentgenology 2 4 2 4

This course is designed to give the dental assisting student an in-depth view of dental radiology. The principles and techniques of exposing, processing, mounting, storing and evaluating intraoral and extraoral radiographic films are included. Also covered are the characteristics of film, film selection for various radiographic techniques, and care of equipment and facilities. Special emphasis is placed on radiation safety for the protection of a patient, operator, and others who may be exposed to radiation in the dental office. Prerequisite: DEN 1004.

DEN 1015 Pharmacology 2 0 0 2

This course is designed to provide a basic survey of pharmacology. Emphasis is placed on drugs commonly prescribed in the dental office and drugs dental patients may be taking. Also covered are drug classifications, administration of drugs and therapeutic and deleterious effects of drugs. Prerequisite: BIO 1005.

DEN 1021 Clinical Procedures II 3 4 2 5

This course is designed to teach the dental assisting student four-handed dentistry techniques and procedures. Laboratory and clinic sessions are provided to allow sufficient practice for students to become proficient in a variety of chairside assisting procedures. Topics to be included are four-handed dentistry, dental instruments, anesthesia and operative dentistry. Selected expanded functions, legal in North Carolina, will also be covered. Prerequisite: DEN 1011.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DEN 1023 Dental Health Education 2 3 0 3

A study of preventive dentistry to prepare future dental assistants for a role as dental health educators in private practice with some emphasis on community dental health programs. The course will expose the student to oral hygiene instruction; methods of motivation, concepts of teaching, utilization of educational media, fluoridation as a preventive measure, and nutritional counseling concepts. Prerequisite: DEN 1004.

DEN 1025 Oral Pathology 2 0 0 2

This course covers the basic principles of general and oral pathology, causes and treatment. Emphasis is placed on pathological conditions commonly seen in general dentistry. Prerequisites: DEN 1004 and BIO 1005.

DEN 1026 Dental Office Emergencies 1 2 0 2

This course is designed to prepare the dental assisting student to function as an effective member of the dental team, in a variety of medical and dental emergencies. Emphasis is placed on the prevention of emergencies in the dental office, as well as the treatment of emergencies when they occur. Role playing and group exercises will be utilized to simulate actual dental office emergencies. Prerequisites: BIO 1005 and DEN 1015.

DEN 1031 Dental Office Practice I 1 0 20 8

This course is an introduction to performance of dental assisting duties in the dental office or dental clinic. Clinical assignments will provide opportunities for the student to apply classroom theory and laboratory skills in a dental office or clinic. Major emphasis will be given to competencies in chairside assisting techniques, clinical support procedures, business office management, and oral radiology. Prerequisites: DEN 1002, DEN 1011, DEN 1012, DEN 1014, DEN 1021, DEN 1023, and DEN 1034.

DEN 1032 Office Management 4 0 0 4

This course is designed to provide the student with the basic skills and techniques necessary to function as a receptionist/office manager in a dental office. Prerequisite: None.

DEN 1033 Professional Development 2 0 0 2

This course is designed to provide the dental assisting student with an in-depth look at the profession of dentistry in general and dental assisting in particular. Care will be taken to expose the students to the ever-changing world of health care delivery including such topics as professional organizations, educational opportunities, career opportunities, health care delivery systems and third party dentistry. The future role of dentistry and dental assisting will also be presented. Guest speakers and panel discussions and field trips will be utilized. Prerequisite: None.

DEN 1034 Clinical Procedures III 4 2 1 5

This course is designed to give the students laboratory and didactic information concerning each of the specialties. Guest speakers from the various specialty fields will be utilized to provide the student with additional knowledge. Prerequisites: DEN 1011 and DEN 1021.

DEN 1041 Clinical Practice II 1 0 18 7

Practice in the dental office or clinic. A continuation of Dental Office Practice I with greater emphasis on speed and proficiency of previously acquired skills. These skills will include chairside assisting techniques, clinical support procedures, radiology, and business office management. Prerequisite: DEN 1031.

Drafting Courses

DFT 90 Mechanical Drawing I 2 3 0 3

Fundamental principles of orthographic projection, working drawings and sections, with emphasis on visualizing. This course includes further study in orthographic projection, dimensioning and various other phases of working drawings. Also included is an introduction to isometric drawings, oblique projection, and blueprinting. Prerequisite: None.

DFT 92 Mechanical Drawing II 2 3 0 3

This course includes further study in orthographic projection, sectioning, and various other phases of working drawings. Also included are isometric drawings, oblique projection, and blueprinting. Prerequisite: DFT 90.

DFT 93 Elementary Drawing 2 3 0 3

This is an introductory course in drawing and sketching for students needing a knowledge of drawing principles for reading blueprints, schematics and describing objects in the graphic language. Prerequisite: None.

DFT 101 Technical Drafting I 1 5 0 3

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, free-hand 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. Prerequisite: None.

DFT 102 Technical Drafting II 1 5 0 3

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," 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.

DFT 111 Construction and Structural Drawing 1 5 0 3

Interpretation of field notes into formal drawings, basic site planning, working plans for highways and subdivisions, reinforced concrete structural details. Prerequisites: DFT 101.

DFT 1104 Blueprint Reading: Mechanical 1 2 0 2

Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes; introducing the student to the welding symbols and abbreviations. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DFT 1110 Building Trades Blueprint Reading and Sketching I 1 2 0 2

Principles of interpreting blueprints and trade specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.

DFT 1111 Blueprint Reading and Sketching II 1 2 0 2

Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, floor plans, elevations, walls, doors and windows and roofs of buildings. Development of proficiency in making three view and pictorial sketches. Prerequisite: DFT 1110 or equivalent.

DFT 1113 Blueprint Reading: Electrical 1 2 0 2

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 are part of this course. Prerequisite: DFT 1110.

DFT 1114 Blueprint Reading and Sketching III 1 2 0 2

Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings are studied with emphasis on the plot plan, floor plan, basement, and/or foundation plan, walls and various detailed drawings of masonry work. Prerequisite: DFT 1111.

DFT 1115 Blueprint Reading: Plumbing 1 2 0 2

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

DFT 1117 Blueprint Reading and Sketching: Welders 1 2 0 2

The first ideas which come into the mind are in pictorial form, and this phase of the welding curriculum is to teach the student how to put his ideas on paper. Sketching is the common means of conveying his ideas to his associates. Prerequisite: None.

DFT 1118 Pattern Development and Layout 3 0 0 3

This course is designed for the student who has basic knowledge of blueprint reading. It presents the practical shop or field layout methods used by pipe welders. Beginning with the simple pan layout to the most complex lateral connections used in industrial pipings, the student learns how to make a pattern to fit the particular job. Prerequisites: DFT 1104 and DFT 1117.

DFT 1125 Descriptive Geometry 2 3 0 3

Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution. Prerequisite: DFT 1170.

DFT 1170 Basic Drafting 1 0 6 3

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments: single stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading, and instrument drawing of principle views. Prerequisite: None.

DFT 1171 Basic Industrial Drafting 2 0 3 3

Drafting instruction and experience in the preparation and interpretation of shop drawings. The student draws elementary machine parts both in detail and assembly drawings. Special emphasis is given to notes and other material related to machine shop and other manufacturing processes. This course is correlated with the machine shop experience of the student whenever possible. Prerequisite: None.

DFT 1172 Technical Sketching 2 0 3 3

Study and practice in freehand sketching of machine parts with pencil. Sketches are made in orthographic, isometric, and oblique projection, as well as in true perspective. Dimensioning and shading of sketches are included. Prerequisite: DFT 1170 or equivalent.

DFT 1173 Industrial Drafting I 1 0 6 3

The trainee will study simple and successive revolutions and their applications to practical problems. Sections are studied and both detail and assembly sections are drawn. Intersections and developments are studied by relating the drawing to the sheet metal trades. Models of the assigned drawings are made from construction paper, cardboard, or similar material as a proof of the solution to the problems drawn. Basic pipe drafting is introduced. Prerequisite: DFT 1170 and/or DFT 1171.

DFT 1180 Trade Drafting I 2 4 0 4

Fundamental drafting principles with instruction and practice in lettering, orthographic projection, working drawings. Introduction to the principles of sectioning, dimensioning, use of drawing instruments and the solution of geometrical problems are covered. This is an introductory course in drafting for students needing a knowledge of drawing principles for reading and describing objects in the graphic language. Prerequisite: None.

DFT 1181 Trade Drafting II 2 0 3 3

The student continues the study of orthographic projection with applications to orthographic instrument drawing of an advanced nature. Methods of describing complex objects with auxiliary views and/or sections and conventions are taught. Dimensioning procedures and practices are emphasized and the student is introduced to the "working drawing." Working drawings are made in one of several fields according to the student's curriculum interest. Prerequisite: DFT 1180 or similar course in basic drafting.

DFT 1190 Industrial Drafting II 1 0 6 3

An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners: keys, rivets, springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gear cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms. The plant layout drawing is introduced. Prerequisite: DFT 1173.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DFT 1191 Machine and Tool Drafting I 1 0 6 3

Introduction to tool drafting, as it related to manufacturing processes and machine tools. Basic drafting and design problems involving jigs and fixtures. Also covered are standard parts, and an introduction to various other elements of tool design. Prerequisite: DFT 1173.

DFT 1192 Design Drafting and Tolerances 2 0 3 3

Advanced machine shop operations involving production operations such as staddle milling, indexing, special fixtures, grinders, automation, transfer and special machines. Demonstrations of numerical control applications. Gaging, measuring, and inspection. Selected other manufacturing processes such as casting, metal fabrication, welding and related processes are covered by demonstration, films, and other media. An analysis of dimensioning practices for complete and precise specifications of functional features required for a component or assembly. Standards are studied and explained. Applications in the form of drawings of components and gages. Applications of metric units are included. Prerequisites: MEC 1110 and DFT 1173.

DFT 1193 Industrial Drafting III 1 0 6 3

Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a simple machine, redesign problem or a component sub-assembly of moderate difficulty. Basic pipe drafting is introduced. Prerequisite: DFT 1173.

DFT 1194 Machine and Tool Drafting II 1 0 6 3

Drawings of machine details and assembly drawings are made from industrial specifications. Basic design principles are introduced with the study of tool design for production. Tool design drawings are made involving standard parts, handbook usage and economic factors in tooling. Also included is a brief introduction of the construction of punch and dies. Prerequisites: DFT 1173 and DFT 1191.

DFT 1195 Steel Fabrication Drafting 1 0 3 2

Introduction to shop drawings related to the welding, riveting, bolting, or other joining methods of steel plates, bars and structural shapes. Emphasis is upon student preparation of working drawings for shop purposes. Prerequisite: DFT 1170 and/or DFT 1172.

DFT 1281 Jig and Fixture Design 2 4 0 4

Commercial standards, principles, practices and tools of jig and fixture design. Individual project and design work to acquaint students with the types of jigs and fixtures and their design. Prerequisite: DFT 1181.

Economics Courses

ECO 102 Economics I 2 2 0 3

Macroeconomics is concerned with obtaining an overview, or general outline, of the structure of the economy and the relationships between the major aggregates—such as government, households, and business—which constitute the economy. It includes such areas of study as total employment, total production, and the general price level. Prerequisite: None.

ECO 104 Economics II 2 2 0 3

An introductory course concerned with the specific units or parts that make up an economic system and the relationships between these parts. Emphasis is placed on understanding the behavior of individual firms and households and the ways in which such entities interact. Prerequisite: ECO 102.

ECO 201 Labor Economics 3 2 0 4

An advanced economics course which traces the history of labor economics from its beginning through modern times. Topics covered include the U.S. labor force, organized labor, collective bargaining, wage analysis, labor law, and unemployment. Prerequisite: ECO 104.

ECO 205 Applied Economics 3 0 0 3

A practical course that exposes the student to the main economic principles as they apply to everyday life and the problems that surround us. Topics of current interest such as the problems of poverty, inflation, discrimination, taxes, and the balance of payments are discussed. Prerequisite: None.

ECO 210 Economics of Social Issues 4 0 0 4

A practical course designed to create student interest in the study of economics and its application to current social problems. Issues include population growth; price controls; problems of higher education; crime prevention; the environment; consumerism; health services; poverty; discrimination; unemployment; inflation; the national debt; government revenues and expenditures; and the energy crisis. Prerequisite: None.

ECO 1105 Applied Economics 3 0 0 3

An introductory course designed to help students understand present day economic problems as well as provide them with a usable working knowledge of economic principles. Topics include what economics is all about; the consumer; kinds of business organizations; labor; the role of government in our economy; money, banking, and government policy; international trade and comparing economic systems. Prerequisite: None.

Electronic Data Processing Courses

EDP 101 Introduction to Computer Systems 5 0 0 5

Fundamental principles and concepts of computers and computer systems are studied. Hardware and software, programming languages, batch and on-line processing, system analysis, and management decision making are examined in depth. Prerequisite: None.

EDP 102 Computer Operations 0 6 0 3

A hands-on course in computer operations of a mainframe computer in an on-line multiprogramming environment. Prerequisite: EDP 104 and permission of EDP Department Chairperson.

EDP 103 Introduction to Programming 3 0 0 3

This course has been developed to meet the need for a broadly based study of programming logic and principles. Flowcharting used in the solution of commercial problems will be studied extensively. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

EDP 104 Introduction to EDP 3 0 0 3

Fundamental principles and concepts of business data processing systems are examined. General business applications are studied with somewhat more detailed attention given to electronic data processing procedures associated with business accounting. Prerequisite: None.

EDP 105 FORTRAN 4 3 0 5

An introductory course on computer programming logic using FORTRAN as a programming language. Flowcharting language structure, statements and programming methods are studied. The student will develop program logic and write FORTRAN programs for solving both technical and commercial type problems. Prerequisites: EDP 103 and EDP 104.

EDP 109 COBOL I 4 3 0 5

A course in the COBOL programming language. Theory (fundamentals) and applications are emphasized. Included is a study of the language rules and programming methods. The student will develop program logic and write COBOL programs. Prerequisite: EDP 103.

EDP 110 COBOL II 3 4 0 5

A course in the COBOL programming language including fundamentals and applications within a Disc Operating System (DOS) environment. The students will develop logic and write advanced COBOL programs. Prerequisite: EDP 109.

EDP 114 Operating Systems 3 0 0 3

A detailed study of operating systems from the level of monitor control systems to large executive systems. Job control languages, supervisor programs, program libraries and data sets will be included. Prerequisites: EDP 104 and EDP 109.

EDP 116 Business Basic Language 3 2 0 4

The objectives of this course are to introduce the concepts of business information processing using the Business BASIC Language. This objective is pursued on several levels. First, the structure of business information systems is examined. Next, computer programming skills are developed in the Business BASIC Language. Finally, these two fundamental studies are linked to provide the student with a proper background to successfully program business problems. Prerequisites: EDP 103 and EDP 104.

EDP 198 Keypunch I 1 6 0 4

A practical course in the basics of keypunch operations for computers and automatic data processing equipment. The course gives realistic approaches to the keypunch machine operations, to individual jobs, to the most commonly used codes for program cards, to the punched card by colors and cuts, to the terminology used in data processing and to the fact that keypunching is the initial and very important step in the data processing job. Prerequisite: Basic typing ability.

EDP 200 Computer Literacy for Educators 3 0 0 3

A practical course that emphasizes the hands-on use of microcomputers as educational tools. This course involves the use of existing software to either manage or assist instruction. Prerequisite: None.

EDP 204 COBOL III 3 4 0 5

A group project programming course organized under the data processing organizational environment of a business; a business data processing department and how it operates within the company is simulated. Prerequisite: EDP 110.

EDP 207 Assembler I 4 3 0 5

The study of symbolic computer languages with emphasis on a particular example of such a language. The student will develop program logic and write programs using assembly language to solve appropriately assigned problems. Prerequisites: EDP 103, EDP 104, and EDP 109.

EDP 208 Assembler II 3 4 0 5

An extension of EDP 207. The student will develop more complex program logic and write programs using more complex and sophisticated data files and input/output devices. Prerequisite: EDP 207.

EDP 210 PASCAL 3 2 0 4

An introduction to the high level structured programming language Pascal, with emphasis on solution of business application problems. Prerequisite: EDP 109 or programming experience.

EDP 212 Data Base Management 3 0 0 3

The theories of data base construction, inquiry, and updating are presented. Several systems of data base management are studied with utilization of one system in a practical environment. Prerequisite: EDP 223.

EDP 216 Data Processing Project 3 12 0 7

During the last quarter, the student will develop a simulated field project using materials from texts, supplemented by actual industrial problems. Students will interview local firms, construct proposed systems and progress through the actual proposal with sample of work to be done. Prerequisite: EDP 223.

EDP 221 Computer Systems I 4 3 0 5

An advanced course in principles and concepts of business data processing. Detailed attention is given to sophisticated software and hardware techniques and procedures. Advanced filing concepts, virtual storage, data base management, intercomputer communications, etc. are studied and examined during laboratory periods. Prerequisites: EDP 104 and EDP 110.

EDP 223 Computer Systems II 4 3 0 5

A study of computer systems involving the multiple program system, plus other system concepts such as feasibility studies, scheduling and system implementation. Prerequisite: EDP 221.

EDP 230 RPG II Language I 4 3 0 5

A first course in the Report Program Generator Language commonly known as RPG II. This course includes a study of the language formulation, rules, and programming methods. The student develops program logic and codes several commercial type programs in the RPG II language. Prerequisite: EDP 103/104 or equivalent.

EDP 231 RPG II Language II 3 4 0 5

In extension of EDP 230, the student develops additional programming skills in writing RPG II programs on more complex business problems. Techniques learned for card systems are extended to disc operating systems. The student codes several programs using these more advanced techniques. Prerequisite: EDP 230 or equivalent.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

Education Courses

EDU 80 Basic Skills 3 2 0 4

To develop or enhance the ability of students in using successful study skills thereby improving performance in mastering academic work. Prerequisite: None.

EDU 104 Teacher's Aide Methods 3 0 0 3

This course deals with teaching methods that can be utilized by the teacher's aide. It exposes the learner to a broad overview of the areas in which he/she will work. Prerequisite: None.

EDU 201 The Growing Years 5 0 0 5

This course is designed as an introductory child psychology course at the undergraduate level. The course examines the interplay of biological factors, human interaction, social structure, and other cultural forces in shaping the growing child. Factors which influence child development from the womb to adolescence are presented. Prerequisite: None.

EDU 220 Simple Gifts: Teaching the Gifted and Talented 3 0 0 3

This is an undergraduate/graduate level course designed to provide K-12 teachers with competencies which are basic to the provision of distinctive instruction for gifted children. The course introduces many important concepts and principles of gifted education as well as methods and techniques applicable to class instruction. Topics include definition, identification, and treatment of the gifted, and teaching strategies and program development for gifted education. The course will provide information and skills which are basic to planning and implementing strategies to meet the educational and socio-emotional needs of children with superior abilities. Prerequisite: None.

EDU 250 Methods of Instruction 2 2 0 3

A study of the instructor and his/her task and principles of teaching and learning. The course includes various techniques and devices used in instruction including audio-visual aids. Experience in practice teaching is provided. Prerequisite: None.

EDU 260 Reading Comprehension 3 0 0 3

This course provides teachers (K-6) with a conceptual framework for understanding the role of comprehension in the reading process and assists teachers in learning specific techniques which will help children increase their ability to understand what they read. The discussion topics, projects and classroom activities are designed to supplement, extend, and clarify the strategies presented in the video-tape programs. The course is offered as an intensive summer session for teacher recertification or in-service credit. Prerequisite: None.

Electrical Trades Courses

ELC 1104 Introduction to Electricity 3 0 3 4

An introduction to electrical structure of matter and electron theory, the relationship between voltage, current and resistance in series, parallel and series-parallel circuits. Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers and motors. The basic concepts of AC and DC machines and simple controls. Prerequisite: None.

ELC 1105 Introduction to Industrial Wiring **2 0 6 4**

Provides instruction and application in the fundamentals of blueprint reading, layout, planning, installation and maintenance of wiring systems in commercial and industrial complexes. Introduction to National Electric Code regulations in actual building mockups. Prerequisite: None.

ELC 1106 Industrial Electrical Maintenance **2 0 6 4**

Introduction and application of industrial electrical maintenance practices. Instruction in the use of electrical test instruments and controls used throughout the industrial complex. Emphasis will be placed on routine maintenance, repair servicing and trouble-shooting. Practice in the use of appropriate hand tools. Industrial safety procedures will be stressed. Prerequisite: None.

ELC 1107 Electric Control and Motors **3 0 6 5**

Introduction to solid state and electromechanial devices used in industry. The use of schematic drawings and wiring diagrams of circuits of motor controls and motor control centers. Emphasis placed on how to recognize, analyze and repair electrical faults safely with minimum out-of-service time. Prerequisite: None.

ELC 1112 Direct and Alternating Current **5 0 15 10**

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 circuits of Ohm's law and Kirchhoff's law; sources 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. Prerequisite: None.

ELC 1113 Alternating Current and Direct Current Machines and Controls **5 0 15 10**

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 system controls. An introduction to the type control used in small appliances such as thermostats, timers, or sequencing switches. Prerequisites: ELC 1112 and MAT 1115.

ELC 1124 Residential Wiring **5 0 9 8**

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, and conduits. National Electrical Code regulations in actual building mock-ups. Prerequisites: ELC 1113 and DFT 1110.

ELC 1125 Commercial and Industrial Wiring **5 4 6 9**

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 and ELC 1124.

ELC 1180 Basic Electricity **3 0 0 3**

This course includes the following topics: electron theory, production of electricity by chemical action, friction and magnetism, induction, voltage, amperage, horsepower and wattage, transformers, wiring and resistance. Some emphasis placed on connecting arc welders and electric motors. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ELN 1118 Industrial Electronics 3 0 6 5

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 3 0 6 5

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

Electronics Engineering Technology Courses

ELC 101 Fundamentals of Electricity 4 6 0 6

Elementary principles of electricity including: basic electric units, Ohm's Law, Kirchhoff's Law, basic electrical measuring instruments, various waveforms as applied to resistive circuits, inductance, capacitance, sinusoidal waves, complex algebra, alternating current circuit analysis of series-parallel networks. Prerequisite: None. Corequisite: MAT 101.

ELC 103 Fundamentals of Electricity 2 3 0 3

Elementary principles of electricity including the applications of network theorems to inductive and capacitance elements with emphasis on alternating-current systems, power and power factor, transformers and resonance. Prerequisite: ELC 101.

ELN 102 Basic Logic Circuits 2 2 0 3

A study of base-two mathematics, basic Boolean algebra, and binary codes as applied to computer circuits. Integrated circuit logic gates are used in the laboratory with military specifications, symbols, and truth tables. Prerequisite: ELN 103.

ELN 103 Fundamentals of Active Devices 2 2 0 3

A basic study of transistor concepts limiting the scope of study to P-N Junction types. The approach is both descriptive and mathematical. Basic graphs and equations are introduced. Prerequisite: ELC 101.

ELN 104 Active Devices 4 3 0 5

An in-depth study of the BJT & FET. A descriptive and mathematical approach is used with all emphasis on solid state devices. Prerequisite: ELN 103.

ELN 106 Passive Networks I 2 2 0 3

Analysis of passive networks under conditions of varying frequency or transient conditions. Prerequisite: ELC 103.

ELN 107 Digital Electronics 3 3 0 4

Digital Electronics is a course in applied digital electronics using integrated circuits. Basic Boolean algebra and Base 2, 8, and 16 math and codes are used. The circuit theory of Gates, flip flops, timers, counters and registers are applied in the classroom and lab. Digital to analog and analog to digital conversion methods and applications are investigated. Prerequisite: None.

ELN 110 Computer-Aided Circuit Analysis & Design Using Pascal 1 2 0 2

An introduction to computer-aided network analysis using the high level structured programming language Pascal and the U.C.S.D. operating system on the APPLE microcomputer; flowcharting and programming control structures; programming accomplished through an interactive environment; matrix formulation of network equations to aid in evolving complex passive networks into Thevenin's and Norton's equivalent circuits. Prerequisite: ELC 103.

ELN 206 Active Network Analysis I 2 3 0 3

A philosophical and mathematical study of transistor application to audio amplifiers and stabilizing circuits. Circuit gains, frequency response, stability and methods of interstage coupling are studied in depth. Prerequisite: ELN 104.

ELN 207 Active Networks Analysis II 2 3 0 3

A continuation of ELN 206 with emphasis applied to the circuitry of integrated operational amplifiers and discrete component audio oscillators. The interface of integrated operational amplifiers for general applications is studied in depth. Prerequisite: ELN 206.

ELN 209 Passive Networks II 3 0 0 3

A study of sophisticated resonant circuits and their behavior in coupling and impedance-matching networks. Prerequisite: ELN 106.

ELN 211 Active Network Analysis III 4 5 0 6

A philosophical study of transistor applications to radio-frequency amplifiers, radio-frequency oscillators, and radio-frequency detectors. Discrete component and integrated circuits are studied in depth. Prerequisite: ELN 209.

ELN 214 Waveshaping & Pulse Circuits I 2 4 0 4

Transistor logic gates and storage circuits as applied in integrated circuits, and discrete component form, with integrated circuits emphasized. Special active devices theory and circuitry, as applied to industrial control, storage, and pulse generation. Interfacing circuits for the I.C. operational amplifier, as applied to wave shaping and pulse circuits. Prerequisites: ELN 106 and ELN 206.

ELN 215 Waveshaping and Pulse Circuits II 2 3 0 3

The study of integrated logic circuits, by treating each complex chip as a sub-sub-system, and the interfacing of sub-sub-systems as sub-systems to a system. Prerequisite: ELN 214.

ELN 220 Electronic Systems 5 6 0 7

A study of a number of electronic communication systems through block diagram analysis. Various functional network and their interrelationship are studied along with various coupling devices as L-C network transmission lines and filters. AM, FM, PM, and SSB transmitters and receivers along with application of these to various systems. Prerequisites: ELN 211 and ELN 215.

ELN 235 Industrial Mechanisms 4 4 0 6

A study of the transducers involved in the transfer of electrical signals to and from other energy systems. Closed loop control systems are studied from the block diagram view. Mechanical and electrical power devices in the output of the control systems such as gear trains three-phase network, and synchros are studied. Prerequisite: ELN 209.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ELN 240 Computers 3 2 0 4

An exploration into the methodology of digital and analog computer systems. Functional block analysis is used to explain various systems. Input and output devices are explored. Prerequisite: ELN 215.

Emergency Medical Science Courses

EMS 101 Introduction to Emergency Medical Science 4 2 0 5

This course is designed to introduce students to the Emergency Medical care system, the components of this system, and their professional roles. Basic life support skills and basic EMT skills are introduced and practiced in a laboratory setting. Prerequisite: None.

EMS 102 Assessment & Emergency Intervention Skills 3 2 3 5

Building on the material in EMS 101, this course emphasizes the fundamental, cognitive, and manipulative skills common to basic emergency medical care of trauma and medical patients. Clinical time is coordinated in association with the class and laboratory material. At the completion of this course, the student will be eligible to take the Emergency Medical Technician-Ambulance certification examination. Prerequisite: EMS 101.

EMS 103 Medical and Trauma Management I 4 0 0 4

This course emphasizes the principles involved in performing a thorough physical assessment of patients with specific medical and trauma-related problems. Principles of shock are discussed in depth. Fluid and electrolyte balance are presented in association with various patient conditions. Specialty subject areas will include the respiratory system and central nervous system patient conditions. Prerequisites: EMS 102, BIO 106, BIO 107 and acceptance as an EMS student. Corequisite: EMS 107.

EMS 104 Medical and Trauma Management II 4 0 0 4

This course emphasizes the cognitive and motor manipulative skills are necessary in administering advanced life support emergency medical care to medical and trauma patients with musculoskeletal and soft tissue injuries. The multiple trauma patient and medical emergent patient will be discussed in depth. Prerequisites: EMS 103 and PHM 102. Corequisite: EMS 108.

EMS 107 Practicum I 0 0 6 2

This course provides an orientation to and beginning experience in field and hospital emergency medical care. Theoretical principles and basic skills from the EMS courses will be integrated together into the clinical areas. Case studies will be explored in depth. Rotations for the course include the emergency department, IV team, laboratory and field ambulance. Prerequisite: None. Corequisite: EMS 103.

EMS 108 Practicum II 0 0 12 4

Rotational sites in the operating room, recovery room, respiratory therapy team, emergency department and field ambulance will provide the student with clinical exposure in the area of the material covered in EMS 104. Case studies as a mechanism for an in-depth analysis of each patient are coordinated with this clinical experience. Prerequisite: EMS 107. Corequisite: EMS 104.

EMS 109 Medical Communications; Extrication and Rescue 2 2 0 3

This course is divided into two phases. The first phase explores the interpersonal and technical aspects of utilizing two-way radios, transmitting units within EMS vehicle, receiving units in the hospital, dispatching equipment and electrocardiographic telemetry equipment. Data process in regards to recording and reporting patient information is also explored. The second phase will involve a comprehensive analysis of the techniques of extrication and rescue. It will explore the problems of gaining access, disentanglement, packaging and removal of persons from wrecked vehicles. Skills will also be covered in the areas of water rescue, rescue from heights, rescue from depths and rescue from burning buildings. Prerequisite: Acceptance as an EMS student.

EMS 201 Cardiology 5 0 0 5

Basic anatomy and physiology of the cardiovascular system is reviewed. Basic electrocardiography is explored in relation to arrhythmias as well as normal rhythms. Medical problems of the cardiovascular system are also discussed. Pharmacological and electrical intervention are presented as they pertain to the paramedics. The Advanced Cardiac Life Support Course material from the American Heart Association is utilized in this course. Prerequisites: EMS 104, PHM 103. Corequisite: EMS 203.

EMS 202 Medical and Trauma Management III 3 0 0 3

This course emphasizes the cognitive and motor manipulative skills necessary in administering medical care to medical and trauma patients with obstetrical and gynecological emergencies including normal and complicated deliveries. Emergency resuscitation techniques for the newborn, newborn care and high risk infant care are also included. Medical and trauma emergencies commonly encountered in children are discussed in association with paramedic care procedures. Emergency care of patients with various aspects of emotional distress is also presented. Prerequisite: EMS 104. Corequisite: EMS 204. Prerequisite or Corequisite: PSY 202.

EMS 203 Practicum III 0 0 12 4

Rotations in the Cardiac Care Unit, Intensive Care Unit, ambulance and emergency room provide planned opportunities for clinical implementation of the material presented in EMS 201. Stress is placed on rhythm interpretations and cardiac patient conditions. Prerequisite: EMS 104. Corequisite: EMS 201.

EMS 204 Practicum IV 0 0 12 4

Planned clinical experiences with hospital and field care of the women during the antepartal, intrapartal and post-partal phases of the pregnancy cycle are included. Emergency care of the newborn and children is also stressed in clinical experiences. Rotation sites include labor and delivery, newborn nursery, pediatric area and ambulance. Prerequisite: EMS 203. Corequisite: EMS 202.

EMS 205 Practicum V 0 0 6 2

This course centers around providing clinical exposure to psychiatric care units, and the EMT-P's role in these areas. The student will also function in the emergency room and on the ambulance service, operating at an advanced skill level. Prerequisite: EMS 204.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
EMS 206	**Emergency Vehicle Operations and Maintenance; Hazards, Disaster, Triage**	**3**	**0**	**0**	**3**

This course includes the principle involved in the effective and safe operation of emergency vehicles. Advanced driving skills are included as they relate to emergency vehicles. Emergency vehicle maintenance is discussed, also. The second part of the course covers a variety of environmental hazards in relation to procedures of care. It also includes EMS major disaster responses and triage concepts. Prerequisite: EMS 109

EMS 207	**Emergency Medical Science Seminar**	**2**	**0**	**0**	**2**

This course is designed to allow the student an opportunity to be a health care educator. Topics related to emergency care and/or emergency care services will be presented by the students to classmates and emergency care providers. Prerequisites: All EMS courses in previous quarters.

EMS 208	**Knowledge and Skills Analysis**	**3**	**0**	**0**	**3**

This course will attempt to amalgamate the theory and clinical experience the student has been exposed to during the previous two years of study. It serves as an excellent review for the EMT-Paramedic Certifying exam. Prerequisite: All previous EMS courses or permission of EMS Department Chairperson.

English Courses

ENG 50	**Usage and Reading**	**6**	**4**	**0**	**8**

This course is designed for high school graduates who can benefit from instruction in basic language usage skills (oral and written). It includes techniques, practical exercises, and extensive application to increase reading rates, comprehension, and spelling. Vocabulary development and reading are combined with grammar to give the student a better understanding of English as a communication tool. Study skills and self-concept development are included in the course. Prerequisite: None.

ENG 88	**English as a Second Language**	**5**	**0**	**0**	**4**

The fundamentals of English are utilized as background to assist the student to become functional in English usage. Emphasis is placed on pronunciation, vocabulary development, grammatical patterns, skill and confidence in communication, and reading comprehension to include socio-cultural patterns. Additionally, this course will allow the student to be creative in using his/her new language while developing his/her grammatical sense. Prerequisite: None.

ENG 90	**Prescriptive Reading**	**3**	**2**	**0**	**4**

This course is designed to diagnose and remediate reading deficiencies on an individualized basis. The course focuses on improving vocabulary and reading skills, including reading rate and literal and critical comprehension. The aim of the course is to prepare students to read college-level assignments efficiently. Prerequisite: ENG 91.

ENG 91 Vocabulary and Reading 3 2 0 4

English 91 is a remedial reading and vocabulary development course devoted primarily to developing good reading skills and habits. Emphasis is placed on dictionary skills, word attack, and reading speed and comprehension. Particular attention is given to developing independent reading habits that would promote success in the student's curricular courses. Instruction is individualized in the lab segment of the course. Prerequisite: None.

ENG 92 Grammar and Composition 3 2 0 4

This course is designed to aid the student in his/her understanding and proper utilization of standard English usage through the study of grammar, sentence structure, and punctuation. The course is intended to prepare the student for his/her entrance into a regular curriculum. Prerequisite: None.

ENG 93 Vocabulary and Composition 3 2 0 4

English 93 is a remedial writing and vocabulary course devoted primarily to developing good writing skills and habits. The course includes an investigation of the principles of rhetoric through the reading of selected essays and the application of those principles in the writing of student themes. Particular attention is also given to vocabulary enrichment through drills and usage. In addition, independent reading assignments are required of each student. Prerequisite: None.

ENG 100 Reading Efficiency 0 3 0 1

This course is designed to assist students in improving both their reading rate and comprehension. Reading machines and programmed materials are utilized to increase the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Prerequisite: None.

ENG 101 Grammar 3 0 0 3

This course is designed to aid the student in the improvement of self-expression. It is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: None.

ENG 102 Composition 3 0 0 3

This course is designed to aid the student in the improvement of self-expression in expository writing. Emphasis is on the paragraph and the whole composition. Prerequisite: ENG 101.

ENG 103 Report Writing 3 0 0 3

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Prerequisites: ENG 101 and ENG 102.

ENG 104 Usage and Composition I 3 0 0 3

This is a course in standard usage of the English language and a study of the rhetoric of expository writing. Emphasis is placed on the reading and the writing of essays. Prerequisite: None.

ENG 105 Usage and Composition II 3 0 0 3

This course involves introduction to basic elements of fiction and an introduction to research techniques. Emphasis is placed on reading and writing about short fiction and on creating a research paper related to that reading. Prerequisite: ENG 104.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ENG 106 World Literature I 3 0 0 3

World Literture I is a study of major literary works of Western culture from the Ancient World through the Middle Ages. Prerequisites: ENG 104, 105, and 108.

ENG 107 World Literature II 3 0 0 3

World Literature II involves the study of the important literary movements and works of the Renaissance and the eighteenth century. Prerequisites: ENG 104, 105, and 108.

ENG 108 Usage and Composition III 3 0 0 3

Designed as a continuation of ENG 105, with functional emphasis upon promoting the students' understanding of prosody and drama. Approach is geared toward stimulating the students' examination and reflection upon chosen literary works and provoking increased writing proficiency through the application of the critical essay. Prerequisites: ENG 104 and ENG 105.

ENG 109 Writing for a Reason 5 0 0 5

This is an introductory English composition course which emphasizes basic writing skills such as choosing and writing a thesis, planning and writing a composition; and composing effective sentences, paragraphs, and essays. The course provides step-by-step procedures for writing compositions that students are likely to need in their college work as well as most entry level jobs. Prerequisite: None.

ENG 110 Business English 3 0 0 3

A course for general office and secretarial science students emphasizing the use of the dictionary and the application of the rules for punctuation, capitalization, the expression of numbers, proofreading and spelling, word division, and the formation of plurals and possessives as they are applied constantly by the secretary, stenographer, and typist in producing mailable transcripts. Prerequisites: BUS 102 and BUS 106 for Secretarial Science students, BUS 104 for General Office students. Corequisite: BUS 107 for Secretarial Science students, BUS 261 for General Office students.

ENG 111 Communicating Through Literature 5 0 0 5

Poetry, drama, film, fiction, and the essay are explored through dramatized segments and concrete examples from the work of many writers from various periods. Also, contemporary British and American authors discuss their artistic concerns and writing techniques. Prerequisite: ENG 109.

ENG 115 Medical Terminology and Vocabulary 3 0 0 3

An allied science related course which deals with the basic tools for building a medical vocabulary and mastering the identification of anatomical roots, prefixes, and suffixes of words. Anatomical body parts, diseases, operations, tumors, drugs, and descriptive terms are emphasized by analysis of the terms and structure of the words. Mental health is included for special information in this health field. Prerequisite: None.

ENG 204 Oral Communications 3 0 0 3

This course is a study of basic concepts and principles of oral communication to enable the student to communicate with others verbally. Emphasis is placed on diction and voice and on applying particular techniques of theory to correct speaking habits and to produce effective oral presentation. Prerequisite: None.

ENG 206 Business Communication 3 0 0 3

Develops skills in the techniques of writing effective communications. Emphasis is placed on correct procedure in writing the inquiry, sales, credit, collection, adjustment, complaint, order, acknowledgement, remittance and application letters and data sheets typical of the business office. Prerequisites: BUS 102 or equivalent, and ENG 101 or ENG 104.

ENG 207 Business Communications for Word Processing 5 0 0 5

Develops skills in the techniques of writing effective communications for the administrative secretary and correspondence secretary. Analysis and emphasis is placed on correct procedure in transformation of ideas into words for the inquiry, sales, credit, collection, adjustment, complaint, order, acknowledgment, remittance, and application letters and data sheets. The importance of processing the written word for effective management of the office is stressed. Prerequisites: BUS 105 or equivalent, and ENG 101 or ENG 104 and ENG 110.

ENG 209 World Literature III 3 0 0 3

World Literature III involves the study of the important literary movements and works of the nineteenth and twentieth centuries. Prerequisites: ENG 104, 105, and 108.

ENG 210 American Literature I 3 0 0 3

The student will explore the American cultural atmosphere from Colonial times to approximately 1860 through cultural analysis of its literature and history. Prerequisites: ENG 104, 105, and 108.

ENG 211 American Literature II 3 0 0 3

Students study the American literary and cultural milieu from 1860 to the present. Prerequisites: ENG 104, 105, and 108.

ENG 212 Creative Writing Seminar 3 0 0 3

Designed as a discipline and forum of criticism for students who wish to write verse or short fiction. Prerequisite: ENG 105.

ENG 214 Classical Mythology 3 0 0 3

English 214 is a chronological and genealogical study of the myths of ancient Greece and Rome. The study begins with the myths of creation, follows the careers of the major dieties, and concludes with legends from the family of man—up to and including the voyage of Aeneas. This course particularly emphasizes the influence of these tales on the creative intelligence and examines from the worlds of music, art, and literature, works that have been influenced by myth. Prerequisite: ENG 105.

ENG 217 Children's Literature 3 0 0 3

The student will read and write about the various types of literature appropriate for young children and will learn to develop standards for judging literature for children. Prerequisite: None.

ENG 1100 Reading Improvement 0 3 0 1

This course is designed to improve the student's ability to read rapidly and accurately. Special machines are used for drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ENG 1101 Communicative Skills: Grammar 3 0 0 3

This course is designed to aid the student in the improvement of self-expression in written composition and oral usage. Emphasis is on grammar, diction, sentence structure, punctuation, and spelling. This course is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations at work and in social life. Prerequisite: None.

ENG 1102 Industrial Communications 3 0 0 3

This course includes a review of the major grammatical principles introduced in English 1101. Emphasis is on the development of one's ability to communicate effectively with other individuals through the medium of good language usage in writing, to think more clearly, and to reason more forcefully. Prerequisite: ENG 1101.

ENG 1103 Report Writing 3 0 0 3

This course is designed to help the student develop competency in report writing. Emphasis is placed on writing letters, writing informal reports, and developing communications skills. Prerequisite: ENG 1102.

Environmental Courses: Water and Wastewater Plant Operators Program

ENV 1100 Biology & Microbiology 2 3 0 3

A basic course in biology with emphasis on biological organisms peculiar to water, wastewater treatment processes and stream sanitation. Collection methods, classification procedures and physiological systems are the area of interest. Prerequisite: None.

ENV 1101 Water Laboratory Control 2 6 0 4

Theory and laboratory technique for control tests of water purification plants as follows: bacteriology, color, turbidity, hydrogen ion concentration, alkalinity, hardness, coagulation, fluoride, iron, manganese and detergents. Interpretation and application of test results are stressed. Prerequisite: None.

ENV 1102 Water Plant Operations 3 2 0 4

Construction features and operational techniques of water purification processes and equipment. Emphasis is placed on continuity of operation and proper control of treatment chemical dosages for purification purposes. Public health aspects of the population as well as safety of plant operators is part of the instructional material. Prerequisite: None.

ENV 1103 Waste Laboratory Control 2 0 6 4

Theory and laboratory techniques for control tests in waste water treatment plant operation as follows: residue, dissolved oxygen consumed, hydrogen ion concentration, physical tests and bacterial enumeration. Interpretation and application of test results are stressed. Prerequisite: None.

ENV 1104 Waste Plant Operations 3 2 0 4

Construction features and operational techniques of purification processes and equiment. Emphasis is placed on operator responsibility in the successful operation of waste water treatment plants. Classroom instruction will be given on campus with several laboratories at local plants. Prerequisite: None.

ENV 1105 Maintenance 2 3 0 3

Preventive maintenance procedures and records for basic and specialized equipment in the water and waste water plant. Equipment nomenclature is covered in classroom with actual experience in local plants. Prerequisite: None.

ENV 1107 Stream Studies 2 0 6 4

A study of the natural purification processes that occur in streams by chemical and biological tests. Emphasis is placed on methods of evaluating streams at various locations and determining the waste assimilating capacity of them. Prerequisite: None.

ENV 1108 Control Systems 3 0 3 4

Application and operation of hydraulic, pneumatic, mechanical, electrical and electronic control systems utilized in water and waste water treatment plants. Calibration and limitations of various types of equipment are presented. Prerequisite: None.

ENV 1109 Water and Waste Distribution 3 0 3 4

Methods of sizing, maintaining and constructing collection systems for waste water and distribution systems for potable water supplies. Purposes and construction details of appurtenances and special structures are included in the instructions. Prerequisite: None.

ENV 1110 Introduction to Ecology 2 3 0 3

An introductory course designed to demonstrate some of the many systems employed in connection with environmental manipulation and overall protection for the public's health. Some of the systems discussed concern methods of disease transmission, protection of ground water, insect and rodent control, liquid and solid waste disposal, swimming pool sanitation, and industrial hygiene. Prerequisite: None.

ENV 1111 Industrial Waste 2 0 3 3

Sources of industrial waste and their effects on streams and waste plants. Methods to reduce problems with particular wastes at industry treatment plants. Prerequisite: None.

Funeral Service Education Courses

FSE 101 Introduction to Funeral Service 3 0 0 3

The principles of funeral service and its history. A study of the ethical obligations and fundamental requirements involving skill, aptitudes and qualifications of funeral service personnel. An introductory look at the practice of funeral service and an introduction to the principles of embalming. Prerequisite: None.

FSE 115 Funeral Law 3 0 0 3

The State Statutes, rules and regulations and applicable statutes of other agencies regulating the funeral professions. A survey of relevant North Carolina laws with respect to funeral service including public health laws, cemetery and transportation laws, vital statistics and death registration. A general survey of rights, privileges, and responsibilities of survivors, duties, authority and responsibility of funeral director and applicable federal acts and statutes. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

FSE 121 Funeral Service Practices 2 2 0 3

The student is helped to develop knowledge of funeral service procedure of various religions and fraternal groups. A study of the customs and funeral practices that are evident in the United States today is presented, along with architectural differences in churches. Military and fraternal services are also stressed. Terminology used in the practice of funeral service today as well as a study of practices and equipment used in funeral service. Prerequisite: None.

FSE 206 Embalming Chemistry 3 2 0 4

Fundamentals of organic and biochemistry. Chemical changes in the human body during life, after death, and during chemical preservation, including disinfection, solutions, toxicology and embalming chemicals. Prerequisite: None.

FSE 209 Introduction to Embalming Practice 0 3 0 1

A laboratory course in embalming principles and practice which is designed to actively involve students in autopsy and routine embalming situations with special emphasis on equipment and materials utilized, sanitation and personal protection, legal, moral and ethical considerations. Prerequisite: Permission of Department Chairperson.

FSE 210 Embalming Theory I 3 0 0 3

A study of the purpose and need for embalming, history of embalming from 4000 B.C., types of death, signs of death, test for death postmortem change, ethics, embalming laws of decomposition, anatomical limits, and linear guides. Laboratory demonstrations will expose the student to the human body in autopsy and routine embalming situations. Prerequisite: None.

FSE 211 Embalming Theory II 3 0 0 3

The topics for study will be case analysis in lecture and task analysis in lab. The tasks or goals to be accomplished are sanitizing and positioning remains, positioning features, mixing of chemical solutions, and actual embalming. Prerequisite: FSE 210.

FSE 212 Embalming Practice I 0 3 0 1

A laboratory course in embalming principles and practice which is designed to actively involve students in autopsy and routine embalming situations. A continuation of FSE 209. Prerequisite: FSE 209 and Permission of Department Chairperson.

FSE 213 Embalming Practice II 0 3 0 1

The student analyzes each case which he/she is involved to determine the embalming techniques to be employed in that particular case. He/she demonstrates proficiency in each procedure and skill of embalming. Prerequisite: FSE 212 and Permission of Department Chairperson.

FSE 214 Restorative Arts I 2 4 0 4

Aspects of general art as applied to funeral services. Anatomical modeling; expression; familiarization with instruments, materials, and technique of rebuilding human features. Color in cosmetics. Development of special laboratory skills. Prerequisite: None.

FSE 215 Restorative Arts II 2 4 0 4

Terminology of traumatic and pathological conditions frequently restored; recommended sequence for most restoration; legal aspects; the use of photographs; stains and their solvents; materials and techniques used in specific restorations. Prerequisite: None.

FSE 224 Funeral Home Operations 3 2 0 4

Outlines all phases of funeral homes operations, including but not limited to: establishing a funeral home, choosing and financing a location; building, remodeling or purchasing existing funeral home; recruitment and training of personnel; establishment of management policies; selection room planning; merchandising; burial merchandise; survivor benefits such as social security and veterans benefits. Prerequisite: None.

FSE 225 Research and Funeral Services 1 3 0 2

Research in specific area of funeral service with a paper as the objective of the course. Such topics as clergy relations, child and death, medical examiner, vital statistics might be subjects for study. Prerequisite: Permission of Department Chairperson.

FSE 257 Pathology 4 0 0 4

A general course description in pathology to provide the student with a general knowledge of disease processes, with particular emphasis on those diseases that are the major cause of death, so the student will recognize the embalming problems which they may present. To provide an understanding of pathological terminology so the student will be able to communicate with members of the medical profession and facilitate the interpretation of the certificates of death. Prerequisite: None.

FSE 268 Funeral Counseling 3 0 0 3

This course is a study of the principles of counseling that will be of assistance to nurses, funeral service directors and others whose work requires some form of formal or informal counseling ability. Objectives of the counseling process, the personality and role of the counselor, and techniques of counseling are studied in depth. Other topics investigated are philosophies of counseling, problems involved in the counseling process and the evaluation of counseling. (The student should be aware of the fact that one course in counseling will not adequately prepare him or her as a professional counselor.) Prerequisite: None.

FSE 280 Professional Practicum 1 27 0 10

Provides experience in funeral service under the direction of a licensed funeral director and college supervisor. The activities involve the normal professional duties performed in the operation of a funeral home. Prerequisite: Permission of Department Chairperson.

FSE 282 Seminar in Funeral Services 1 2 0 2

The student will review each course in the curriculum in preparation for state and national examinations and discuss current events in the practice of funeral service. Prerequisite: Permission of Department Chairperson.

Food Service Courses

FSO 101 Introduction to Food Service 1 0 0 1

Introduction to and history of food service and the outlook for the food service industry including broad objectives and specific goals of training with an investigation of job opportunities and personal qualifications. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
FSO 102	**Food Preparation I**	**3**	**0**	**6**	**5**

A study of the scientific principles of food preparation and cooking procedures. Included are preparation of salads, stocks, soups, sauces, gravies, and beverages. Prerequisite: None.

FSO 103	**Equipment Layout and Design**	**3**	**2**	**0**	**4**

Designed to teach methods of simplifying work through the effective use and care of large and small equipment with emphasis on time and motion economy. A study of the principles of equipment layout and institutional kitchen design. Prerequisite: None.

FSO 104	**Sanitation and Safety**	**3**	**0**	**0**	**3**

A study of sanitation standards and safety precautions as related to food storage, preparation, and service. Prerequisite: None.

FSO 105	**Accounting—Purchasing—Records**	**3**	**0**	**0**	**3**

Basic mathematical skills studied in relation to food purchasing, preparation, accounting and records. Prerequisite: None.

FSO 106	**Nutrition I**	**3**	**0**	**0**	**3**

A study of the principles of nutrition using the basic four food groups and the application of these principles to the planning of nutritionally adequate diets; other factors influencing menu planning; refrigeration and storage facilities; availability of seasonal foods; equipment and facilities; employee skills; eye appealing food combinations; type of clientele and food service. Prerequisite: None.

FSO 107	**Baking I**	**2**	**0**	**6**	**4**

An introduction to the principles of and development of skills in baking. Prerequisite: None.

FSO 108	**Personnel Management**	**3**	**0**	**0**	**3**

A study of the job responsibilities and duties of the food service worker; his/her relationship to his/her associates, with emphasis on understanding human behavior; labor policies and legislation; and the importance of self-development in relation to professional responsibility. Prerequisite: PSY 206.

FSO 109	**Production Management**	**3**	**0**	**0**	**3**

Use of standardized recipes and portion control, work sheets, score sheets for judging food products, plan of work to improve work methods, and further emphasis on motion economy. Prerequisite: FSO 105.

FSO 110	**Food Service Internship I**	**1**	**0**	**21**	**5**

Students work in a food service operation under the direction of the instructor and with the cooperation of the employer. Students are evaluated by the instructor and employer as to their performance and abilities. Prerequisite: 40 hours of food service instruction or permission of Department Chairperson.

FSO 111	**Seminar I**	**3**	**0**	**0**	**3**

The purpose of this seminar is two-fold: job orientation and evaluation of job experience. Corequisite: FSO 110.

FSO 112	**Food Preparation II**	**2**	**0**	**9**	**5**

Emphasis placed on meat analysis and cutting, and on meat, poultry, fish, and shellfish cookery. Prerequisite: FSO 102.

FSO 117 Baking II 1 0 12 5

The development of artistic skills related to cooking and baking. Prerequisite: FSO 107.

FSO 122 Food Preparation III 1 0 9 4

Emphasis is on whole meal preparation and service, quantity cookery, and service styles. Included will be the preparation and service of breakfast, luncheon, and dinner menus. Prerequisite: FSO 112.

FSO 202 Food Preparation IV 3 0 6 5

A course designed to continue development of skills in food preparation. Emphasis will be placed on experimental cookery as related to quality control and food specifications and standards. Prerequisite: FSO 122.

FSO 203 Organization and Management 3 0 0 3

A study of the organization structure, the application of the principles of scientific management and the effectiveness of personnel as related to successful food service operation. Prerequisites: FSO 108 and FSO 109.

FSO 204 Food Purchasing 3 0 0 3

Fundamentals of sound food purchasing methods and procedures based on cost control, specifications, quantity, and storage. Prerequisite: FSO 105.

FSO 205 Nutrition II 3 0 0 3

Principles of nutrition as applied to institutional menu planning. Included are school food service (type A lunch), cycle menus, and modified diet planning. Prerequisite: FSO 106.

FSO 206 Financial Management 3 0 0 3

A comprehensive study of financial management related to food service operations to include food, labor and equipment costs, operating and overhead expenses, personnel policies, and records. Prerequisite: FSO 105.

FSO 207 Food Merchandising 2 0 6 4

Emphasis on the art of food preparation and service. Prerequisite: FSO 122.

FSO 210 Food Service Internship II 1 0 21 5

Students enter work experience at a mid-management or supervisory level, under the direction of the instructor and with the cooperation of the employer. Prerequisite: Completion of all food service courses. Corequisite: FSO 211.

FSO 211 Seminar II 3 0 0 3

Job orientation and overall evaluation of work experience. Prerequisite: None.

FSO 212 Food Preparation V 1 0 6 3

Planning and preparation of special meals and menus. Included will be the preparation of various cuisines, modified diets, and Type A lunch menus. Prerequisite: FSO 202.

History Courses

HIS 104 Western Civilization I 3 0 0 3

This course traces the development of Western Civilization from prehistoric periods to 1300 A.D. Emphasis is placed upon the legacies of ancient Greece and Rome to the world as well as upon the development of national monarchies in Western Europe. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
HIS 105	**Western Civilization II**	**3**	**0**	**0**	**3**

This course is a survey of Western Civilization from 1300 to 1815. Emphasis is given to the period of the Renaissance, the Protestant Reformation, and the Commercial Revolution, Enlightenment, and the French Revolution. Prerequisite: None.

HIS 106	**Western Civilization III**	**3**	**0**	**0**	**3**

This course is a study of Western Civilization from 1815 to the present. The social and economic development of the western world in the period between the Napoleonic Wars and World War I, the period between World War I and World War II, and the period since World War II are emphasized. Prerequisite: None.

HIS 201	**American History I**	**3**	**0**	**0**	**3**

This course is a survey of American history from the discovery of America to the outbreak of the Civil War. Emphasis is given to the Colonial Period, the American Revolution, the development of national institutions, the westward movement, the political, economic, and social differences of North and South, and the Civil War. Prerequisite: None.

HIS 202	**American History II**	**3**	**0**	**0**	**3**

This course is a study of United States history from the outbreak of the Civil War through World War I. Emphasis is given to the periods of Reconstruction, Industrialization, Imperialism, and World War I. Developments in foreign policy are related to the domestic occurrences in the United States. Prerequisite: None.

HIS 203	**American History III**	**3**	**0**	**0**	**3**

This course is a survey of United States history from World War I to the present. Emphasis is given to the periods of the Great Depression, World War II, the Cold War and the social unrest of the 1960's. Developments in foreign policy are related to the domestic occurrences in the United States. Prerequisite: None.

HIS 210	**North Carolina History I**	**3**	**0**	**0**	**3**

This course is a study of geographical, political, economic and social conditions existing in North Carolina from the discovery of America through the Civil War period. Particular emphasis is placed on those aspects of development which tended to make North Carolina unique during the colonial period and in the development of basic institutions. Prerequisite: None.

HIS 211	**North Carolina History II**	**3**	**0**	**0**	**3**

This course is a study of geographical, political, economic and social conditions existing in North Carolina from the Civil War to the present. Particular emphasis is placed on those aspects of development which tend to make North Carolina unique during this period. Prerequisite: None. (Recommend HIS 210.)

Horticulture Courses

HOR 150	**General Plant Horticulture**	**3**	**2**	**0**	**4**

A course dealing with horticulture principles and the application of plant science fundamentals to horticultural practices. Prerequisite: None.

HOR 151 Plant Materials 4 2 0 5

A study of a variety of horticultural plants normally produced in greenhouse and nursery operations with emphasis upon the identification of the plant by their characteristics, by common and scientific names, their adaptations to various landscape uses, and their cultural requirements. Prerequisite: None.

HOR 152 Plant Materials II: Herbaceous Plants 4 2 0 5

A course designed to develop the student's knowledge and understanding of herbaceous plant identification. Developing the student's knowledge in appropriate use of herbaceous plants in private and commercial landscape projects. Prerequisite: None.

HOR 153 Greenhouse Management 3 2 0 4

A study of the basic marketing principles with emphasis upon how to operate a small business such as a garden center involved in selling horticultural plants and garden supplies. Students will be provided experience in selling as a part of the course, and field trips to observe successful operations. Prerequisite: HOR 151.

HOR 190 Greenhouse Production of Plants and Crops 3 2 0 4

A course dealing with the application of the principles of plant science in the production of plants and crops in the greenhouse. Emphases are placed upon the methods of plant propagation, specific plant requirements, scheduling production operations, and the application of marketing principles and practices. Prerequisite: None.

HOR 200 Landscape Horticulture I 3 4 0 5

A study of basic principles and practices utilized in landscaping in order to better understand the importance of basic planning in development of residential and commercial properties. Prerequisite: HOR 151.

HOR 201 Landscape Horticulture II 3 4 0 5

A study of the principles and practices utilized in landscaping residential and commercial properties. Landscape planning will include the development, cost analysis, and installation of a landscape design. Prerequisites: HOR 151 and HOR 200.

HOR 204 Plant Management Practices 4 2 0 5

A course designed to identify the general principles and practices involved in turf and nursery establishment and management. Emphasis will be given to the appropriate methods available and their use in each type of operation. Prerequisite: BUS 185.

HOR 205 Horticultural Retail Marketing 3 2 0 4

A study of the basic marketing principles with emphasis upon how to operate a small business such as a garden center involved in selling horticultural plants and garden supplies. Students are provided experience in selling as a part of the course, and field trips to observe successful operations. Prerequisite: None.

HOR 228 Plant Diseases & Parasites 3 2 0 4

A study of horticultural plant pests that occur in nurseries, greenhouses, and garden centers with major emphasis on identification of the pest and determination of the best and most economical control. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

HOR 254 Plant Propagation 3 2 0 4

A study of the fundamental principles involved in the production of plants from seed, leaves, stems and other plant parts, including the various techniques that are useful in the propagation of plants. This course includes techniques of production for nursery and greenhouse propagation operations. Prerequisites: AGR 170 or equivalent.

HOR 258 Turf Management 2 4 0 4

A course designed to identify the principles and practices involved in turf management. Emphasis will be given to turf grass identification, growth, development and maintenance. Prerequisite: None.

HOR 299 Supervised Clinical Education 1 15 0 6

This course is designed to provide the student with an opportunity to pursue and be involved in, under faculty supervision, work experience in a specialty field. The student may choose employment involving either or a combination of production, processing, manufacturing, distributing, marketing, or inspecting horticultural products, or the provision of a type of horticultural service. Prerequisite: Minimum of 35 quarter hours of horticulture instruction or permission of Department Chairperson.

Insurance Licensing Institute Courses

INS 214 General Principles 2 0 0 2

The types of risk, and how to apply the risk management concepts to said risks; the various types of insurance and functions of insurance companies; and the various laws and regulations affecting the insurance industry.

INS 215 Life, Accident & Health 2 0 0 2

Exposures, types, policy provisions and practices of life, health, and accident insurance; programming life and health insurance; interpreting the regulations and laws specifically applying to life, health and accident agents; and the various social insurance plans.

INS 216 Fire and Casualty 2 0 0 2

Automobile insurance, general liability exposures and insurance, worker's compensation, commercial fire and other insurance, homeowner's insurance, crime insurance, and government fire and casualty insurance.

Chartered Life Underwriter Courses

INS 220 Financial Services: Environment and Professions 3 0 0 3

This introductory course sets the stage for the CLU and CFC programs by providing an overview of the environment in which financial services professionals assist clients in meeting their financial security needs. The financial planning process is presented as a framework for identifying client objectives and formulating and assessing plans to achieve them. Special emphasis is placed on effective information gathering and client counseling techniques. Prerequisite: BUS 247.

INS 221 Income Taxation 3 0 0 3

The federal income tax system with particular reference to the taxation of life insurance and annuities. The income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates. The way income tax laws apply to transactions of individuals and businesses is important to financial services professionals in planning that can result in avoidance, minimization, or deferral of taxation. Prerequisite: BUS 247.

INS 222 Economics 3 0 0 3

Basic economic concepts with emphasis on such macroeconomic and microeconomic topics as the price system and the market economy, the circular flow of national income and product, stabilization policy, the supply and demand for money, unemployment and inflation. This course is designed to explain the basic economic principles and institutions, an understanding of which is necessary for an appreciation of alternative explanations of and alternative solutions for the more common economic problems found in private and government sectors. Prerequisite: BUS 247.

INS 223 Financial Statement Analysis/ Individual Insurance Benefits 3 0 0 3

The initial assignments cover various topics related to personal and business financial statements, including the basic concepts of accounting, the format and contents of key financial statements, the techniques of financial statement analysis, and personal budgeting. A thorough understanding of the contents and analysis of financial statements is critical in assessing a client's financial condition. The second section of the course describes various types of individual insurance coverages available for meeting life, health, and personal property and liability risks. Prerequisite: BUS 247.

INS 224 Insurance Environment and Operations 3 0 0 3

Legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, disposition of life insurance proceeds, and life insurance agency. Also covered are insurance company types, organization, operations and regulation. The regulation aspects include investments, privacy, reserves, surrender values, policy approval and company examination. One assignment is concerned with the psychological and procedural aspects of death and dying. Prerequisite: BUS 247.

INS 225 Group Benefits and Social Insurance 3 0 0 3

Analysis of group insurance benefits, including the regulatory environment, contract provisions, marketing, underwriting, ratemaking, plan design, and alternative funding methods. Also, various governmental programs related to the economic problems of death, old age, unemployment, and disability. Prerequisite: BUS 247.

INS 226 Pensions and Other Retirement Plans 3 0 0 3

Introduction to qualified and nonqualified deferred compensation; design of qualified pension, profit-sharing and other qualified plans; cost factors and funding instruments for qualified plans; income and estate tax aspects. Also, plans for the self-employed, individual retirement plans, tax-deferred annuities, and nonqualified deferred compensation plans. The course emphasizes planning for retirement income and for maximum tax benefits for employees and business owners. Prerequisite: BUS 247.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
INS 228	**Investments**	**3**	**0**	**0**	**3**

Various aspects of investment principles and their application to personal finance. Yields, limited income securities, investment markets, valuation of common stock, real estate, debt and credit, mutual funds, variable annuities, tax-sheltered investments, and principles of personal portfolio management. The significance of this course is highlighted by the growing importance of money management to individuals. Prerequisite: BUS 247.

INS 230	**Estate and Gift Tax Planning**	**3**	**0**	**0**	**3**

Estate and gift tax planning including the nature, valuation, disposition, administration and taxation of property. Particular emphasis will be given to a basic understanding of the unified estate and gift tax system. The course will cover the uses of revocable and irrevocable trusts, life insurance, powers of appointment wills, lifetime gifts, the marital deduction and other estate planning devices. Also covered is the estate planning process including the client interview, fact finding and development of appropriate personal estate plans using various estate planning devices. Prerequisite: BUS 247.

INS 231	**Planning for Business Owners and Professionals**	**3**	**0**	**0**	**3**

Tax and legal aspects of organizing a business; problems in continuing a business after an owner's death and the insured buy-sell agreement; retirement of a business owner, including estate planning and "estate freezing" techniques; stock dividends, corporate recapitalizations, stock redemptions, and other techniques; disability buy-sell agreements; key employee life and health insurance plans, and split-dollar life insurance plans; and business uses of property and liability insurance. Prerequisite: BUS 247.

Industrial Management Courses

ISC 102	**Industrial Safety**	**2**	**2**	**0**	**3**

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 guarding and personnel protective equipment; State industrial accident code and fire regulations; the first aid department and the line of supervisory responsibility; job instruction and safety instruction; company rules and enforcement; use of safety committees; workman's compensation; and advertising and promoting a good safety and fire prevention program. Special topics of current interest relating to safety legislation will be reviewed. Prerequisite: None.

ISC 120	**Principles of Industrial Management**	**3**	**2**	**0**	**4**

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. Prerequisite: None.

ISC 202 Quality Control 3 2 0 4

Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, structure, costs, reports, records, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests for significance. Prerequisite: None.

ISC 204 Value Analysis 3 0 0 3

The modern concept of value and value applications. This course will provide the student an opportunity to study products, processes, and systems with the purpose of identifying function and unnecessary costs. The objective of the concepts and techniques of value analysis is to develop effectiveness in identifying and removing unnecessary cost by use of sound decision criteria. Prerequisite: None.

ISC 205 Purchasing 3 0 0 3

A study of the concepts of modern purchasing. The course will provide the student an opportunity to study industrial purchasing systems and the concepts and techniques for optimizing procurement and cost. Prerequisite: None.

ISC 210 Job Analysis & Evaluation 2 2 0 3

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 processes as an intricate part of productive procedures. Prerequisite: ISC 240.

ISC 211 Work Measurement 5 0 0 5

This course is designed to give students a broad concept of work measurement as a management tool. It includes a study of methods and techniques utilizing flow and process charts, multiple activity charts, operations charts, flow diagrams, work sampling, personnel and work scheduling, standards development, and time and motion data utilization. Students will be afforded laboratory experiences to develop proficiency in the application of the aforementioned management tools. The preparation of written analyses, based on the findings during laboratory periods, will be an integral part of the course. Prerequisite: ISC 210.

ISC 220 Management Problems 3 0 0 3

A study of social conflict between corporations and various segments of society. Includes dilemmas of management conflict in actual social issues of today's world. Areas of environmental conservation, government, owners, individuals, and special interest impact upon management are explored. Case studies are utilized. Prerequisite: BUS 234, second year standing or consent of instructor.

ISC 221 Introduction to Industrial Engineering 3 2 0 4

A practical study of the functions of the industrial engineer. Motion and time studies, predetermined time systems, and their bases for establishing remuneration and incentive are surveyed. Effective plant layout, material handling, and packaging are evaluated by motion and time study principles. Prerequisite: None.

ISC 231 Manufacturing Cycles 5 0 0 5

A study in depth of the following areas: purchasing and distribution, consumption patterns, channels of distribution, marketing of consumer goods, shopping, specialty, agricultural and industrial goods, service marketing, functional middlemen, speculation and hedging, wholesaling, shipping and warehousing, exporting and trade movements, standardization and grading, pricing, government regulation of competition, sales promotional activities, and merchandising practices. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ISC 232	**Industrial Dynamics**	**5**	**0**	**0**	**5**

Organizational behavior examined by both theoretical and applicatory approaches. Theories, applications, and simulations of productivity, creativity, time efficiency, and motivation are examined emphasizing their effect upon the dynamics of the industrial environment. Prerequisite: ISC 120 or the consent of the curriculum advisor.

ISC 235	**Industrial Management Practicum**	**1**	**9**	**0**	**4**

A study of the problems facing local industry with plant visitations and interviews. The student will summarize his findings in written reports to include both problem areas and proposed solutions. Prerequisite: Completion of all work from the first through the fifth quarters or consent of Department Chairperson.

ISC 236	**Management Science**	**2**	**2**	**0**	**3**

A survey of quantitative methods of management science and operations research. Included are real world applications of project scheduling, linear programming, statistics, probabilities, and decision theory. Prerequisite: ISC 120.

ISC 240	**Industrial Relations**	**2**	**2**	**0**	**3**

Study of the effective development and utilization of manpower by study of present day procurement, selection, training, employee maintenance functions and case studies of typical industrial situations. Application of material learned is a very important part of this course. Prerequisite: ISC 120 or consent of instructor.

ISC 241	**Industrial Training**	**3**	**0**	**0**	**3**

The fundamental principles of training in industry. Emphasis is placed upon learning curve application, task analysis, simulator mockups, and various learning models. Prerequisite: ISC 120.

Criminal Justice Courses

LCJ 101	**Introduction to Criminal Justice**	**5**	**0**	**0**	**5**

A general course designed to familiarize the student with a philosophy and history of criminal justice, including its legal limitations in a democratic republic, a survey of the primary duties and responsibilities of the various criminal justice agencies, a delineation of the basic processes of justice, and evaluation of criminal justice's current position, and an orientation relative to criminal justice as a vocation. Prerequisite: None.

LCJ 102	**Constitutional Law**	**5**	**0**	**0**	**5**

Survey of the important developments relating to judicial review of legislative action, problems of federalism, safeguards to privacy, life, liberty, and property, and protection of civil and political rights and their relationship to the criminal justice system. Prerequisite: None.

LCJ 103	**Criminology**	**5**	**0**	**0**	**5**

The student surveys crime typologies, various hypotheses relative to the etiology socially deviant human behavior, and society's past, current, and possible future reaction to such behavior. Prerequisite: LCJ 101 or consent of instructor.

LCJ 104 Police Organization and Administration **5 0 0 5**

A study of the theory, principles, and concepts of effective police administration. Management theory, organizational structure, communication behavior, organizational behavior, policy-making, planning, problem-solving, decision-making, management by objectives, budgeting, personnel management, manpower and resource allocation, and police productivity will be examined with special attention given to their application within a police organization. Prerequisite: LCJ 101 or consent of instructor.

LCJ 105 Introduction to Corrections **5 0 0 5**

An introduction to the correctional systems as they exist in the United States as a part of the criminal justice system. Historical perspectives, contemporary philosophies, treatment of prisoners, and current trends and alternatives will be studied. Prerequisite: LCJ 103.

LCJ 106 Correctional Classification & Treatment **5 0 0 5**

A social examination of the medical model of deviance. An analysis will be made of rehabilitation ideology and the techniques utilized to treat those who have been labeled as criminal. Topics will include psychoanalysis, psychotherapy, behavior modification, religious and social counseling, logo-therapy, reality therapy, hypnosis, and various others accepted as well as esoteric therapy techniques. Prerequisite: LCJ 101 or consent of instructor.

LCJ 107 Decarceration & Other Alternatives in Corrections **5 0 0 5**

The student will study the history of the traditional administration of the criminal justice process. The negative aspect of incarceration will be discussed. Both pre- and post-arrest and adjudication intervention programs will be compared and evaluated. Prerequisite: LCJ 105 or consent of instructor.

LCJ 108 Criminal Law **5 0 0 5**

Designed to present a history of the development and philosophy of the criminal law, the theory and practice of the criminalization decision, the principles of liability, elements of crimes and a review of defenses. Special emphasis will be placed upon North Carolina General Statutes, specifically Chapter 14. Prerequisite: LCJ 102.

LCJ 109 Laws of Arrest, Search, Seizure, and Confessions **3 0 0 3**

Development of the laws relating to arrest, search, seizure, and confessions will be reviewed. Recent U.S. Supreme Court decisions and possible trends will be studied. Case study will be utilized extensively. Prerequisite: LCJ 102 or consent of instructor.

LCJ 110 Public Safety Photography **3 4 0 5**

A study of photographic equipment and its applications to the field of public safety. Instruction is given in all phases of the photographic process including scene, surveillance, macro- and micro-photography, including the development of negatives and prints. The student develops techniques in the use of different kinds of cameras and other photograpic equipment through lab practice. Prerequisite: LCJ 210 or consent of instructor.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

LCJ 112 Correctional Processes 5 0 0 5

An examination of the human service skills employed in the guidance, treatment, rehabilitation and containment of the convicted offender. Instruction is given in casework management, the utilization of available community services, and the assessment of rehabilitation strategies appropriate for the diversion, sentencing, probation and parole stages of the correctional process. Prerequisite: LCJ 105 or consent of instructor.

LCJ 201 Traffic Planning and Management 4 2 0 5

A study which covers the history of the traffic enforcement problem as it exists today. Attention will be given to the 3 E's and legislation, the organization of the traffic unit, the responsibilities to the traffic function of the various units within the law enforcement agency, enforcement tactics, evaluation of the traffic program effectiveness, and the allocation of men and materials. Prerequisite: LCJ 101 or permission of instructor.

LCJ 202 Court Systems and Administration 4 2 0 5

A study of the organization, operation and administration of the American court systems to include state and federal courts of original and appellate jurisdiction. Court processes and administrative procedures will be thoroughly examined by the student. In addition, an examination will be made of the role of the court administrator in the judicial process, including juror selection, case calendaring, docket preparation, administrative procedures and records. During the course, preparation, administrative procedures and records. During the course, the student will identify, analyze, and offer possible solutions to the various problems that preclude effective and efficient administration of the courts. Each student will attend actual court proceedings; observe various court personnel and judicial officials. Prerequisites: LCJ 101 and LCJ 102.

LCJ 203 White Collar Crime 3 0 0 3

A study of non-violent property crimes and their effect upon society and the criminal justice system. Prerequisite: LCJ 102 or consent of instructor.

LCJ 204 Courtroom Preparation and Testimony 2 2 0 3

Reviews the procedures necessary to preparation for proper and effective courtroom presentation of evidence and testimony. The rules of evidence will be reviewed. Prerequisite: LCJ 108 or consent of instructor.

LCJ 205 Criminal Evidence and Procedure 5 0 0 5

A study of the nature and admissibility of evidence, its role in determining guilt or innocence in the prosecution of offenders, the kinds and degrees of evidence, principles of exclusion and selection, and burden of proof. Instruction is given in the identification, collection, preservation, and control of evidence. North Carolina pretrial criminal procedures are covered in depth and the judicial system of North Carolina is explained. Prerequisite: LCJ 102 or consent of instructor.

LCJ 206 Critical Issues in Criminal Justice 3 0 0 3

An analysis of contemporary problems that affect the criminal justice system in America today. Prerequisite: LCJ 101 or consent of instructor.

LCJ 207 Interviews and Interrogations 3 0 0 3

Instruction will be given in the various sources of information available to law enforcement agencies and in the techniques used in interviewing and interrogating. Prerequisite: LCJ 101 or consent of instructor.

LCJ 208 Identification Techniques 4 2 0 5

The student will study various identification methods and how they evolved into the present day systems. Techniques for lifting latent prints and taking rolled impressions will be developed through lab practice. Instruction will be given in the more popular ten finger and single print classification systems. An introduction will be given to the process of comparing latent lifts and rolled impressions and in preparing them for courtroom presentation. Instruction will also be given in other methods of identification such as dental, voice, personal habits, physical characteristics, modus operandi, etc. Prerequisite: LCJ 210 or consent of instructor.

LCJ 209 Juvenile Justice Planning and Administration 5 0 0 5

An introduction to the cause and treatment of juvenile delinquency. The organization functions, and jurisdictions of juvenile agencies; the processing and detention of juveniles, juvenile case disposition, juvenile status and court procedures. Evaluation of methods in delinquency control. Special attention will be given to forms of family, church and community resources bearing on juvenile adjustment and preventive measures. Prerequisite: LCJ 103 or permission of instructor.

LCJ 210 Criminal Investigations I 4 2 0 5

This course introduces the student to the fundamentals of investigation: crime scene search; crime scene recording; collection and preservation of evidence; case preparation and court presentation; and the investigation of specific offenses such as arson, narcotics, sex, larceny, burglary, robbery and homicide. Prerequisite: LCJ 101 or consent of instructor.

LCJ 211 Community Relations 2 4 0 4

A course designed to create an awareness of the need for good police and community relations; problems confronting police personnel in achieving this goal; solutions to these problems, including a survey of non-police agencies dealing with police problems and how they can best work together to achieve their common goals. A community-related project is initiated and completed during the period of this course. Prerequisite: LCJ 101 or consent of instructor.

LCJ 212 Prisoner's Rights 3 0 0 3

Elaborates on the wide range of rights sought to be protected by the First Amendment (religion, reading, writing, mail, press access, etc.). The due process requirements for prison discipline and challenges to prison conditions will be discussed. Trends for the future in prisoner's rights will be discussed. Prerequisite: LCJ 105.

LCJ 213 Firearms & Defensive Tactics 4 2 0 5

The course is designed to help the student develop an understanding of the need, use, and respect for all types of firearms. Range practice is given in the familiarization and use of the handgun, rifle, shotgun, etc., with a special emphasis on the development of proficiency in the use of service revolvers. Instruction also is given in riot control use of non-lethal weapons and defensive methods used in handling arrested persons. Prerequisite: Permission of instructor.

LCJ 214 Criminal Investigations II 4 2 0 5

A general survey of the methods and techniques used in modern scientific investigation of crime with emphasis upon the practical use of these methods by the students. Laboratory techniques will be demonstrated, and the student will participate in actual use of the scientific equipment. Prerequisite: LCJ 210 or consent of the instructor.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
LCJ 215	**Vice Control and Investigation**	**3**	**0**	**0**	**3**

Code and case law dealing with vice; detection and suppression; apprehension and prosecution of violators; special consideration of laws dealing with gambling, prostitution, liquor, narcotics, and sex crimes. Prerequisite: LCJ 101 or consent of instructor.

LCJ 216	**Directed Study**	**3**	**6**	**0**	**6**

Surveys and applied research as approved by instructor. Course is intended to be an individualized course of reading and limited empirical research providing an opportunity for the student to focus his or her attention upon a specific issue or problem peculiar to one component of the system. Prerequisite: Successful completion of all LCJ courses required prior to the 6th quarter.

LCJ 219	**Introduction to Criminalistics**	**4**	**2**	**0**	**5**

A survey of the various sciences and their application to the field of law enforcement. A study of the theory and techniques used in the more common forensic applications, such as blood grouping, blood alcohol, luminol, drug analysis, flammable accelerants, explosives, serial number restoration, firearms, primer residue tests, etc. Prerequisite: LCJ 210.

LCJ 220	**Crime Prevention and Control**	**3**	**0**	**0**	**3**

A comprehensive survey of specific programs of practical crime prevention programs in communities of all sizes. Programs to prevent unlawful behavior from occurring or minimizing such behavior in both adults and juvenile circles will be analyzed in depth relative to evaluating their success in minimizing police intervention. Prerequisite: LCJ 101 or consent of instructor.

LCJ 221	**Narcotics and Drug Abuse**	**3**	**0**	**0**	**3**

Designed to present a history of pharmacology and pharmacognosy. Emphasis will be to familiarize the student with drugs and drug abusers. Prerequisite: None.

LCJ 222	**Correctional Casework and Counseling**	**3**	**0**	**0**	**3**

A course introducing the student to correctional casework, counseling philosophy, and methods. Designed to clearly define the objectives and goals of the correctional counselor-caseworker. Instruction focuses on correctional casework models, services, philosophy, history, and principles against a backdrop of development and contemporary practices. Prerequisite: LCJ 105 or consent of instructor.

Paralegal Courses

LEG 101	**Introduction to Paralegalism**	**3**	**0**	**0**	**3**

An outline of the curriculum and objectives of the paralegal program; legal vocabulary; task descriptions of various paralegal jobs; professional ethics; licensing, certification, and accrediting in the profession; and professional organizations. The course requires one hour per week be spent observing at court. Prerequisite: None.

LEG 105	**Partnership and Corporate Law**	**2**	**0**	**0**	**2**

This course introduces the legal considerations relevant to the creation, organization, operation, and termination of the proprietary, partnership, and corporate forms of business enterprise; coverage of management's powers, duties and liabilities under each respective organization. Prerequisite: None.

LEG 108 Administrative and Governmental Law 3 0 0 3

This course involves a study of the scope and authority of administrative agencies of the Federal and State Government and will cover the role or the paralegal in working for such agencies. Since paralegals may practice before certain administrative agencies and work without attorney supervision in some cases, special emphasis will be placed upon the procedure and preparation for such practice, including the preparation of documents, rules of evidence, and the appellate process within and beyond the agencies. Prerequisite: None.

LEG 113 Family Law 3 2 0 4

The purpose of this course is to train paralegals to handle competently separations, divorces, annulments, adoptions, and name change proceedings from initial interview through data collection and drafting of instruments, giving notice, filing and serving documents, and setting hearing dates, to final disposition. The substantive law will be taught and then applied in the laboratory portion of the course. Prerequisite: None.

LEG 115 Poverty Law 3 0 0 3

This course will deal with special problems of the poor. The course will not only be useful for those paralegals who become associated with legal aid offices but will deal with such topics as debt collection practices and child neglect which cross socioeconomic lines. However, the course will stress problems which especially affect the poor, such as welfare and Social Security eligibility, housing problems, racial and sex discrimination in employment and juvenile delinquency. Prerequisite: None.

LEG 117 Tort Law 3 0 0 3

This course will cover intentional torts, e.g., battery, assault, false imprisonment, torts to property; and defenses to intentional torts; negligence and the defenses to negligence; strict liability; nuisances; misrepresentation; defamation, wrongful death; and tort immunity. Prerequisite: None.

LEG 132 Legal Bibliography and Library Management 3 6 0 6

Instruction in the proper methods of utilizing legal research materials; proper citation of authority; shepardization; synthesis of decisions; sources of legal research; preparation of legal memoranda and trial briefs. Prerequisite: None.

LEG 135 Legal Systems and Litigation Preparation 5 0 0 5

A study of jurisdiction of State and Federal Courts; acquisition of jurisdiction over parties and subject matter; venue; pleading and related problems under the North Carolina and Federal Civil Rules of Procedure; forms of pleadings and motions. Lab includes the mechanics of preparation of a lawsuit for trial, from the drafting and filing of the initial pleading to final judgment and appeal. Prerequisite: None.

LEG 140 Bankruptcy and Collections 2 1 0 2

A study of the current laws and procedures governing bankruptcy (voluntary and involuntary), with attention to a creditor's rights and to trustee's duties and powers. Chapters VII and XIII of the Bankruptcy Act will be discussed and appropriate forms completed. Other collection procedures will be mentioned briefly. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

LEG 204 Investigation 5 0 0 5

The purpose of this course is to give the student a working knowledge of the various aspects of civil and criminal investigation including the collection and preservation of physical evidence, crime scene sketching, procedures for obtaining medical, traffic and criminal records and techniques for locating missing witnesses. Through class lecture, informal interviewing sessions and videotaped interviews, the student will gain a thorough knowledge of the requirements of a successful interview as well as an understanding of the various approaches to dealing with uncooperative, hostile or lying witnesses. Prerequisite: None.

LEG 214 Property I 3 0 0 3

This course is a study in ownership of and power over land; of land transfers, in whole and in part, absolute and conditional, present and future; of retained powers of ownerships; and of the documents and procedures necessary to establish an interest in land. Prerequisite: None.

LEG 215 Property II—Title Search 2 4 0 4

Includes the study of the preparation of simple contracts for sale of real estate; ordering or conducting title search; examination of title and preparation of abstracts of titles; ordering title insurance; preparation of deeds, bonds, notes, mortgages, and affidavits of title; preparation of settlement sheets and holding the closing conference. Also, a study is made of the applicable statutory and common law principles, including the form and adequate execution of documents; the functions of judgments and estates in the determination of whether a title to real estate is marketable; the study of the function of various documents, indices and files on public records in various county offices. Forms for abstracting title information from public records and summaries thereof and various typical problems and errors which may render a title unmarketable are included. Prerequisite: LEG 214 and LEG 224.

LEG 217 Criminal Law, Procedure and Evidence 4 0 0 4

A study of the elements of crimes in North Carolina, defenses to these crimes and the rules of evidence regarding proof of crime in court. A study of the Fair Sentencing Act is included. The law of arrest, search and seizure and pretrial discovery will also be studied. Criminal procedure will be studied and a case's progress through the courts traced. Prerequisite: None.

LEG 220 Remedies 3 0 0 3

A study of remedial principles and problems in general. A detailed study of remedies available for different transactions, such as injury to persons, injury to property, breach of contract, class actions, and violations of other legal rights. The major remedy categories of damages, restitution, coercive remedies, and declaratory remedies will be studied, as well as election of remedies. Prerequisite: None.

LEG 224 Wills, Probate and Estates 3 2 0 4

A study of types of wills, including probate and administration; the operation and revocation of wills; descent and distribution in case of intestacy; construction of both administrative and dispositive provisions of wills and trust agreements to facilitate the most advantageous transfer of estate assets. Prerequisites: None. Suggested LEG 135 and LEG 214.

LEG 225 Law Office Management 3 1 0 3

The study of types of law practice; setting up and maintaining systems within the office including tickler, timekeeping, client file, and bookkeeping systems; maintaining ethical standards and professional responsibility; selecting and supervising secretarial personnel; billing and upgrading practice. Lab experiences include setting up a tickler reminder system; using the *Safeguard* or *Sans-Copy* office system materials; drafting a resume; and preparing a major project on time-flow, case progress, and statutes of limitations. Study of organizing and maintaining a law library. Prerequisite: None.

LEG 226 Consumer Protection 3 0 0 3

Historical evolution of consumer protection; regulation by federal administrative agencies; federal and state consumer transactions law; enforcement of consumer transactions law; civil action for harm from defective or dangerous products. Prerequisite: None.

LEG 228 Constitutional Law 3 0 0 3

A study of judicial, legislative and executive power as directed by the United States Constitution and its interpretation by the three branches of government; the federal system—intergovernmental relations; regulation and taxation of commerce; and protection of individual liberties; limitations on the exercise of governmental power. Prerequisite: None.

LEG 230 Law of Trusts 2 0 0 2

The historical background, definition and classification of trusts, including inter vivos, testamentary, express, resulting, constructive, spendthrift and other prospective trusts; nature and operation of trusts whether written or oral, active or passive, voluntary or implied; the title, rights, powers, duties, and liabilities of trustees; administration of trusts, including management, deposits, investments, sales, transfers, and gifts of trust property. Prerequisite: None.

LEG 290 Internship and Seminar 2 24 0 10

Students work in law firms, in the Public Defender's office, and similar settings four full days per week "on-the-job" training (gratis) under close attorney supervision; they keep a log of activities attempted and of successes. The supervising teacher confers periodically with the supervising attorney, office staff, and the paralegal. The paralegal also returns to campus one day per week for a seminar to improve the curriculum in general and the internship in particular and to pool common learning experiences of the past week. Prerequisite: All other law courses in Paralegal Curriculum (minimum 45 LEG hours).

Masonry Courses

MAS 1101A Bricklaying 5 0 15 10

This course is designed to study the origin, history and manufacture of brick. We study the development and use of bricks and also the various processes involved in the manufacture of them. Students are taught how to select and care for the mason tools that are required to be used. They are next introduced to the mortar-making equipment and how it is used, also the properties and proportions of mixing. Prerequisite: None.

MAS 1102A Bricklaying 5 0 15 10

The students learn the placing of materials in reference to the working areas, so as to conserve time and energy. The students learn by demonstrations to pick up and spread or "string" mortar properly and to lay the brick in place in the proper position. Prerequisite: MAS 1101.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MAS 1106 Fundamentals of Bricklaying I 8 0 24 16

The history of the bricklaying industry. Types of brick, laying foundations, laying brick, bonding and various use of tools. Basic concepts of arithmetic with application of masonry. Principles of interpreting blueprints with specifications related to construction.

MAS 1107 Fundamentals of Bricklaying II 8 0 24 16

Practical application of selecting mortars and construction of various building elements to include walls, chimneys, and arches. Students will learn the proper use of bonds, expansion strips, wall ties, and methods of caulking. Practice in reading details of blueprints for grades, foundations, walls, elevation, chimneys, fireplaces, and arches.

MAS 1108 Fundamentals of Masonry I 8 0 24 16

Students will participate in the layout and erection of masonry lintels, fireplaces, tiles, stone, panels, and other related masonry structures. Students will learn how to calculate the required quantities, cost of materials for building various masonry components and structures. Develop abilities in reading complex blueprints of residential and commercial buildings with emphasis on the plot plan.

MAS 1109 Fundamentals of Masonry II 8 0 24 16

A practical course designed to include all the fundamentals and techniques used in masonry construction. Students will be taught the basic fundamentals of concrete masonry to include grading, forming, mixing by proportions and curing of concrete.

Mathematics Courses

MAT 50 General Mathematics 6 4 0 8

This course improves the mathematical background of those high school graduates who need either to learn or to review the basic facts and techniques that are normally covered in a general mathematics course. The course includes the fundamental mathematical operations of addition, subtraction, multiplication, and division using whole numbers. The meaning and use of both common fractions and decimal fractions, as well as the fundamental mathematical operations using both types of fractions, are included. Emphasis is on practical applications using fundamental mathematical principles. Prerequisite: None.

MAT 91 Basic Math I 3 2 0 4

The meaning of number and numerals. Reading numerals. Operations with whole numbers: addition, subtraction, multiplication, division. Prime and composite numbers. Factors and multiples of numbers. Common fractions. Decimal fractions. Relationship between whole numbers, common fractions, and decimal fractions. Practical problems illustrating each operation. Prerequisite: None.

MAT 92 Basic Math II 3 2 0 4

The meaning of percent. Relationship between percent, fractions, and decimals. Computing percentages, principal amounts and rates. Squares and square roots. Basic geometry of lines. Measurements and scales. Planes and space. Right triangles. Indirect measurement. Numerical trigonometry of right triangles. Introduction to metric system. Prerequisite: MAT 91 or equivalent.

MAT 93 Basic Math III 3 2 0 4

The meaning and measurements of angles. Reading and drawing angles. Application of angles. Measurement of areas, volumes, weight, time and speed. Metric system. Introduction to basic algebra. Prerequisite: MAT 92 or equivalent.

MAT 94 Pre-Algebra 3 2 0 4

A review of arithmetic, the number system, operations with whole numbers: addition, subtraction, multiplication, division; common fractions, decimal fractions, percentages, powers and roots, metric system, perimeters and areas, the right triangle, other triangles, the circle, areas and volumes of rectangular solids, cylinders, pyramids, cones, spheres; and signed numbers. Prerequisite: None.

MAT 95 Algebra I 3 2 0 4

Basic concepts and operations of algebra: linear equations and inequalities; graphing and linear systems; exponents and polynomials; factoring. Prerequisite: MAT 94 or equivalent arithmetic courses.

MAT 96 Algebra II 3 2 0 4

A continuation of MAT 95. Rational and radical expressions; quadratic equations; complex numbers; graphs of linear and quadratic functions; graphs of linear inequalities; direct and inverse variation. Prerequisite: MAT 95 or equivalent Algebra I course.

MAT 97 Algebra III/Trigonometry 3 2 0 4

MAT 97 provides opportunity for the student to apply fundamental algebraic concepts to technical engineering problems. It permits the student to investigate and employ the concept of function and its applications to technical problems, and it introduces the student to the trigonometric functions and their applications. Prerequisites: MAT 95 and MAT 96 or two years of algebra.

MAT 98 Mathematics of Dosages and Solutions 3 2 0 4

This course is designed for the student entering the Associate Degree Nursing Program. It enables the student to review fundamental mathematical concepts and provides opportunity for the student to apply these concepts in the calculation of appropriate dosages. The course also provides opportunity for the student to develop skill in working with the metric and apothecary systems. Prerequisite: Permission of instructor.

MAT 101 Technical Mathematics I 5 0 0 5

The real number system is developed as an extension of natural numbers. Fundamental algebraic operations, the rectangular coordinate system, factoring, and fractions are introduced along with methods of solving systems of equations in two and three unknowns. The fundamental trigonometric concepts and operations are introduced and used in the solution of right and oblique triangles. Vectors and complex numbers are introduced with special emphasis on the j-operator. Practical problems are used to apply the principles studied. Prerequisites: MAT 95, MAT 96, and MAT 97 or equivalent courses passed with a "C" average or better grade.

MAT 102 Technical Mathematics II 5 0 0 5

A continuation of MAT 101. Advanced algebraic and trigonometric topics to include determinants, logarithms, graphs of the trigonometric functions, quadratic equations, equations of higher degree, inequalities, variation, progressions and the binominal theorem. Prerequisite: MAT 101.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MAT 103 Technical Mathematics III 5 0 0 5

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. Application of these concepts to practical situations is stressed. Prerequisite: MAT 102.

MAT 105 Algebra and Trigonometry 5 0 0 5

Linear and quadratic equations and inequalities, linear and quadratic functions, graphics; trigonometric functions and their applications to triangles and vectors; polynomial and rational functions. Prerequisite: Two years of algebra or equivalent (MAT 95 and MAT 96). MAT 97 recommended.

MAT 106 Electronic Data Processing Math I 5 0 0 5

The real number system is developed. Characteristics of decimal numbers in other bases are examined. Binary arithmetic is studied. The fundamental operations of algebra, linear and nonlinear equations and functions, linear inequalities, and graphical solutions to linear programming problems are discussed. Emphasis throughout the course is placed on the orderly procedures in problem solving. Prerequisite: Two years of algebra or equivalent (MAT 95 and MAT 96).

MAT 107 Electronic Data Processing Math II 3 0 0 3

A continuation of MAT 106. Linear and nonlinear functions. Inequalities, systems of linear equations and inequalities. Determinants, matrices, linear programming, Boolean algebra; logic, truth tables, flowcharts. Emphasis throughout the course is placed on orderly procedures in problem solving. Prerequisite: MAT 106.

MAT 108 College Mathematics 5 0 0 5

MAT 108 places emphasis on concepts and principles, not on manipulative skills. The study of set concepts, set operations and mathematical logic is intended to provide the student with a conceptual basis for the subsequent investigation of the structure of mathematical systems with emphasis on the real number system. The introduction to Algebra and to probability theory provide opportunity for application of the concepts and principles developed earlier in the course. Prerequisite: Two years of algebra or equivalent (MAT 95 and MAT 96).

MAT 109 College Algebra I 5 0 0 5

MAT 109 presents to the student opportunity to develop a conceptual approach to the principles of algebra while concurrently strengthening his/her manipulative skill in algebraic computation. A balance between abstract theory and manipulative drill is maintained. The course is equally suited for the student who intends it to be a terminal course in college mathematics and for the student who requires an understanding of the principles of algebra in order to succeed in more advanced mathematics courses. Prerequisite: Two years of algebra or equivalent (MAT 95 and MAT 96).

MAT 110 Business Mathematics 3 2 0 4

Business Mathematics is a course of study designed to introduce business students to the mathematics necessary for the understanding of American business. In addition to practical business applications, business forms and terminology are used extensively to provide a strong business background. Prerequisite: None.

MAT 111 College Trigonometry 5 0 0 5

Using the concept of function, this course aims to develop the analytical aspects of trigonometry and to apply trigonometric principles in the solution of problems. Prerequisite: Two years of algebra and permission of instructor, or MAT 109.

MAT 112 College Algebra II 5 0 0 5

MAT 112 is the second in a sequence of two college algebra courses, following MAT 109. Algebraic theory and concepts are developed concurrently with manipulative skill. The course is designed for the student who desires to extend his/her knowledge of algebra and is well suited for the student who intends to study calculus. Prerequisite: MAT 109.

MAT 121 Elementary Technical Mathematics for Civil and Chemical Engineering 5 0 0 5

Designed for the students in the Civil and Chemical Engineering Technology, MAT 121 presents the fundamental concepts of algebra and trigonometry which will enable the student to combine algebraic expressions, to solve and graph linear equations, to interpret and use vectors, to solve triangles, and to use radian measure. Prerequisites: MAT 95, MAT 96, and MAT 97 or equivalent courses passed with a "C" average or better grade.

MAT 122 Basic Technical Mathematics for Civil and Chemical Engineering 5 0 0 5

A continuation of MAT 121. Quadratic equations. Exponential and logarithmic functions. Variation and basic statistics. Emphasis is on applications to technical engineering problems. Prerequisite: MAT 121.

MAT 123 Intermediate Technical Mathematics for Civil and Chemical Engineering 5 0 0 5

A continuation of MAT 122. Systems of linear equations. Equations of higher degree. Plane analytic geometry. Emphasis on applications to technical engineering problems. Prerequisite: MAT 122.

MAT 201 Calculus I 5 0 0 5

A brief study is made of the real numbers along with an introduction to analytical geometry. The concept of a function is introduced and a thorough study is made of limits and continuity. A thorough study is made of the concept of the derivative and its applications. Prerequisites: Two years of algebra and one year of trigonometry and permission of instructor, or MAT 109 and MAT 111.

MAT 202 Calculus II 5 0 0 5

The definite integral is introduced and studied in detail. Particular attention is given to the Fundamental Theorem of calculus along with applications of the definite integral. The logarithmic and exponential functions are introduced and studied in relation to the derivative and the definite integral. Prerequisite: MAT 201.

MAT 203 Calculus III 5 0 0 5

A review is made of trigonometry and then the derivative and definite integral of the trigonometric functions are studied. Major emphasis is placed on the study of techniques of integration. Polar coordinates are introduced and studied. Prerequisite: MAT 202.

MAT 204 Calculus IV 5 0 0 5

The concept of the indefinite integral is introduced and studied and a study is made of indeterminate forms. Taylor's formula is studied and the concept of an infinite series is introduced and studied in detail. Prerequisite: MAT 203.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MAT 286 Technical Mathematics IV 3 0 0 3

A continuation of MAT 103 to include graphs and derivatives of the trigonometric functions, exponential and logarithmic differentiation and integration, polar and parametric equations, and mathematical series. Emphasis is placed on electronic problem solving. Prerequisite: MAT 103.

MAT 1101 Vocational Mathematics I 3 2 0 4

Basic mathematical concepts and principles are developed and used to compute required data necessary in the vocational fields. Solutions of practical problems. Prerequisite: None.

MAT 1102 Vocational Algebra 3 2 0 4

Basic concepts and operations of algebra: algebraic operations; addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportion, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by addition and subtraction, substitution, graphing, and exponents. Prerequisite: MAT 1101 or equivalent.

MAT 1103 Geometry 3 0 0 3

Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Areas of plane figures, volumes of solids. Geometric principles as applied to shop and drafting work. Prerequisite: MAT 1101 or equivalent.

MAT 1104 Vocational Trigonometry 3 2 0 4

MAT 1104 applies trigonometric concepts to practical drafting and shop problems. Concepts studied include definition and measurement of angles, the trigonometric functions with application to the angle as a central angle of a circle and as an angle of a triangle, the Pythagorean Theorem, the laws of sines, and the law of cosines. These concepts are then used in the solution of right and oblique triangles, the graphs of the trigonometric functions, and in the solution of trigonometric equations. Prerequisite: MAT 1102.

MAT 1105 Mathematics for Nurses 3 0 0 3

Review of fundamental operations with numbers, whole numbers, common fractions, decimal fractions, Roman numerals, percentage, proportion; applications to nursing procedures: Apothecaries' system, metric system, household systems, percentage strength, ratio strength, finding the amount of pure drugs and tablets, working with solutions, pediatric dosages, dosage by division of tablets, calculation of doses in minims not exact multiples of five. Prerequisite: None.

MAT 1110 Math for Building Trades 3 2 0 4

Basic concepts of arithmetic: addition, subtraction, multiplication, and division; fractions and decimals; percentage. Basic concepts of algebra: signs and symbols; addition, subtraction, multiplication, and division; equations; ratio and proportion; formulas. Basic concepts of geometry: principles of linear, angular, circular, surface and volume measurement. Application of these basic mathematical concepts to the carpentry, electrical, masonry, and plumbing trades. Prerequisite: None.

MAT 1116 Mathematics for Plumbers 3 2 0 4

To provide the student with a base of mathematical skills necessary for the layout, measurement, and computation of pipe lengths; and for the computation of volumes, pressures and capacities of water tanks and pipes. Prerequisite: None.

MAT 1123 Machinist Mathematics I 3 2 0 4

Fundamental geometric concepts and construction of plane and solid figures, surface and volume measurements, and related problems; introduction to trigonometry of the right triangle. Introduces gear ratios, lead screw and indexing problems with emphasis on application to the machine shop. Practical applications and problems furnish the trainee with experience in geometric propositions. Prerequisite: MAT 1102.

MAT 1151 Trigonometry I 3 0 0 3

Definitions of the trigonometric functions; functional relationships: use of tables, including interpolation; solutions of right triangles; solutions of oblique triangles; applications in depth. Prerequisite: MAT 1180 or equivalent.

MAT 1152 Trigonometry II 3 0 0 3

The fundamentals of solid geometry and the trigonometry of compound angles. Problem solving from pictorial and orthographic drawings of compound angles, angular holes, tilting angles, and angles of rotation. Prerequisite: MAT 1151.

MAT 1180 Machinist Mathematics II 3 2 0 4

Brief review of geometric concepts with practical applications related to shop problems. Trigonometry of the right triangle. Trigonometry of oblique triangles through the use of the Law of Sines and the Law of Cosines. Emphasis on problems and practical application using the trigonometric principles. Prerequisite: MAT 1123.

Mechanical/Machine Shop Courses

MEC 96 Shop Practice 2 0 3 3

Brief overview of machines that are used in the machine shop. Deals primarily with their identification, nomenclature of machine, elementary operation of the lathe, drill press, grinder, and milling machine. Simple projects will be included using this equipment. Prerequisite: None.

MEC 1101 Machine Shop Theory and Practice 3 0 12 7

An introduction to the machinist trade and the potential it holds for the craftsman. Deals primarily with the identification, care and use of basic hand tools and precision measuring instruments. Elementary layout procedures and processes of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and in practice. Prerequisite: None.

MEC 1102 Machine Shop Theory and Practice 3 0 8 6

Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine and 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 1103 Machine Shop Theory and Practice 3 0 8 6

Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worn gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder. Prerequisite: MEC 1102.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MEC 1104 Structure of Metals 3 2 0 4

A practical approach to metals, their structure, markings, manufacturing, classifications and uses. Interpretation of properties and specifications of metals by use of manuals, catalogs, charts, etc. The alloying in different metals. Prerequisite: None.

MEC 1105 Machine Shop Theory and Practice 3 0 9 6

Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc. Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing good work habits and attitudes acceptable to the industry. Prerequisite: MEC 1103.

MEC 1106 Heat Treating Practice 2 4 0 3

Working knowledge of the methods of treating ferrous and nonferrous metals. The effects of hardening, tempering, and annealing upon the structure and physical properties of metals. Trainees will be given the opportunity to acquaint themselves with the equipment and processes of heat treating. Prerequisite: MEC 1104.

MEC 1107 Numerical Control in Manufacturing 2 0 3 3

Numerical control using the slo-syn control unit with circular interpolation on the standard milling and drilling machine. An introduction to concepts in numerical control machining and the role it holds in modern manufacturing. Deals with point milling operations. The command language and programming procedures as they apply to this particular unit will be applied. Prerequisite: None.

MEC 1108 Industrial Materials 3 0 3 4

A study of modern industrial materials with emphasis on their physical properties and applicaton. Methods by which they are produced and processed as well as use of catalog and reference data will be covered. Prerequisite: PHY 1101.

MEC 1110 Machine Processes I 2 0 3 3

An introduction to basic machine shop operations in relation to manufacturing processes and drafting. Lectures and shop practice in hand tools, measuring, terminology and introduction to engine lathe work. Basic milling machine operations are introduced with student lab exercises relating to lectures and textbook study. Prerequisite: None.

MEC 1111 Introduction to Manufacturing Processes 2 0 3 3

Manufacturing methods and processes will be studied from textbook material, discussions and shop demonstrations. Various manufacturing processes not previously covered will be introduced. Drafting will be integrated by study of the working drawing in conjunction with materials and processes. Field trips, films and lab work will supplement lectures and study. Prerequisite: MEC 1110.

MEC 1112 Machine Shop Processes 1 0 6 3

To acquaint the student with the procedures of layout work and the correct use of hand and machine tools. Experiences in the basic fundamentals of drill press and lathe operation; hand grinding of drill bits and lathe tools; set-up work applied to the trade. Prerequisite: None.

MEC 1151 Tool Making: Jigs and Fixtures **1 0 6 3**

This course is designed to help the student become more proficient in working to very close tolerances. The student will learn the best methods of fastening parts together. Clamping, locating methods, and the application of jigs and fixtures to production machining are included. Emphasis is stressed throughout on the quality of workmanship and precision tolerances. Prerequisite: MEC 1112.

MEC 1152 Tool Making: Gages and Special Tools **2 0 2 3**

A study of precision gages will be made. Special tools and their application to production studied. The student will have practice in making plug gages, ring gages, snap gages, etc. The student will also have product work in the making of special slide tools, form tools, and fly cutters. Prerequisite: MEC 1112.

MEC 1153 Advanced Tool Making **3 0 6 5**

A continuation of tool making practices. Project work consisting of complicated jigs and fixtures, including prematic operated fixtures and power clamping methods. Further instructions given in form dressing procedures, surface finishes, precision tolerances, and general tool making practices. Prerequisite: MEC 1151.

MEC 1154 Die Making I **2 0 6 4**

This course is designed to introduce the student to the principles of dies and die making. Simple piercing and blanking dies will be studied and the student acquainted with terminology common to the trade. Accuracy, surface finish, importance of clearances, radii and the press cycle will be studied. Students will build and set up for production a simple die, working from blueprints and maintaining specified accuracy. Prerequisite: MEC 1112.

MEC 1155 Die Making II **2 0 9 5**

A continuation of the study of dies, the dangers of insufficient and excessive cutting clearances, and methods of providing angular clearances. Factors affecting stripping force will be discussed along with bending stresses, deformation due to bending and the bend allowance curve. Students will build a form and bending die. Development of correct working habits and close tolerance machining is stressed. Prerequisite: MEC 1154.

MEC 1156 Die Making III **2 0 6 4**

The theory and design of progressive dies will be studied. The student will be given instruction in the location of pilots, the progressive cam stages, grinding operations, and blank development. The student will machine, assemble, and set up a conventional progressive die involving three or more stages. Prerequisite: MEC 1155.

MEC 1158 Introduction to Plastic Molding **2 0 9 5**

This course will include types, uses, and the behavior of plastics. The injection molding machine, the standard mold base, nomenclature common to the trade, and the design and machining of mold components. Prerequisites: Four quarters of Machine Shop or equivalent.

MEC 1159 Tool Making III **2 0 6 4**

Advanced Tool making practices consisting of single and multi-point cutting tools of advanced design. Included will be design, machining, heat treating, and sharpening of form tools for automatic screw machines. Prerequisite: MEC 1153.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MEC 1160 Manufacturing Processes and Production I 3 0 0 3

Introductory study of some manufacturing processes that have not been previously studied such as foundry processes, welding, powder metallurgy, press work, plastics, die casting, forging and other selected processes and materials. Also covered are automation and additional machine shop processes. Prerequisite: MEC 1111.

MEC 1161 Manufacturing Processes and Production II 2 0 3 3

Manufacturing processes are further studied with emphasis placed on application to actual production situations. Economics of processes and redesign. Models, films, flowcharts, demonstrations in shop and field trips are utilized to provide realism. Prerequisite: MEC 1160.

MEC 1170 Mold Making I 2 0 9 5

The technique of producing optical finishes, gating, runner systems, ejection methods, methods of venting and cooling, and procedures of final assembly of the mold are the content of this course. Prerequisite: MEC 1158.

MEC 1171 Mold Making II 2 0 6 4

This course encompasses the molds, materials, and methods for molding thermoset plastics. Primary emphasis is placed on compression and transfer molding, but innovations now in practice are included. Prerequisite: MEC 1158.

MEC 1172 Mold Making III 2 2 0 3

Mold Making III is a continuation of the process and molds for molding thermoset plastics, utilizing the more recent in-line screw injection process. Also, the process and molds for blow molding comprise a part of this course. Prerequisite: MEC 1171.

MEC 1180 Industrial Specifications 3 0 0 3

Organizing and studying machine tool and hand tool specifications, job sheets and procedure sheets. Catalogs, specification sheets, and manufacturer's handbooks serve as reference sources. Prerequisite: None.

MEC 1181 Precision Machining 3 0 9 6

This course is a forerunner to MEC 1182—Jig and Fixture Making. The primary objective of this course is to make the student aware of the need, in many phases of industry, for the machinist to be capable of machining parts to very close tolerances, high surface finish and proficiency using precision measuring, and gaging instruments and to develop the skill and patience required to perform this type of work. To further develop his self-confidence and pride of workmanship and to prepare him for the Jig and Fixture Making course which requires this skill, patience, and self-confidence. Prerequisite: MEC 1105.

MEC 1182 Jig and Fixture Making 3 0 9 6

This course is designed to acquaint the student with the art of tool making and to develop skills to perform this work. To teach the student the principles of jigs and fixtures, their application to industry and the basic fabrication methods. To develop self-confidence in his ability to do high precision work, making him aware that the accuracy of perhaps thousands of parts depends on his skill and accuracy. Prerequisite: MEC 1181.

MEC 1183 Machine Repair 2 0 4 3

This course is designed to acquaint the student with the movable parts of machine tools, the basic methods of joining these parts together and adjustments necessary to obtain satisfactory service. To further acquaint him with the methods of hand scraping of ways and other bearing surfaces and to develop some skill in the performance of this type of work. To instruct the student in and develop a basic knowledge of hydraulic and electrical systems as they apply to machine tools. Prerequisite: MEC 1181.

MEC 1184 Advanced Machine Processes 3 0 6 5

To further acquaint the student with advanced set-ups and operation of machines for mass production. Instruction will be given on the turret lathe, milling machine, cylindrical grinder and other production machines. To motivate the student to apply himself to find ways and means of improving methods of production and manufacturing processes. Prerequisite: MEC 1181.

MEC 1198 Automotive Machine Shop 2 0 6 4

Review of the proper use of the basic machines taught in the first year: boring bar, honing machine, valve grinder, hydraulic press, etc. Application to the automotive trade. A basic instruction on lathe operation, drill-press work, use of the micrometer and other measuring devices peculiar to machine work. Prerequisites: PME 1101, PME 1102, and PME 1103.

MEC 1199 Cooperative Training 1 15 0 6

Provides the student with an opportunity to pursue, under staff supervision, work experience in a specialized field. Periodic conferences will be held with each student and employer while the student is receiving training. This course offers valuable experience and training which is incorporated into the student's education from the standpoint of ON-THE-JOB EXPERIENCE and gives realism and motivation to his academic and technical program of studies. Prerequisites: MEC 1101, MEC 1102, and MEC 1103.

Music Courses

MUS 101 Introduction to Music 3 0 0 3

This is a course designed to introduce students to the literature of music. Music and composers of all historical periods are heard and studied sufficiently to acquaint the student with the music of Western Civilization. Emphasis is on listening rather than reading, writing, or performing skills. Prerequisite: None.

MUS 102 Fundamentals of Music 3 0 0 3

This course is for all students beginning the study of music and is especially valuable for anyone who wishes to use music in his/her teaching. The student learns the written language and vocabulary of music, its correlation to the keyboard, and an introduction to the techniques of piano playing. The course is for those who have had no previous musical training in the characteristics of sound, notation, rhythm, scales and keys, formation of intervals and chords, cadence patterns and accomplishment figures. The basic melodic, rhythmic, and harmonic characteristics of music are presented to provide a skillful blending of theory and practice for thorough preparation of the student who wishes to proceed with an advanced study of music. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MUS 104 Music Appreciation 3 0 0 3

The course is designed to further the development of knowledge, understanding, and the appreciation of all media of music. Emphasis is given to the historical development, forms and styles, and to the art of correct listening. Analysis is conducted through lectures, reports and listening. Prerequisite: None.

Nursing Courses

(All courses scheduled in each quarter of the curriculum are corequisite to each other and prerequisite to the succeeding quarter.)

NUR 101 Introduction to Nursing 6 6 0 8

Nursing I (Introduction to Nursing) is an introduction to the role of the nurse in meeting the needs common to all patients. Students are provided opportunities to acquire basic knowledges, skills, and attitudes necessary to the practitioner of nursing based on physical, biological, and behavioral scientific principles. Basic concepts of pharmacology, nutrition, growth and development from infancy to old age, mental health, and communication skills are included. Nursing I introduces the student to the nursing process. Experience in various community and health care facilities provide the student with opportunities for application of theory. Prerequisites: One unit of biology, algebra and chemistry, and MAT 98 (Dosages and Solutions) or equivalent. These courses should have been taken within five years of admission to the ADN Program. Corequisites: PSY 101, ENG 104, and BIO 106.

NUR 102 Nursing of Children and Adults, I 6 6 0 8

Nursing II (Nursing of Children and Adults, I) increases the student's background in pharmacology and nutrition. Basic concepts relating to deviations from health are introduced, thus enabling the student to develop additional knowledge and skills in order to provide more complex nursing care to meet individual patient needs. Opportunities to begin studying some of the major health problems encountered in the clinic and hospital setting are provided. The study is designed to help the student to continue to utilize the nursing process in administering nursing care to children and adults with specific health needs. Prerequisites: NUR 101, PSY 101, ENG 104 and BIO 106. Corequisites: SOC 101, BIO 107, and PSY 202.

NUR 103 Nursing of Children and Adults, II 6 9 0 9

Nursing III (Nursing of Children and Adults, II) gives the student the opportunity to study in depth selected major medical and surgical health problems. The study focuses on the needs of patients who require surgical intervention, and on the needs of patients who are experiencing nutritional problems, reproductive problems, and problems relating to fluid and electrolyte balance. Consideration is given to studying the nature, scope, clinical manifestations, and therapeutics of these conditions as well as emphasizing the patient as a person and the effect of his illness on his personality, his family and the community. The study provides a broad background of information that will assist the student to implement the nursing process at a more advanced level when caring for the hospitalized child or adult. Prerequisites: NUR 102, BIO 107, and PSY 202. Corequisites: BIO 108 and PSY 204.

NUR 104 Nursing of Mothers and Infants **3 6 0 5**

Nursing IV (Nursing of Mothers and Infants) emphasizes the physiological, psychological, social, and spiritual factors involved in maternal and infant care and family health. The family-centered approach is used, and the family unit serves as the framework for the nursing care of mothers during the maternity cycle and of their newborn infants. Normal aspects of maternal-infant care are stressed. Adaptations are made to include common complications occurring during the maternity cycle and in the neonatal period. Experience in giving nursing care to mothers and infants is provided in the hospital setting. Prerequisites: NUR 103, BIO 108, SOC 101, and PSY 202. Corequisite: SOC 102.

NUR 205 Nursing of Children and Adults, III **6 12 0 10**

Nursing V (Nursing of Children and Adults, III) focuses on those conditions which markedly affect the individual's emotional status and self-concept. The purpose of this course is to provide learning experiences which enable students to acquire the knowledge, skills and attitudes necessary to function therapeutically in the care of mentally ill patients, to recognize the role of the professional nurse in the preventive aspects of mental illness and to deepen understandings of the interrelatedness of physical, emotional and social components of all illness. Prerequisites: NUR 104 and PSY 204. Corequisites: ENG 105, ENG 204, ENG 210 and an elective.

NUR 206 Nursing VI (Nursing of Children and Adults, VI) **6 12 0 10**

Nursing VI (Nursing of Children and Adults, VI) focuses on those health problems which involve supply and removal of gases, difficulty in chemical regulation and neurological conditions. The student is given the opportunity to further develop skills in planning nursing care. The focus of the planning will be according to the changing needs presented by the patient. Evidence of planning will be reflected in the nursing care plan identifying nursing problems, nursing objectives, nursing actions, rationale and evaluation. Emphasis is placed on increasing verbal and nonverbal communication skills required in health care. Opportunities will be provided for the student to identify teaching implications and initiate teaching plans which will assist the patient and his family in adjusting to the changes brought about by the health problems. Prerequisites: NUR 104 and 205. Corequisites: ENG 105, ENG 204, ENG 210 and an elective.

NUR 207 Nursing of Children and Adults, IV **6 12 0 10**

Nursing VII (Nursing of Children and Adults, IV) is designed to assist the nursing student in caring for patients of all age groups with major health problems which require more complex technical skills and more comprehensively planned nursing care. The student continues to integrate theoretical principles and concepts obtained from all previous courses. The emphasis of discussion will be on those patients having difficulty maintaining oxygen and nutrition to the cells, orthopedic nursing, nursing care of the burned patient, disorders of the skin, disorders of eye and ear, and emergency and disaster nursing. There is continued demonstration of ability to identify nursing needs and problems, write behavioral objectives, plan and implement nursing action, and evaluate effectiveness of nursing actions through formulation of nursing care plans to meet the physical and emotional needs of the patient with complex health problems. The student is also given an introduction to team leadership. Prerequisite: NUR 206. Corequisites: NUR 208 and ECO 102.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
NUR 208	**Professional Development**	**3**	**0**	**0**	**3**

Nursing VIII (Professinal Development) is a brief study of the organizational structure of nursing, current trends, legal aspects, and career opportunities for the nurse who graduates with an associate degree. Prerequisite: NUR 206. Corequisites: NUR 207 and ECO 102.

NUR 298A	**Individual Study for Nurses**	**0**	**6**	**0**	**0**

An independent assignment for students to complete assigned study guides in courses NUR 101, NUR 102, NUR 103 and NUR 104. It includes work in the Skills Lab and use of assigned visual aids and other resource materials in the independent study lab.

NUR 298B	**Individual Study for Nurses**	**0**	**3**	**0**	**0**

An independent assignment for students to complete assigned study guides in courses NUR 205, NUR 206, NUR 207, and NUR 208. There is less emphasis on work in the Skills Lab. Work continues with assigned visual aids and other resource materials in the independent study lab.

Nutrition Course

NUT 101	**Nutrition**	**3**	**0**	**0**	**3**

A study of basic facts from the field of nutrition with emphasis on applications to the planning of balanced diets to meet the needs of individuals in various life stages. The responsibilities of health workers in promoting good nutrition are stressed. Prerequisites: BIO 106, BIO 107, BIO 108, and BIO 110.

Physical Education Courses

PED 111	**First Aid**	**3**	**2**	**0**	**4**

A study of theory and practice in giving the immediate and temporary aid to a victim of sudden illness or the victim of an accident. Certification in CPR included. Prerequisite: None.

PED 116	**Physical Education**	**0**	**3**	**0**	**1**

This course is a survey of physical education including swimming, physical conditioning, team sports, and individual sports. Prerequisite: None.

PED 120	**Beginning Swimming**	**0**	**3**	**0**	**1**

This is a course for non-swimmers or very weak swimmers designed to develop the fundamental skills of swimming and to overcome fears of water. It includes some water safety techniques and practices. Prerequisite: None.

PED 121	**Intermediate Swimming**	**0**	**3**	**0**	**1**

This is a course designed to give competence in four basic leg strokes and their corresponding arm strokes, safety practices, and other swimming including floating, sculling, treading, and underwater swimming; includes two basic dives. Prerequisite: Must be able to swim 25 yds. (free style).

PED 122	**Advanced Swimming**	**0**	**3**	**0**	**1**

This is a course designed to develop skills and competence in swimming, diving, lifesaving, and water safety techniques, practices, and skills. Prerequisite: PED 121 or must be able to swim 300 yds. (free style, untimed).

PED 130 Angling 0 3 0 1

The course covers the history, values, safety, bait casting, fly casting, spinning, care of equipment, North Carolina fishing license and regulations, type of game fish and size limits. Prerequisite: None.

PED 131 Roller Skating 0 3 0 1

This course provides the student with the basic fundamentals and safety rules of recreational skating at a roller rink. Pattern and speed skating as well as free form are taught. Prerequisite: None.

PED 132 Bowling 0 3 0 1

The skills and techniques necessary for one to bowl with reasonable success are taught. Rules, methods of scoring, terminology, and etiquette associated with the sport are stressed also. Prerequisite: None.

PED 134 Cross Country 0 3 0 1

Training techniques for long distance running are taught and opportunities to utilize these techniques are provided. In addition proper diet and nutrition are discussed. Prerequisite: None.

PED 136 Archery 0 3 0 1

This course is designed to teach fundamental skills and establish correct habits of participation. Selection as well as care and maintenance of equipment will be covered. Prerequisite: None.

PED 137 Golf for Beginners 0 3 0 1

The purpose of the course is to teach the students the fundamentals of golf. The course teaches the rules by which the game is played, the history of the game, the terminology and definitions, etiquette, and instructions for the use of clubs and other golf equipment. Prerequisite: None.

PED 138 Golf—Intermediate 0 3 0 1

This course is designed for those who have passed beginning golf or its equivalent and have an established handicap. The why's and how's of the golf swing are stressed in order to improve handicap. Prerequisite: None.

PED 139 Golf—Advanced 0 3 0 1

For those who have an established handicap of 10 or less. Strategy of golf, both match and medal, is covered in the actual golf course setting. Prerequisite: None.

PED 143 Tennis 0 3 0 1

This course at the introductory level is designed to present the history, fundamentals, nomenclatures and terminologies, grips, stances, basic methods of achieving skills, and all rules, scoring, and safety practices of this individual sport, together with sufficient minimal practice under supervision of the instructor-coach, to permit a beginner to understand, discuss and participate in the sport at the beginner level. Prerequisite: Medical certificate and approval of instructor.

PED 146 Badminton 0 3 0 1

The course covers history, singles and doubles play, equipment, basic rules, the grip, backhand and forehand strokes, common shots, and strategy. Prerequisite: None.

PED 148 Physical Fitness 0 3 0 1

This course emphasizes body toning and shaping. Exercises that stress flexibility, strength and coordination are stressed. Major emphasis is placed on aerobic dancing and exercises. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PED 151 Basketball 0 3 0 1

This course is to familiarize the student with the basic skills that are necessary to become a competent participant and spectator of the game of basketball. It is felt that a clearer conception of the growth and development of basketball enhance the actual play of the individual and do much toward insuring proper interpretation and appreciation of the game. Prerequisite: None.

PED 161 Football 0 3 0 1

Fundamental skills used in playing the game are taught. Rules of play are stressed as well as formations and team strategies. Flag football games are played between class teams to utilize techniques taught in class. Prerequisite: None.

PED 166 Soccer 0 3 0 1

The course is designed to assist the student in the acquisition of fundamental skills used in playing the game. Techniques necessary for effective team and individual play are stressed, as well as a knowledge of the terminology associated with the sport. Prerequisite: None.

PED 171 Softball 0 3 0 1

The development of fundamental skills such as pitching, hitting, fielding, base-running, and catching are stressed in this class. The class also provides for development and understanding of rules and team strategy. The development of an understanding of the terminology used in the sport are stressed also. Prerequisite: None.

PED 181 Volleyball 0 3 0 1

Basic rules and fundamentals in the game of volleyball are taught in this course. This includes skills in volleying, setting, spiking and game strategy. Prerequisite: None.

PED 190 Weight Training 0 3 0 1

It is the purpose of this course to provide practical weight training information that can be successfully applied to increase strength, improve physique and aid in conditioning for other physical activities, instill in the student a keener understanding of and appreciation for the human body with special emphasis directed to the importance of muscular development to health and personal well-being as well as to encourage weight training as a carry-over activity that can be of benefit and enjoyment to the individual throughout his entire adult life. Prerequisite: None.

PED 195 Intramurals 0 3 0 1

Course is designed to acquaint the student with activities, both individual and team, that are offered in our intramural program. These activities can be used by the student throughout his entire adult life. Prerequisite: None.

PED 211 First Aid and Safety 3 2 0 4

This course is a standard First Aid & Safety course conducted according to the standards of the American Red Cross including basic lifesaving and water safety techniques and practices. Prerequisite: PED 122.

PED 212 First Aid and Safety 3 2 0 4

This is an advanced course; the American Red Cross Certificate is awarded upon completion of the course. Prerequisite: PED 211.

Philosophy Courses

PHI 101 Introduction to Philosophy 3 0 0 3

This introductory course uses a historical approach to the understanding of philosophy. The basic concepts, themes, theories, and arguments of ancient, medieval, modern, and contemporary philosophers are examined. Prerequisite: None.

PHI 102 Introduction to Logic 3 0 0 3

This introductory course is designed to help one acquire the ability and habit of correct reasoning and sound thinking. It introduces the traditional logic of the syllogism and modern "symbolic" logic, finishing the inquiry with a brief glance at the classical fallacies in logic arguments. Prerequisite: None.

Pharmacy Courses

PHM 101 Introduction to Pharmacy 5 0 0 5

This course includes a history of pharmacy, orientation to institutional and community pharmacies, duties of pharmacy supportive personnel, legal and ethical aspects of pharmacy supportive personnel, drug legislation, medical terminology, the position of pharmacy in total health care, and use of pharmacy literature and references. Prerequisite: None.

PHM 102 Pharmacology I 5 0 0 5

Includes a description of drug receptor theory, structure activity relationships and factors influencing drug effects; relating drug trade names to generic names and use, and a study of the properties, reactions, and therapeutic application of primary agents in the major drug classes. Prerequisites: BIO 107, PHM 101, and CHM 103.

PHM 103 Pharmacology II 5 0 0 5

A continuation of PHM 102 and including toxicology and poison control. Prerequisites: PHM 102 and BIO 108.

PHM 104 Pharmaceutical Preparations I 3 3 0 4

A study of pharmaceutical dosage forms and considerations in their compounding. The course includes study of pharmaceutical Latin and use of pharmaceutical calculations. Lab exercises are designed to develop techniques of extemporaneous compounding for selected dosage forms. Prerequisites: PHM 101, PHM 110, and BUS 102.

PHM 105 Pharmaceutical Preparations II 3 3 0 4

A continuation of PHM 104 with emphasis on parenteral (injectable) dosage forms. Prerequisite: PHM 104.

PHM 106 Pharmacy Management 5 0 0 5

A general study of pharmacy management practices including organization, personnel management, purchasing, inventory control and other areas relating to the effective management of pharmacy practice. Includes channels of distribution for pharmaceutical products and functions of the middleman, and a discussion of consumer motivation and buying behavior. Prerequisite: PHM 101.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PHM 107 Community Pharmacy 3 0 15 8

Lecture emphasis is on non-prescription drug products, their composition, indications, actions and reactions. The clinical portion of the course is spent in a retail pharmacy and the student is given the opportunity to develop skills in all areas of retail pharmacy practice including receipt, interpretation, evaluation, compounding, filling, labeling and filing of valid prescription orders under supervision of a registered pharmacist. He observes application of the principles of pharmacy management and is allowed to communicate and interact with patients and store personnel. Prerequisites: PHM 103, PHM 105, and PHM 106.

PHM 108 Pharmaceutical Law 3 0 0 3

A study of the laws affecting the profession of pharmacy, including Federal and North Carolina controlled substances and food and drug laws and a limited study of business law. Prerequisite: PHM 101.

PHM 109 Hospital Pharmacy 3 0 15 8

This course examines hospital pharmacy in depth and acquaints the students with procedures of management principles as they apply to the institutional setting. The clinical portion of the course is spent in a hospital pharmacy under the supervision of a registered pharmacist and the student is given the opportunity to observe and perform all functions in the delivery of the proper medication to the patient. Prerequisites: PHM 103, PHM 105 and PHM 106.

PHM 110 Pharmaceutical Calculations 1 0 4 3

This course deals with calculations used in the practice of pharmacy including study of weights and measures, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration, and isotonic and electrolyte solution calculations. Prerequisite: None.

PHM 111 Pharmacy Seminar 2 0 0 2

Discussion of current trends, concepts, and topics which pertain to contemporary pharmacy practice. Prerequisites or Corequisites: PHM 107, PHM 108, PHM 109 and PHM 120.

PHM 120 Principles of Pharmaceutical Manufacturing 5 0 0 5

A study of the processes and controls in the formulation and manufacture of pharmaceuticals on a large scale, including F.D.A. current Good Manufacturing Practices. Included are techniques of quality control and sterility. Tours of facilities of several manufacturers are included in the course. Prerequisite: PHM 105.

Physical Science Courses

PHY 91X Physical Science I, Level I 3 0 0 4

This course presents laws of motion, power, energy, gravitation, atomic structure of matter and the properties of solids, liquids and gases. The approach is mainly inquiry approach with minor emphasis on mathematical derivation and calculations. Practical approach is emphasized by means of suitably chosen laboratory exercises, demonstration experiments and appropriate audiovisual aids. Prerequisite: None. Corequisite: PHY 91Y.

PHY 91Y Physical Science I, Level I Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 91X. Prerequisite: None. Corequisite: PHY 91X.

PHY 92X Physical Science II, Level I 3 0 0 4

This course presents the basic concepts of heat, light and sound. The approach is mainly inquiry approach with minor emphasis on mathematical derivation and calculations. Practical approach is emphasized by means of suitably chosen laboratory exercises, demonstration experiments and appropriate audiovisual aids. Prerequisite: None; PHY 91 - preferable. Corequisite: PHY 92Y.

PHY 92Y Physical Science II, Level I Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 92X. Prerequisite: None; PHY 91 - preferable. Corequisite: PHY 92X.

PHY 93X Physical Science III, Level I 3 0 0 4

This course presents the basic concepts of electricity and magnetism, atomic and nuclear physics, relativity and astrophysics. The approach is mainly inquiry with minor emphasis on mathematical derivation and calculations. Practical approach is emphasized by means of suitably chosen laboratory exercises, demonstration experiments and appropriate audiovisual aids. Prerequisite: None. Corequisite: PHY 93Y.

PHY 93Y Physical Science III, Level I Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 93X. Prerequisite: None. Corequisite: PHY 93X.

PHY 94X Physical Science I, Level II 3 0 0 4

Introductory physics and its application in fundamental concepts, fluids, simple and compound machines, work, energy, power, heat. Selected experiments are performed by students in the laboratory. Prerequisite: None. Corequisite: PHY 94Y.

PHY 94Y Physical Science I, Level II Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 94X. Prerequisite: None. Corequisite: PHY 94X.

PHY 95X Physical Science III, Level II 3 0 0 4

A study of sound, light, color, magnetism, static electricity, current and circuits, electromagnetism and alternating current. Demonstration and lab selected experiments will be conducted by the student. Prerequisite: None. Corequisite: PHY 95Y.

PHY 95Y Physical Science III, Level II Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 95X. Prerequisite: None. Corequisite: PHY 95X.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PHY 101X	**Properties of Matter**	**3**	**0**	**0**	**4**

Physics 101X is an introduction to some of the basic principles concerning the properties of matter in the universe as we know it today. This course deals specifically with the mechanical properties of matter such as density, elasticity, tension, and shear. Other topics include a discussion of fluids and the principles relating to the mechanics of those fluids. Finally a discussion of the thermal properties of matter, temperature and heat, and thermodynamics is included. Prerequisite: algebra. Corequisite: PHY 101Y.

PHY 101Y	**Properties of Matter Lab**	**0**	**2**	**0**	**0**

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 101X. Prerequisite: None. Corequisite: PHY 101X.

PHY 102X	**Work, Energy and Power**	**3**	**0**	**0**	**4**

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. Prerequisites: MAT 101 and PHY 101. Corequisite: PHY 102Y.

PHY 102Y	**Work, Energy and Power Lab**	**0**	**2**	**0**	**0**

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 102X. Prerequisites: MAT 101 and PHY 101. Corequisite: PHY 102X.

PHY 103X	**Electricity**	**3**	**0**	**0**	**4**

Basic theories of electricity, types of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of this course. Prerequisites: PHY 101 and MAT 102. Corequisite: PHY 103Y.

PHY 103Y	**Electricity Lab**	**0**	**2**	**0**	**0**

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 103X. Prerequisites: PHY 101 and MAT 102. Corequisite: PHY 103X.

PHY 104X	**Light and Sound**	**3**	**0**	**0**	**4**

A study of sound and wave motion and its technical applications to industry and related fields. Light and illumination. Principles of optical instruments. Practical aspects are emphasized. Prerequisites: PHY 102 and MAT 103. Corequisite: PHY 104Y.

PHY 104Y	**Light and Sound Lab**	**0**	**2**	**0**	**0**

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 104X. Prerequisites: PHY 102 and MAT 103. Corequisite: PHY 104X.

PHY 120 Radiographic Physics I 3 0 0 3

This course is geared towards the health personnel who operate a variety of biomedical instruments; it presents basic electronic principles, various electronic instruments, their operation, function, tolerances, calibration, and safety precautions. The emphasis is placed on applications rather than design and maintenance. Prerequisite: None (Previous exposure to physical sciences and elementary algebra desirable).

PHY 121 Radiographic Physics II 3 0 0 3

This course covers fundamentals of mechanics, electricity, magnetism, and electronics required to understand basic operations in radiology. Emphasis is placed on the principles underlying the operation of radiographic equipment and auxiliary devices. Prerequisite: PHY 120.

PHY 1101X Properties of Matter-Heat Energy 3 0 0 4

The basic concepts of heat energy are discussed from a practical application viewpoint. The effects of heat energy on materials such as expansion, freezing, and boiling are discussed. Solar energy as a source of heat is presented with an emphasis on collection and practical utilization of this valuable energy source. Prerequisite: None. Corequisite: PHY 1101Y.

PHY 1101Y Properties of Matter Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 1101X. Prerequisite: None. Corequisite: PHY 1101X.

PHY 1102X Electricity 3 0 0 4

Basic principles of electricity: circuits, electrical meters, dry cells, storage batteries, magnets, electrical production of magnetism, use and manufacture of electromagnets, electric motors, Ohm's law, electric power and cost of electric power, alternating current theory, generators, transformers, electrical devices, telephone, electron tube, diode, rectifier, radio, photo-electron cell, television and radar. Prerequisite: None. Corequisite: PHY 1102Y.

PHY 1102Y Electricity Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 1102X. Prerequisite: None. Corequisite: PHY 1102X.

PHY 1103X Work, Energy, and Power 3 0 0 4

Physical principles of force, energy, work and power; equilibrium and the laws of motion; principles of machines, mechanical advantage, and transmission of power in practical applications, pulleys systems, levers, inclined planes, and the wheel and axle; and the use of vectors and graphical presentations. Prerequisites: PHY 1101 and MAT 1101. Corequisite: PHY 1103Y.

PHY 1103Y Work, Energy and Power Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 1103X. Prerequisites: PHY 1101 and MAT 1101. Corequisite: PHY 1103X.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

Plumbing Courses

PLU 1105 Plumbing Maintenance 1 2 3 3

The course introduces the student to the plumbing trade and to the use of tools and materials necessary to repair or replace fixtures and piping. Planning new additions is also stressed. Prerequisite: None.

PLU 1110 Plumbing Pipework 5 0 15 10

A brief history of plumbing and why rules, or codes, are necessary in the trade. The course introduces the student to the use of equipment, tools, pipe and fittings used by plumbers. Safety and care of tools are also stressed. Drainage and venting fundamentals are developed in the lecture period and applied in the shop. Prerequisite: None.

PLU 1111 Domestic Water System 2 0 9 5

The installation of water distribution systems beginning with the sources of supply and including the location of pipes, valves, and pumps in both single and multi-story buildings are studied. Private and public sewage and drainage systems, including their ventilation is a part of this course. Heating devices and hot water circulation also are studied. Prerequisite: PLU 1110.

PLU 1112 Installation of Plumbing Fixtures 3 0 9 6

The student becomes acquainted with the major manufacturers of plumbing fixtures and their products. The many different styles and materials of plumbing fixtures are studied, as well as their ways of installation, and service. Installations are made. Prerequisite: PLU 1111.

PLU 1120 Low Pressure Steam Systems 2 0 6 4

This is an introductory course into the hydronic heating field. The course involves different types of boilers and burners, also types of radiation. Piping systems, component parts, and insulation are studied and installed. Prerequisite: PLU 1110.

PLU 1121 High Pressure Steam Systems 3 0 9 6

Applications of low pressure steam are continued. Principles of operation of low pressure and high pressure steam and their utilization in industry are studied. Prerequisite: PLU 1120.

PLU 1123 Hot Water and Panel Heating 3 0 6 5

This phase of hydronic heat will be studied as it applies mainly to residential heating. The many different systems and their advantages and disadvantages will be studied. Practical applications will be made in the shop. Prerequisites: PLU 1111 and PLU 1120.

PLU 1125 Industrial Piping 3 0 6 5

Piping systems of commercial and industrial buildings as well as process piping such as used in chemical industries will be studied. Boilers and steam engine systems will also be included. Valves, faucets, meters, hangers, area drains, and other materials pertaining to industry will also be studied. Prerequisites: PLU 1112 and WLD 1101.

PLU 1126 Hydraulic Systems Plumbing 2 0 3 3

Hydraulic principles, circuits, control valves, pumps, fluids, and various other accessories as they apply to plumbing systems will be studied. Installation and servicing of equipment will be undertaken. Prerequisite: PLU 1110.

PME 93 Introduction to Auto Mechanics 2 0 3 3

To introduce the students to the varied duties of the auto mechanic. Prerequisite: None.

PME 1011 Electrical Systems I 3 0 3 4

This course develops a thorough knowledge of and the ability to use and maintain test equipment used in electrical equipment diagnoses and repairs: study of the construction and operation of components of the electrical system and testing of electrical systems, components for proper performance; servicing and maintenance of batteries, generators, alternators, starters and accessory circuits in the electrical system, methods of troubleshooting, diagnosing and repairs. Prerequisite: None.

PME 1018 Motorcyles 1 0 9 4

This course develops a thorough knowledge of and ability to use, maintain and store the various hand tools, test equipment and measuring devices needed in the repair of motorcycles. Students will study the construction and operation of the components of motorcycle engines, clutches, transmissions, drive train and electrical components to insure proper operation and the methods of troubleshooting, diagnosing, and repairing. Prerequisites: PME 1104 or PME 1101 and PME 1011.

PME 1101 Automotive Engines 3 0 12 7

This course develops a thorough knowledge of and ability to use, maintain, and store the various hand tools and measuring devices needed in automotive repair work. Students study the construction and operation of components of automotive engines, testing of engine performance; servicing maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing. Prerequisite: None.

PME 1102 Engine Electrical Systems 6 0 9 9

This course teaches the students how the concepts of basic electricity are applied as they study the fundamentals of the engine-related electrical devices and the repair and service procedures of those devices. The students are encouraged to develop skills in testing and troubleshooting the charging systems, starting systems and ignition systems, and they become familiar with the concept of electronics. Prerequisite: PME 1101.

PME 1104 Basic Small Engine Repairs 3 0 12 7

This course develops a thorough knowledge of and ability to use, maintain and store the various hand tools, test equipment and measuring devices needed in Recreational Vehicle and Equipment Repair. It includes a study of the construction and operation of components of gasoline engines both four-stroke cycle and two-stroke cycle, and testing of engine performance, servicing and maintenance systems involved with engine performance, methods of testing, diagnosing and repairing. Prerequisite: None.

PME 1109 Small Engine Diagnosis 0 0 9 3

This course emphasizes the shop procedures necessary for swift and accurate diagnosis of problems in the electrical, mechanical, and fuel systems of small engines. All shop equipment previously studied will be utilized. A full range of experiences in testing, adjusting, repairing, and replacing will be utilized. Major emphasis will be placed upon developing a logical sequence of diagnostic procedures utilizing skills developed in prior courses. Prerequisite: PME 1104.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PME 1111 Automotive Body Repair 3 0 18 9

This course introduces the students to the basic fundamentals of auto body repair and teaches the basic skills of auto body refinishing. Prerequisite: None.

PME 1123 Automotive Chassis and Suspensions 6 0 9 9

This course covers principles and functions of the components of automotive chassis, practical job instruction in adjusting and repairing of suspension, steering and braking systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, front suspensions, and drum and disc brakes. Prerequisite: PME 1102.

PME 1124 Power Train Systems 3 0 9 6

This course includes the principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials, and the identification of troubles, servicing, and repair. Prerequisites: PME 1123, PHY 1102, and PHY 1103.

PME 1125 Automotive Servicing II 3 0 9 6

Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of testing, adjusting, repairing and replacing experiences. Each student is given an opportunity to be service manager or shop foreman during this course. Prerequisite: PME 1123.

PME 1132 Fuel Systems 2 0 4 3

This course is designed to teach the fundamentals of fuel systems, especially those systems using gasoline for fuel. This course includes characteristics of fuels, types of fuel systems including fuel injection, fuel pumps, carburetors and types of testing procedures and equipment used to service said systems. Prerequisites: PME 1101 and 1102.

PME 1133 Emission Controls 1 0 3 2

This is a training program to give the student an in-depth look at the introduction, description, operation, maintenance and servicing of engine emission controls. This course will help the students learn how to apply the fundamentals of these controls as they go about their work as mechanics making them aware of the part the automobile engine plays in contributing to air pollution and the mechanic's role in keeping down these pollutants. Prerequisite: PME 1181.

PME 1135 Automotive Air Conditioning 3 0 3 4

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation and control; proper handling of refrigerants in charging the system. Prerequisite: PHY 1102.

PME 1151 Electrical and Fuel Systems 3 0 12 7

Development of a thorough knowledge and ability to diagnose and repair electrical and fuel systems for recreational vehicles and equipment. Study of the construction and operation of the fuel systems components. Testing the electrical systems and fuel systems components. Testing the electrical systems and fuel systems components for proper operation. Servicing and maintaining electrical and fuel systems components. Methods of troubleshooting, diagnosing and repairs. Prerequisites: PME 1104 and PME 1011.

PME 1158 Equipment Repair 2 0 6 4

This course is a study of the construction and operation of components of recreational equipment. Testing of equipment performance, servicing, and maintenance of engines, clutches, transmissions, differentials and drive train, electrical system, brake systems, both hydraulic and mechanical, cooling system, fuel and exhaust systems; proper lubrication and methods of testing, diagnosing, and repairing. Prerequisites: PME 1104 and PME 1011.

PME 1160 Marine Outboard Engines 5 0 15 10

Development of a thorough knowledge and ability to diagnose, test, service and repair marine outboard engines. Study of the construction and function of each of the components of outboard engines to include the power head, lower end unit, fuel and electrical systems and cooling system. Prerequisites: PME 1104, PME 1011, and PME 1151.

PME 1170 Power Plant Trouble-Shooting 3 0 6 5

This course is designed to tie together all the facts and techniques involved in performing troubleshooting and diagnosing procedures on the total automotive power plant operation; fuel systems, ignition systems, starting and charging systems; cooling and lubrication systems and mechanical troubles that may occur. Prerequisite: None.

PME 1175 Diesel-Engine, Fuel, Timing and Diagnosing 3 0 0 3

With the influx of diesel-engine usage in automobiles, there is a need to provide students with instruction on mechanical fuel injection, fuel injection timing and diagnosing procedures. This course is developed to provide the needed instruction to fill the void in our course of instruction. Prerequisite: PME 1101 and PME 1132.

PME 1181 Automotive Tune-Up 3 0 3 4

This practical course, coming at the end of the second year, is designed to help the students develop their work experiences with the more technical aspects of engine tune-up. Much stress is placed on the use of test equipment and the students are encouraged to use their knowledge of fundamentals by applying it to practical problems which arise. Special emphasis is placed on review of fundamentals and work experience. Prerequisite: PME 1102.

PME 1182 Automatic Transmissions 6 0 6 8

This course was designed to supplement the power train course in order to give the students a better background, both in fundamentals and in servicing of automatic transmissions. Repair procedures, proper testing and diagnosing are stressed in this course. Prerequisite: PME 1124.

PME 1183 Chassis Electrical Circuits 5 0 4 6

This course will acquaint the student with the principles of operation, the repair and servicing procedures, test equipment used in troubleshooting, and repairing the vehicle chassis electrical circuits. Prerequisite: PME 1102.

PME 1188 Small Gas Engines 3 0 3 4

Develops basic skills and knowledge in operation, maintenance and repair of small gasoline engines. Troubleshooting is also emphasized. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

Surgical Technician Courses

PML 1080 Nursing Procedures 3 2 3 5

Designed to acquaint the student with the total needs of the patient: physical, social, psychological and spiritual. This will include safe patient care in transporting, positioning, skin preparation, and basic needs through simple nursing care, observation and reporting. Prerequisite: None.

PML 1085 Pharmacology 3 0 0 3

This course is to provide a basic foundation and serve as a useful guide to increase the student's understanding of drug therapy, toxic reaction, and their implications in the operating room. This will include a study of various types of anesthesia, method of administration and their general or local effects on the body. Prerequisites: PML 1091, PML 1080 and PML 1090.

PML 1090 Principles of Operating Room Technique 2 0 3 3

A course designed to help the student acquire a basic knowledge of surgical aseptic technique and develop skills in its application in the operating room. It deals with the role of the operative procedure and its relations to other aspects of patient care including ethical, moral and legal responsibilities. It is designed to develop an increased awareness and understanding of the function of each member of the operating team. Prerequisite: None.

PML 1091 Anatomy and Physiology I 3 2 0 4

This is a study of the structure and function of the general plan of the body and systems. Units covered will include points of reference, basic concepts, and the systems of the body: integumentary, locomotor, digestive, reproductive, genito-urinary, and respiratory. Terminology related to the more common disorders that require surgical intervention will be integrated with the various systems. Prerequisite: None.

PML 1093 Theory of Surgical Procedures I 4 4 0 6

This course includes a thorough study of the most common surgical procedures and why they are performed. Instruction begins with incisions and wound closures, and continues with the total care of the surgical patient during general, gynecological, genito-urinary, and gastrointestinal surgical procedures. Prerequisite: None.

PML 1094 Clinical Practice I 0 0 15 5

The student will receive practical experience in the actual clinical area with emphasis on acquiring skills in scrubbing, gowning, gloving; acquiring dexterity with the handling of instruments, sutures, and supplies; anticipating the needs of other members of the operating team; and to improve organization for economy of time, motion, and priority of needs. Prerequisite: None.

PML 1095 Clinical Practice II 0 0 15 5

Practical experience continues in the clinical setting for planned experiences in thoracic, plastic and reconstructive, orthopedic, and neurological procedures. Emphasis is placed on operation and care of special instruments and equipment. Prerequisite: PML 1094.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PNE 1110	**Medical Surgical Nursing II**	**5**	**0**	**21**	**12**

This course is a continuation of Medical-Surgical Nursing I. Clinical assignments implement content of the PNE course sequence of the first three quarters of the curriculum. Prerequisite: Third quarter PNE sequence.

PNE 1111	**Drugs and Administration**	**3**	**0**	**0**	**3**

This course is designed to give the Practical Nurse student a knowledge of drugs, laws regarding the use of drugs, side effects, and skills in administering drugs safely. Prerequisite: First quarter PNE sequence.

PNE 1113	**Geriatrics**	**3**	**0**	**0**	**3**

This course teaches the principles basic to meeting the needs of the geriatric patient. Students are prepared to give care to the patients at this stage of life span in the home, hospital and nursing home settings. Prerequisite: Third quarter PNE sequence.

PNE 1115	**Mental Health**	**3**	**0**	**0**	**3**

This course is designed to help the Practical Nurse student acquire knowledge of ethics that are appropriate to the practical nurse in obtaining and holding a position; to give her/him an added insight into the moral and legal aspects associated with nursing activities. Prerequisite: Third quarter PNE sequence.

PNE 1116	**Vocational Adjustments II**	**2**	**0**	**0**	**2**

This course is designed to help the Practical Nurse student acquire knowledge of ethics that are appropriate to the practical nurse in obtaining and holding a position and to give an added insight into the moral and legal aspects associated with nursing activities. Prerequisite: Third quarter PNE sequence.

PNE 1298	**Special Problems**	**0**	**5**	**0**	**0**

An independent assignment for students to complete assigned study guides in all nursing courses. It includes work in the Skills Lab and use of assigned visual aids and other resource materials in the independent study lab scheduled each quarter.

Political Science Courses

POL 101	**American Government I**	**5**	**0**	**0**	**5**

American Government I surveys the historical, philosophical, and economic bases of the western political systems. The course is designed to integrate basic political science theory with contemporary American governmental action. Topics covered include the writing of the U.S. Constitution, the complexity of American federalism, the nature of citizenship, political parties, campaigning, the influence of pressure groups, and the workings of selected state governments. Prerequisite: None.

POL 102	**State and Local Government**	**3**	**0**	**0**	**3**

This course is a general study of local and state governments with a certain emphasis placed on the government of the State of North Carolina. Emphasis is also given to the theory and practical application of operating non-national governments. The functions, duties and divisions in government are examined in regard to their effects on the community. Prerequisite: None.

POL 103 National Government 3 0 0 3

This course is a study of the federal government. Emphasis is given to the Constitution, the concept of Federalism and the three branches of government. The interaction of pressure and special interest groups and the media on the national government is examined and evaluated. Prerequisite: None.

POL 104 American Government II 5 0 0 5

American Government II focuses on the governmental system of the United States. Through an in-depth study of the three branches of government, the course explores the Presidency, the Congress and the Judiciary from many different perspectives. Students will learn how the three branches of the federal government serve as a system of checks and balances, how bills are drafted and become a part of the legal system, and how the government serves as a protector and preserver of the rights guaranteed in the Bill of Rights and the Constitution. Prerequisite: None.

Postal Courses

POS 101 Postal History and Organization 3 0 0 3

This course is designed to trace the delivery of written communication and merchandise through to present day modes. In so doing, the course will depict and compare the private, corporate, and governmental agencies which have been and are responsible for mail service throughout the world, as well as the United States. The current postal organization will be studied to present its structure and functional relationships between divisions and other federal agencies. Policies and procedures, rules and regulations, will also be traced to and studied under the current organization. The history and operations of the Postal Inspection Service will be presented as an integral but separate function of the above. Prerequisite: None.

POS 103 Postal Service Mail Processing I 3 0 0 3

This course is designed to provide the participant with an awareness of the interrelated factors necessary to achieve rapid separation of large amounts of mail within specified time and error parameters and on a cost-effective basis. Prerequisite: None.

POS 105 Postal Mail Processing II 3 0 0 3

This course is designed to provide the student with an in-depth view of revenue determination procedures and flow characteristics involved in receipt, processing, and dispatch of second, third, and fourth class mail. Prerequisite: POS 103.

POS 201 Postal Service Labor Relations 3 0 0 3

Overview of laws and practices as related to labor-management in the postal service. Current status and current problems and/or issues. The National and Local Agreement; the various bargaining units and associations in the USPS: the grievance policy and procedure, the disciplinary action policy and procedure, and the National Labor Relations Board. Prerequisite: None.

POS 202 Postal Service Finance 3 0 0 3

This course covers the ancillary functions of the support area such as office services, administrative services and bulk accountable paper, accounting, storage and distribution. Prerequisite: None.

POS 203 Postal Customer Service 3 0 0 3

This course is designed to provide the student with an in-depth knowledge of all services provided to postal customers. Includes customer relations, retailing postal services and nonpostal services. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
POS 205	**Postal Service Delivery & Collection**	**3**	**0**	**0**	**3**

The purpose of this course is to introduce the student to the problems, and solutions to the problems, encountered in collecting mail from multiple, diverse points and transporting it in a time and cost effective manner to collection centers for processing and, conversely, in distributing mail from one or more processing points to multiple, diverse recipients. Prerequisite: None.

POS 207	**Employee Relations**	**3**	**0**	**0**	**3**

The objective is to introduce the student to the maintenance organizational structures of the postal service. The student will be able to describe the three primary areas of maintenance and will be knowledgeable in the responsibilities of each element. Prerequisite: None.

POS 208	**Postal Problems Analysis**	**3**	**0**	**0**	**3**

Presents postal problems for which the student must use system analysis, problem-solving grids, and decisions by objectives to analyze and specify the dimensions of the problems; identify and test possible causes; assess adverse consequences of possible causes, objectives, and solutions; and analyze and test alternatives decided upon as possible objective solutions. Prerequisites: POS 101, 103, and 105.

Psychology Courses

PSY 101	**Introduction to Psychology**	**3**	**0**	**0**	**3**

This course is an introductory survey of the field of psychology wherein the student becomes better acquainted with a human as a biological-social organism. Topics covered include history of the development of psychology, the scientific method in psychology, theory of statistical concepts, intelligence, motivation, emotions, and learning. Prerequisite: None.

PSY 103	**Understanding Human Behavior**	**5**	**0**	**0**	**5**

This course is an introductory course in psychology dramatizing the fundamentals of human behavior and highlights the concepts, philosophies, and contribution of major figures in the field of psychology. Course topics include the brain, sensory deprivation, stress, conditioning, memory, pain and hypnosis, psychotherapy, interpersonal attraction, and persuasion. Prerequisite: None.

PSY 104	**Dynamics of Human Behavior**	**3**	**2**	**0**	**4**

Human behavior is studied in this course with emphasis on developmental aspects, motivations, common behavioral patterns, and the role of defense mechanisms in human behavior. Prerequisite: PSY 101.

PSY 116	**Perspectives on Death**	**2**	**0**	**0**	**2**

This course is designed to create an understanding of death as a biological reality, as a cultural phenomenon, as a spiritual event, as an economic reality, and as a psychological process. The course is also designed to develop an objective and realistic point of view of death based on information and understanding. Prerequisite: PSY 101.

PSY 202	**Human Growth & Development**	**3**	**0**	**0**	**3**

In this course, human physical and psychological growth and development from infancy to adulthood are studied. Consideration of the social, biological, and cultural influences upon growth is explored in depth. Prerequisite PSY 101.

PSY 204 Abnormal Psychology 3 0 0 3

This course is a study of the principal abnormal phases of behavior and the ways by which the individual develops abnormal habits of thinking and acting. A survey of the signs of beginning maladjustment and procedures which may be followed to correct these tendencies is made. Special attention is given to the prevention and treatment of behavior disorders. Prerequisite: PSY 101.

PSY 206 Applied Psychology 3 0 0 3

This course is a study of the principles of psychology that assist in the understanding of interpersonal relations on the job. Motivation, feelings, and emotions are considered with particular reference to on-the-job problems. Other topics investigated are employee selection, supervision, job satisfaction, and industrial conflict. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his/her adjustment problems as a worker and a member of the general community. Prerequisite: None.

PSY 208 Grief Psychology 3 0 0 3

This course consists of a study of the role of the funeral director in grief counseling. The purpose of the course is to make the aspiring funeral director more understanding and aware of the impact of death on the bereaved. The concepts of dying, death, immortality, grief management, religion and the funeral as a medium in resolving grief are examined from a psychological standpoint. Prerequisite: PSY 101.

PSY 210 Human Relations 3 0 0 3

This course consists of a study of basic principles of human behavior, beginning with an explanation of the biological and cultural roots of human behavior and social drive and continuing through the many problems of the individual in relationship with others in society. Topics covered include the elements of social behavior, perception during interaction, two-person interaction, small social groups and social organization, the self and interaction, and training for social competence especially within varied work situations. Prerequisite: PSY 101.

PSY 216 Applied Police Psychology 3 0 0 3

A study which builds upon the principles of psychology taught in PSY 101. It is designed to assist law enforcement officers in a better understanding of relationships on the job, at home, and in the community as members of the law enforcement team. Prerequisite: PSY 101.

PSY 230 Personality 2 2 0 3

This course involves the study of the major theories, methods of measurement, and means of modifying personality. Prerequisite: None.

PSY 250 Industrial Psychology 3 0 0 3

This course consists of a study of the effects of business and organizational structure on the behavior of individuals. Prerequisite: PSY 101.

PSY 252 Organizational Psychology 3 0 0 3

This course is an introductory survey of the area of organizational psychology and introduces the student to the personal relevance and conceptual bases of the phenomena of organizational psychology. Because the course focuses on exercises, games, and role playing to make the insights of behavioral science meaningful and relevant to practicing managers and students of organizational behavior, regular class attendance and student participation is necessary for student success. Prerequisite: PSY 101 or PSY 206.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PSY 206	**Social Psychology**	**3**	**0**	**0**	**3**

This course is a study of the effects of groups on the individual. Opinion, attitude change, and surveys are also studied. Prerequisite: PSY 101.

PSY 270	**Motivation**	**3**	**0**	**0**	**3**

In this course, an examination is made of the major theories of motivation and the application of techniques that affect motivation. Prerequisite: PSY 101.

PSY 280	**Forensic Psychology**	**5**	**0**	**0**	**5**

This course covers a study of the causes of crime, the corrections, trends, and the human personality, adaptive and defensive psychological devices employed by humans involved in crime from a legal standpoint. Abnormal psychological personality traits involved in crimes such as drug abuse, alcoholism, rape and other sexual aberrant criminal activities are emphasized. Prerequisite: PSY 101.

PSY 290	**Coping With Kids**	**3**	**0**	**0**	**3**

This course uses the fundamental principles of Alfred Adler's *Individual Psychology* to explore the problems of discipline and communication with young people. Democratic methods of discipline, the use of encouragement to win cooperation and the use of classroom meetings and adult discussion groups are emphasized as effective methods of learning how to solve conflicts. The course is designed for teachers (K-12) and others who live, work and play with young persons. Prerequisite: None.

PSY 1101	**Human Relations**	**3**	**0**	**0**	**3**

This course is a study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and the relations within the work situation. Prerequisite: None.

PSY 1106	**Applied Psychology**	**3**	**0**	**0**	**3**

This course presents the procedures for building an efficient, enthusiastic business team and deals with the nature of the interpersonal which arise in business organizations. The individual and his behavior are discussed as well as the problems of influence and authority. Prerequisite: None.

Physical Therapy Courses

PTH 101	**Introduction to Physical Therapy**	**3**	**3**	**0**	**4**

Historical background, philosophy, and professional ethics of Physical Therapy; interprofessional relationships between members of the health care team; trends in the development of formal educational programs for a skilled technical assistant, including professional and legal implications; overview of total medical spectrum; concepts of health and disease; modalities used in physical therapy; basic principles and techniques of aseptic care, patient handling, and vital signs; orientation to clinical service departments and their administration. Prerequisite: None.

PTH 102	**Physical Therapy Procedures I**	**3**	**6**	**0**	**5**

Physical and physiological principles and techniques of selected physical therapy treatment methods; modalities and procedures include patient preparation for treatment, application of hot packs, and massage techniques for the back and upper extremities. Laboratory and classroom practice is followed by clinic practice under supervision in direct patient care service. Prerequisite: PTH 101.

PTH 103 Physical Therapy Procedures II 3 6 0 5

A continuation of the study of the physical and physiological principles and technologies of selected physical therapy treatment measures; low frequency and high frequency currents, including the use of galvanic and faradic currents, short wave and microwave diathermy and ultrasound; massage of the lower extremities. Previously learned skills are reinforced by combining them with the newly learned skills. Laboratory and classroom practice are followed by assignment to a clinical facility for supervised experience in direct patient care service. Prerequisite: PTH 102.

PTH 104 Physical Therapy Procedures III 3 9 0 6

The third of a four-quarter sequence of physical and physiological principles and techniques of application of selected physical therapy measures. Uses of light radiation sources, infra-red and ultraviolet; therapeutic use of paraffin; selected hydrotherapy measures; continuing reinforcement of previously learned skills in conjunction with measures learned in this course. Following classroom and laboratory practice, the student is assigned to a clinical facility to practice all learned skills under supervision in direct patient-care service. Prerequisite: PTH 103.

PTH 105 Physical Therapy Procedures IV 3 12 0 7

This course completes a four-quarter sequence of physical and physiological principles and techniques of applications of basic physical therapy measures. Therapeutic use of cold; uses and techniques of cervical and pelvic tracation are included. All previously learned skills are reviewed thoroughly. The student is introduced to home bound physical therapy provided by a public health or home service agency. Introduction to record keeping and patient care documentation procedures including Problem Oriented Medical Record system will be given. Following classroom and laboratory practice, the student is assigned to a clinical facility to practice under supervision in direct patient care service. Prerequisite: PTH 104.

PTH 106 Seminar in Physical Therapy Procedures 3 0 0 3

A one-quarter course paralleling the clinical affiliations, students present case studies and progress notes on patients treated in their clinical assignments. The rationale for a specific treatment in view of a given diagnosis is discussed in depth. Prerequisite: PTH 105.

PTH 110 Therapeutic Exercise 3 6 0 5

Introduction to basic principles of therapeutic exercise; techniques of manual joint range of motion, ambulation activities, and activities of daily living as they apply to a variety of pathological conditions; uses of assistive and resistive exercise equipment. Thorough review of joint structure, muscle origins and insertions, innovations, actions, and physiology. Orientation to highly specialized exercise techniques is offered, but competence is required only in the more routine therapeutic exercise and ambulation techniques. Prerequisites: BIO 106 and BIO 107.

PTH 201 Pathology/Physiology for Physical Therapist Assistants 4 0 0 4

This survey course is designed to present the causes, disease, or trauma processes, and general principles involved in the diagnostic entities most frequently seen and treated with physical therapy. In addition, those physical therapy procedures that are appropriate and most widely used will be discussed in depth for each of the diagnostic categories covered. Prerequisites: BIO 106, BIO 107, and ENG 115.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PTH 202 Functional Anatomy 2 2 0 3

This course provides the study of applied anatomy and kinesiology. In addition, emphasis is given to the comprehension of joint function and dysfunction as seen in a rehabilitation facility. It consists of two parts: anatomy and kinesiology. The anatomy part consists of coordinated lectures and laboratory sessions in the study of the musculoskeletal system. The kinesiology part consists of coordinated lectures and laboratory sessions in the study of the biomechanics of the musculoskeletal system. Prerequisites: PTH 103 and PTH 110.

PTH 210 Psychology of Adjustment 3 0 0 3

Explanation of basis for and methods of achieving effective interaction with the patient by student's enhancing one's understanding of one's self, helping the student to understand the dynamics of the health worker-patient relationship and to develop awareness of the complementary roles of other health workers. The emotional reactions to disease, physical impairment and/or handicap by persons with varying basic personality characteristics are explored in depth. Special problems of working with the elderly and/or terminal patient are also introduced. Prerequisites: PSY 101 and SOC 101.

PTH 215 Community Health and Welfare 3 0 0 3

A one-quarter survey course of various health and welfare resources within a community and the coordination between these agencies. Governmental and social influences in health care, the distinction between the public, voluntary, and private sectors of health and welfare, and the implications of the present system upon possible future changes in the delivery of services are explored. The referral mechanism for total patient care is stressed. Prerequisite: Consent of Instructor.

PTH 298 Clinical Education 4 30 0 14

The student is assigned to a variety of clinical settings for planned learning experiences and practice under supervision for eleven weeks. All learned skills are reinforced during direct patient care service in a general hospital or private clinical area. Prerequisite: PTH 105.

Radiologic Technology Courses

RDT 101 Radiologic Technology I 4 3 0 5

The student is given an orientation into the field of radiologic technology. He/she is taught darkroom chemistry and film processing, the basic principles of radiographic exposure, and elementary patient care procedures. Basic medical terminology is introduced to radiographic positioning and topographical anatomy, as applied to the appendicular skeleton. Basic radiation protection and office procedures are introduced at this time. Prerequisite: None.

RDT 102 Radiologic Technology II 4 3 0 5

The student is taught the radiographic principles and basic radiographic positioning necessary to perform diagnostic studies of the axial skeleton. Further patient care procedures, medical terminology, and restatement of radiographic exposure principles are included. Topographical anatomy of the axial skeleton will be incorporated in the positioning classes. Prerequisite: RDT 101.

RDT 103 Radiologic Technology III 4 3 0 5

The student will learn the techniques for basic views of the thoracic and abdominal viscera, soft tissue radiography and fluorography; how to prepare the patient and the contrast media for these studies. Radiation protection and topographical anatomy will be stressed. Prerequisite: RDT 102.

RDT 111 Clinical Education 0 0 12 4

Practical experience in a clinical setting including office procedures, processing of radiographs, practice in ethical and attitudinal situations during patient contact, patient care, and basic patient positioning for studies of upper and lower limbs. The student will also apply some of the simpler principles of radiographic exposure. There will be regular sessions of film critique, and radiation protection measures will be emphasized and observed. Prerequisite: None.

RDT 112 Clinical Education II 0 0 12 4

The student will receive practical experience in the actual clinical area. The students will continue to practice and improve their skills in darkroom technique, film processing, and proper care of the automatic processor. They will practice positioning for the routine studies of the upper and lower extremities, the shoulder girdle, and the pelvic girdle and will actually make radiographs of these areas under the supervision of a registered radiologic technologist. There will be regular sessions of film critique, and radiation protection will be observed. Prerequisite: RDT 111.

RDT 113 Clinical Education III 0 0 15 5

Practical experience in a clinical setting with emphasis on the preparation and use of contrast media, preparation of the patient for such studies; and the performance of examinations of the digestive tract, biliary tract, and urinary tract using contrast media. The student will be working in fluoroscopy and will also make radiographs of the abdominal and thoracic viscera without the use of contrast media. Soft tissue radiography (exclusive of mammography) and location of foreign bodies will be touched upon. Radiation protection measures will be reemphasized and observed. Prerequisite: RDT 103.

RDT 114 Clinical Education IV 1 0 39 14

The student spends the entire summer quarter gaining clinical experience and developing skill in the techniques of diagnostic radiography. He/she reviews film processing and developing, patient positioning, and exposure factors. Practice covers radiography of the skeleton, the thoracic and abdominal viscera, and examinations of the abdominal viscera using contrast media and fluoroscopy. Radiation protection measures will be emphasized and observed. Prerequisites: RDT 103 and RDT 113.

RDT 204 Radiologic Technology IV 4 3 0 5

This course is a continuation of the radiologic technology series. The content covered in this quarter concerns a continuation of radiobiology, contrast media, more advanced work in radiography of the skeleton and the art of pediatric radiology. Prerequisite: RDT 103.

RDT 205 Radiologic Technology V 4 3 0 5

The study is confined to special radiographic procedures and the mechanics and uses of that equipment. The student will become acquainted with the specialized and highly technical procedures used in these studies, the equipment, and the general indications and contraindications for each examination. The student will be familiarized with the basic principles of C-T, ultrasound and digital vascular radiology. Prerequisite: RDT 204.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
RDT 206	**Radiologic Technology VI**	**4**	**0**	**0**	**4**

The student is familiarized with the procedures involved in nuclear medicine. Time is spent reviewing anatomy, positioning, X-ray circuitry and exposure factors in preparation for taking the registry examination. Prerequisite: RDT 205.

RDT 215	**Clinical Education V**	**0**	**0**	**24**	**8**

Practical experience in a clinical setting with emphasis on working with children. The student also practices techniques for special views of the skeleton. Radiation protection practices and routine equipment maintenance are observed and used. Prerequisite: RDT 114.

RDT 216	**Clinical Education VI**	**0**	**0**	**24**	**8**

Practical experience in a clinical setting with emphasis on special radiographic procedures; use of photofluorographic unit, if available; cineradiography; and use of portable X-ray machine. Radiation protection measures are emphasized and observed. Prerequisites: RDT 204 and RDT 215.

RDT 217	**Clinical Education VII**	**0**	**0**	**24**	**8**

Practical experience in a clinical setting with emphasis on special procedures and nuclear medicine. Radiation protection will be emphasized and observed. Prerequisite: RDT 216.

RDT 218	**Clinical Education VIII**	**1**	**0**	**39**	**14**

The student spends the summer quarter improving his/her skills in the techniques of general diagnostic radiography and fluoroscopy with both adults and children and has the opportunity to work in the areas of special procedures, ultrasound, C-T scan, and radiation therapy on a limited basis. Radiation protection will be emphasized and observed. Prerequisite: RDT 217.

Recreation Associate Courses

REC 109	**Facility Management**	**3**	**0**	**0**	**3**

This course is designed to provide information regarding detail in respect to a playground, a community center, playground leadership techniques, activities equipment, supplies, and other information conducive to a successful playground and/or community center program. Prerequisite: None.

REC 110	**Introduction to Natural and Economic Resources**	**2**	**2**	**0**	**3**

This course is designed to provide information on the various types of plants and animals that might be found in hiking or camping trips. Field trips and projects are emphasized. Prerequisite: None.

REC 111	**Introduction to Recreation**	**5**	**0**	**0**	**5**

This course is designed to provide a complete overview of all aspects of organizing and managing a comprehensive recreation program. The focus will be on providing insight into the planning, programming, and conducting recreational activities. Opportunity will be provided for students to devote volunteer time with various recreational and educational agencies in the community. Prerequisite: None.

REC 112 Arts and Crafts 2 3 0 3

This course is designed to give the student practical experiences in creative crafts projects and to instruct the student on factors influencing the development and management of a comprehensive crafts program. Prerequisite: None.

REC 114 Scrap Art 0 3 0 1

This course will stress various methods of creating art objects out of recycled materials that can be found around the house. Crafts for youngsters in a recreational setting will be stressed. Prerequisite: None.

REC 119 Team Sports 2 2 0 3

Offers a survey of the basic terminology, skills, and rules of selected team sports and their use in recreation. Emphasis is upon knowledge and understanding of the organization, administration, and promotion of sports rather than mastery of performance skills. Prerequisite: None.

REC 120 Cultural Arts 3 0 0 3

Presents music and art as an integral part of a well-planned recreation program. Singing, rhythm, and appreciation of music are included with emphasis on developing appreciation and promotion of music and art rather than master of performance skills. Prerequisite: None.

REC 121 Program Planning and Organization 2 0 3 3

A study of essential elements and basic principles involved in the organization, supervision, promotion, and evaluation of various types of recreation programs. Emphasis is on organized programs and services. Prerequisite: None.

REC 201 Group Leadership 3 0 0 3

Provides insight into the theory, principles, and practice of planning, organizing, and conducting effective recreation programs for various groups. Emphasis is on group involvement. Prerequisite: None.

REC 202 Introduction to the Ill and Handicapped 3 0 0 3

This course is designed to introduce the student to the exceptional or abnormal person. During the course, the student will become familiar with differing disabilities, their causes, limitations, and treatment. To fully orient the student, scheduled trips will be arranged to community programs and institutions for the mentally and physically handicapped, the mentally ill, and the elderly. Prerequisite: None.

REC 204 Outdoor Recreation 2 4 0 4

This course presents an overview of the scope and extent of outdoor recreation. The history and development of outdoor recreation and its relationship to conservation are presented. Students learn campcraft skills and techniques. Organized camping experiences are planned and conducted to provide leadership experiences. Prerequisite: None.

REC 205 Communication in Recreation 3 0 0 3

This course is designed to familiarize students with methods of communication used in recreation, both written and oral. Emphasis will be placed on public relations presentations, workshops, and supervision. Adaptations for working with the disabled such as sign language and braille will also be introduced. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

REC 206 Recreational Drama 3 2 0 4

This course is designed to familiarize the students with the use of drama in a therapeutic recreation setting. Special emphasis will be placed on the different forms of drama that are adapted to the disabled child and adult. Students will gain much knowledge through actually experiencing and creating these activities during laboratory time. Prerequisite: None.

REC 207 Sports Officiating—Football 2 2 0 3

A course designed to acquaint students with the rules, knowledge, and skills in officiating football activities. Also included are how to recruit, train, and schedule officials for activities. Special emphasis is placed on high school, junior high, and tag football rules and regulations. Prerequisite: None.

REC 208 Sports Officiating—Basketball 2 2 0 3

This course is designed to teach students rules, regulations, and procedures regarding basketball officiating. Emphasis is placed on acquiring skills, knowledge, and abilities needed to become a junior high school basketball official. Prerequisite: None.

REC 209 Sports Officiating—Softball 2 2 0 3

This course acquaints students with all skills, knowledge, and abilities needed to officiate softball activities. Rules and regulations of the various leagues and levels of competition are covered extensively in this course. Prerequisite: None.

REC 210 Medical Terminology & Kinesiology 3 0 0 3

This course is designed to build a workable medical vocabulary for the therapeutic recreation student. Terminology commonly used in the medical setting will be presented and taught in connection with the study of muscle movement during sports and recreation activities. Special emphasis will be placed on terminology and kinetics used with handicapped persons. Prerequisite: None.

REC 211 Water-Related Sports 2 3 0 3

Includes the basic terminology, skills, and techniques of selected water-related activities and their use in recreational programs. Also stressed are swimming pool operations. Prerequisite: None.

REC 212 Adaptive Physical Education and Recreational Activities 3 0 0 3

The study and use of modifications and adaptations used in physical and recreational activities for handicapped persons. Discussions and demonstrations of techniques and equipment used in adapting various sports, games, and activities will be incorporated into this course. Prerequisite: None.

REC 213 Rehabilitative Team 3 0 0 3

This course will offer insight into the number and type of profesisonals working with handicapped individuals. Students will be provided with an overview of the various job responsibilities and how they interrelate with that of the recreation therapist. Prerequisite: None.

REC 214 Recreational Music 3 2 0 4

This course will increase student's knowledge and awareness of recreational music methods, techniques, and equipment. Special emphasis will be placed on therapeutic principles and objectives in dealing with the handicapped person. Prerequisite: None.

REC 220 Camp Counseling 2 4 0 4

This course is designed to teach students the theory of camping, different types of camp programs and skills, and the duties and rewards of being a camp counselor. Prerequisite: None.

REC 221 Individual Lifetime Recreation Activities 2 3 0 3

A survey of the basic terminology, skills, and rules for selected individual lifetime sports and their use in recreation. Prerequisite: None.

REC 223 Folk, Square, and Social Dance 3 2 0 4

Basic skills in recreational dance will be taught during this course. Major emphasis will be placed on adaptations for the physically and mentally handicapped. Students will learn the basic skills of dances, as well as proper instructional techniques for the disabled. Most skills will be learned through actual laboratory experience. Prerequisite: None.

REC 225 Scheduling Activities and Tournaments 1 2 0 2

A study of the techniques utilized in the scheduling of activities that are incorporated in municipal and therapeutic recreation programs. A major emphasis is placed on structuring tournaments. Prerequisite: None.

REC 231 Social Recreation 3 2 0 4

Introduce methods and materials for planning, organizing, and conducting social activities for groups of various sizes and ages. Major activities are discussed, played, and/or demonstrated. Prerequisite: None.

REC 235 Special Populations and Recreation 3 0 0 3

This course is designed to familiarize the recreation student with the various groups of people in our society who require special consideration when planning recreational activities. These groups include the mentally and physically handicapped, the aged and those people who are classified as social deviants. Factors such as planning activities, facilities, and new trends in recreation will be discussed. Prerequisite: None.

REC 250 Family, School, and Community Health 3 0 0 3

This course is designed to study factors that influence physical and mental health. Topics which will be discussed include drugs, alcohol, environmental factors hazardous to health, communicable diseases, death, mental health, and all other present-day problems that deal with health. Prerequisite: None.

REC 299 Recreation Internship 1 18 0 7

This is a practial work experience in a specialized setting for the disabled or elderly within the community. During this course, the student will work under the supervision of a therapeutic recreation professional. Prerequisite: REC 202.

Real Estate Courses

RLS 202 Real Estate Mathematics 3 0 0 3

Instruction in basic mathematical concepts such as decimals, fractions, percentages, multiplication, division. In addition, various mathematical functions relating to real estate practice, including computations of area, commissions, taxes, interest, discount points, depreciation, prorations, capitalization and depreciation. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
RLS 209	**Real Estate Finance**	**3**	**2**	**0**	**4**

The economics of finance is covered together with the legal aspects of real estate finance, sources of mortgage money, terms under which different financing should be used, sources of funds, mathematics of real estate finance, and appraisals for financing purposes. Prerequisite: RLS 286 or Real Estate License.

RLS 216	**Real Estate Sales and Brokerage**	**3**	**2**	**0**	**4**

The relation of the salesman and the broker is studied. Such factors as real estate salesmanship, location of prospects, bringing the prospect and the property together, the use of advertising in selling, time use, the basic development of a sales plan, a sales presentation, and the closing techniques. Prerequisite: RLS 286 or Real Estate License.

RLS 221	**Real Estate Investments and Taxation**	**3**	**0**	**0**	**3**

Local and national trends in the development, use, and value of real property, as well as governmental policies and their effect on the real estate market, are examined and discussed. Skills are developed in the analysis, research, and correlation of the various trends, policies, and factors affecting real estate. A study of real estate as an investment. Prerequisite: RLS 286 or Real Estate License.

RLS 226	**Land Development**	**3**	**2**	**0**	**4**

A study of the land and population economics of land utilization and the development factors related to manufacturing, labor, transportation, and commerce in or near development location. Prerequisite: RLS 286 or Real Estate License.

RLS 228	**Land Use Policy and Governmental Influence on Real Estate**	**3**	**2**	**0**	**4**

A study of the local and national trends in the development, use, and value of real property, as well as governmental policies and their effect on the real estate market. Skills are developed in the analysis, research, and correlation of the various trends, policies, and factors affecting real estate. Prerequisite: RLS 286 or Real Estate License.

RLS 231	**Real Estate Merchandising**	**3**	**2**	**0**	**4**

Organization and conduct of real estate brokerage and managerial business and professional activities, and the social, economic, legal licensing and ethical responsibilities of the real estate broker and property manager. A survey of the real estate merchandising process including advertising, marketing, and selling with special emphasis on the real estate salesperson, the consumer, and influence on the economy. Prerequisite: RLS 286 or Real Estate License.

RLS 285	**Real Estate Fundamentals and Principles (Salesman)**	**4**	**2**	**0**	**5**

This course will offer a complete study of all fundamentals and principles in real estate for the person who wishes to become a real estate salesperson. It includes the basic areas of real estate contracts, financing, real estate ownership, real estate brokerage and property valuation. Approved Pre-licensing Real Estate Salesperson's Course. Prerequisite: None.

RLS 286 Real Estate Fundamentals and Principles 6 3 0 7

A survey course designed to provide both the beginner and the real estate practitioner with a basic knowledge of real estate. It includes the basic aspects of real estate ownership, contracts, financing, closing, licensing, mathematics, brokerage, land use, property management, and law of agency. Successful completion and meeting attendance requirements of this course will qualify the student to take the North Carolina Real Estate Broker's Examination. Prerequisite: None.

RLS 292 Introduction to Real Estate Appraisal 4 2 0 5

The study of the functions of the real estate appraisers, planning, and the process of appraisal, site evaluation, and building materials, and equipment. The three methods of appraising property are considered: the income approach, the market data approach, and the cost approach, including depreciation and renovation. Prerequisite: RLS 286 or Real Estate License.

RLS 293 Residential Real Estate Appraisal 3 2 0 4

A study of the methods and techniques used in estimating the value of residential properties and in preparing a residential appraisal report. Topics include analysis of economical factors affecting the value of real estate, local, State, federal, and neighborhood influences and attitudes, economical factors and estimation of value. Prerequisites: RLS 286, or Real Estate License, and RLS 292.

RLS 294 Commercial Real Estate Appraisal 3 2 0 4

A study of the capitalization of income and the income approach to value. Topics covered include an analysis of steps to estimate the value of income-producing properties such as apartments, hotels, motels, office buildings, retail stores, industrial, etc.; interest rates; recapture rates; capitalization rates and techniques; and appraisal of lease interests. Prerequisites: RLS 286, or Real Estate License, and RLS 292.

RLS 295 Advanced Commercial Appraising 3 2 0 4

A study of the management of real estate as an investment taught at the executive level. Develops property ownership objectives through the analytical aspects of owning and managing investment real estate. Studies comprehensive long-term management plan to assure maximum financial yield for a property. Topics include valuation, financial implications, present value theory, and after-tax financial analysis. Prerequisite: RLS 294.

RLS 296 Property Management 4 2 0 5

A study of the nature of property management, types of property, lease preparation, property maintenance and protection of property (Insurance). Other topics include accounting and budgeting in property management, tenant selection and legal and professional requirements of a property manager. Prerequisite: RLS 286 or Real Estate License.

Respiratory Therapy Technology Courses

RTH 105 Introduction to Respiratory Therapy Theory and Equipment 3 2 0 4

An introduction to a course of study in respiratory therapy. The course is designed to give the learner a thorough knowledge of clinical practice, and a sound understanding of the biological and physical principles on which humid and aerosol therapy is based. Prerequisite: Admission to Respiratory Therapy Program.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

RTH 106 Respiratory Therapy Theory and Equipment II 3 4 0 5

This course deals with the administration of medical gases, ventilation, and Intermittent Positive Pressure Breathing. It provides a framework of knowledge to make intelligent and safe clinical application of these modes of therapy. Prerequisites: RTH 105 and MAT 105.

RTH 111 Clinical Practice I 3 2 15 9

Designed to introduce the student to the hospital atmosphere including an orientation to each clinical affiliate. Classroom and laboratory practice expands both the technical and pathophysiologic understanding of specific entities in respiratory therapy. These include branchial hygiene therapy, airway care, airway pressure therapy, principles of ventilator care and equipment cleaning and sterilization. Prerequisites: RTH 105 and RTH 106.

RTH 112 Clinical Practice II 3 0 33 14

Guided learning experiences in pulmonary function measurement of lung volumes and capacities, flowrates, diffusion capacities, distribution of ventilation, and the performance of arterial blood gas puncture and assessment. A study of the airway including endotracheal intubation technique and management is covered with an introduction to the management of patients requiring mechanical ventilation. The student is assigned to various clinical facilities to practice all learned skills under supervision in direct patient care service. Prerequisites: RTH 105, RTH 106, RTH 111, and RTH 151.

RTH 151 Pharmacology 3 0 0 3

This course includes the effects, mechanisms of action, routes and methods of administration, distribution, metabolism and excretion of drugs with special emphasis on those administered by respiratory therapists. Prerequisite: MAT 105.

RTH 213 Clinical Practice III 3 0 33 14

This course will provide the student with a complete comprehensive review of didactic materials. Clinical involvement is in critical care areas. Special emphasis is placed on all parameters involved with continuous mechanical ventilation. Prerequisites: RTH 241, RTH 242, RTH 243, and RTH 251.

RTH 241 Pediatrics (Including Perinatology) 2 2 0 3

Normal development and physiology of the fetal, neonate and pediatric age group will be covered with emphasis on the cardiopulmonary system. Disease process and treatment modalities will be taught in depth. Prerequisite: Second year student.

RTH 242 Clinical Application I 3 2 15 9

Continual study of the application of blood gases with emphasis on interpretation in relation to mechanical ventilation. Prerequisite: Second year student.

RTH 243 Cardiopulmonary Evaluation 2 2 0 3

An in-depth exposure to pulmonary function evaluation procedures, interpretation of pulmonary function test, cardiac function test, hemodynamic monitoring and pulmonary rehabilitation. Prerequisite: Second year student.

RTH 251 Clinical Application II 3 2 15 9

A study of the management of emergency situation as seen in pulmonary patients. Including: how to treat respiratory failure, the diagnostic possibilities and physiological abnormalities in each emergency situation, and the use and abuse of oxygen therapy and respiratory therapy equipment. Prerequisite: RTH 243.

RTH 252 Departmental Organization and Administration 2 0 0 2

A study in planning, organizing, directing, and controlling a respiratory therapy department. Record keeping, charting, and personnel management will be covered. Prerequisite: Second year student.

Social Science Courses

SOC 100 Focus on Society 5 0 0 5

Focus on Society is a principles of sociology course that offers the student clues to understanding the myriad of sociological events of our time. Through thirty half-hour programs of interviews with renowned social scientists and close examinations of the portions of society experiencing change. Focus on Society explores the intersection of history and biography in our society where the social conditions of the present relate to the recent past. Prerequisite: None.

SOC 101 Introduction to Sociology 3 0 0 3

This introductory course is designed to provide the student with a capability to relate fundamental concepts of sociology to the analysis of the major elements of social life: individuals, social situations, and culture. The course focuses on the scientific nature of sociology and the use of the scientific method to study social patterns and the major social institutions: the family, religion, education, polity, and economy. The student is provided an opportunity to study patterns of socialization, intergroup relations, and minority group relations as well as population growth and ecosystems. Prerequisite: None.

SOC 102 Marriage and Family 3 0 0 3

This course covers a study of the family as a social institution—its origins and development, its forms and functions, its interrelation with other social institutions, and its role in contemporary civilization. In connection therewith, a study is made of sex development differentiations, social relationships between the sexes, and factors contributing to or mitigating against successful, stable marriages. Prerequisite: None.

SOC 103 Family Portrait: A Study of Contemporary Lifestyles 5 0 0 5

Family Portrait is a college-level course dealing with changing American family lifestyles. Presented is an objective view of marriage, the family, and alternative lifestyles in contemporary America. Personal awareness, growth and satisfaction in interpersonal relationships are stressed through the presentation of new ideas and traditional theories. Subjects include marriage readiness, adjustments, counseling and therapy, and alternative lifestyles. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

SOC 203 Sociology of Death and Dying 3 0 0 3

This is a course designed to present the anthropological background and frustrations which are the consequences of death and dying. The student will be afforded an opportunity to analyze the differential rates of death among various groups, races, and societies, as well as the various courses and types of death. Also the student will be provided instruction on the preparation for death and an insight into role reconstructuring in social institutions resulting from the demise of incumbents of social positions. Current issues related to death and dying are discussed in depth. Prerequisite: None.

SOC 210 Contemporary Social Problems 3 0 0 3

This course in contemporary social problems explores facets of the most current social problems. The course involves the student in the analysis of social problems using sociological theory to explain social disorganization, social pathology, conflict, violence, labeling and deviance in contemporary society. The student gains insight into the function of stratification, institutions, values, goals, and social norms as sources of social problems. The course is designed to present the sociological perspective to social problems related to physical and mental health, chemical dependency, crime, deviance, prejudice, discrimination, work inequality, population, and environmental crisis. Prerequisite: SOC 101.

SSC 90 Introduction to the Social Sciences 3 2 0 4

This course offers the student in developmental studies a general introduction to the following social sciences: anthropology, economics, geography, history, political science, psychology, and sociology. The student is provided with a historical perspective of the development of the substantive content of the social sciences, the scientific methods used by social sciences, and some possible applications of each social science. A basic aim of this introductory course is to supply the student with the tools and information he/she needs to understand and appreciate scientific endeavors in the various social sciences. Prerequisite: None.

SSC 205 American Institutions 3 0 0 3

This is a course of study which focuses on the analysis of the structure, function, change, and meaning of culture, institutions and society. The student is afforded an opportunity to analyze the distribution and aggregation of identities, roles, and resources as well as how power, prestige, and property are determinants of the class structure in the United States. The primary focus of the course is on the six basic social institutions: the family, religion, economy, education, polity, and health. Prerequisite: None.

Welding Courses

WLD 95 Shop Practice 2 0 3 3

Introduces the student to the art of welding, where welding is used, and the safety in shop practices. The student is introduced to welding with the oxy-acetylene torch in the flat position, oxy-acetylene cutting, and brazing. In shop practices, the students arc weld in the flat position using E6011 electrodes. This course checks the student to determine if the student has the ability and desire to become a full-time welding student. The minimum of technical facts is covered, and only welding in the flat position is discussed. Prerequisite: None.

WLD 1112 Mechanical Testing and Inspection 1 2 3 3

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 give adequate information as to the quality of the weld. Types of tests covered are DESTRUCTIVE—guided free-bend, notched-bend, tee-bend, nick-tear, tension and impact; post-heating, magnetic particle, and magnaflux. Prerequisites: WLD 1120 and WLD 1121.

WLD 1120 Oxy-acetylene Welding and Cutting 3 0 12 7

Introduction to the history of oxy-acetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of unit. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead positions, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction. Prerequisite: None.

WLD 1121 Arc Welding 3 0 15 8

The operation of A.C. transformers and D.C. motor generator arc welding machines. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weakness in welding. Safety procedures are emphasized throughout the course. Prerequisite: None.

WLD 1122 Commercial and Industrial Practices 3 0 9 6

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. Prerequisite: Three quarters of welding or equivalent.

WLD 1123 Inert Gas Welding 1 0 3 2

Introduction and practical operations in the use of inert-gas-shielded arc welding. A study will be made of the equipment, operation, safety, and practice in the various positions. A thorough study of such topics as principles of operation, shielding gases, filler metals, process variations and applications, and manual welding. Prerequisites: WLD 1120 and WLD 1121.

WLD 1124 Pipe Welding 4 0 14 8

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. Prerequisites: WLD 1120 and WLD 1121.

WLD 1125 Certification Practices 3 0 6 5

This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of work done. Emphasis is placed on attaining skill in producing quality welds. Prerequisites: WLD 1123 and WLD 1124.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
WLD 1180 Basic Welding	**2**	**0**	**4**	**3**

A short course in welding, both oxy-acetylene and electric, designed as a helping course for Automotive Mechanics, Air Conditioning, Heating, and Refrigeration, Drafting, Plumbing, Recreation Vehicle and Equipment Repair, and Machine Shop. This course will cover a minimum of technical facts and is designed to teach the student to weld in the flat position only with electric arc and oxy-acetylene. Prerequisite: None.

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Computer Operator

Helen Barnak
Keypunch Operator

Delores Hartman
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Recruiter — M.Ed., East Carolina University

Eddie S. Smith ..... B.S., Florida Memorial College
Counselor — M.A., North Carolina Central University
Ed.S., University of North Carolina

Catherine B. Tilghman ..... B.A., Mars Hills College
Counselor — M.A., Wake Forest University

M. Ben Watson ..... B.A., Barber-Scotia College
Counselor — M.A., Appalachian State University

John W. Wheelous ..... B.S., M.A., Appalachian State University
Counselor

Kathryn E. Woltz ..... B.A., M.A., Appalachian State University
Counselor

Teresa Womble ..... B.S., M.Ed., Campbell University
Recruiter

Learning Resources

Susan S. Rose ..... B.A., North Carolina State University
Librarian — M.L.S., University of North Carolina

Janis Fisher ..... B.A., Meredith College
Assistant Librarian — M.L.S., East Carolina University

Nancy Kutulas ..... B.A., Meredith College
Assistant Librarian — M.L.S., University of North Carolina

Joanne B. Ryan ..... B.S., Southwestern Missouri State University
Library Technician

William D. Singleton ..... Caldwell Technical Institute and Community College
Library Assistant

Dorothy C. Walker ..... Fayetteville Technical Institute
Library Technician

Larry E. Wolfe ..... A.A.S., Central Piedmont Community College
Director of Media Center

Jonathan Pearlman ..... B.S., University of Florida
AV Production Technician

Willard Justice ..... Fayetteville Technical Institute
AV Technician

Betty Wiggins ..... East Carolina University
AV Assistant

Michael R. McGlothlin ..... Fayetteville Technical Institute
Photo Graphics Technician

Patricia H. Nunalee ..... B.S., East Carolina University
Learning Lab Coordinator

Patricia L. Carter ..... B.S., Campbell College
Learning Lab Assistant

Mary Croghan ..... B.A., Wellesley College
Learning Lab Assistant

Flora G. Dunham ..... B.S., Indiana University
Learning Lab Assistant

Carolyn E. Freeman ..... B.A., Flora McDonald College
Learning Lab Assistant

Willisteen Hall ..... B.A., Methodist College
Learning Lab Assistant

Annette D. Hornsby ..... B.A., Methodist College
Learning Lab Assistant

Nell P. Mayville ..... Registered Nurse, Highsmith Hospital School of Nursing
Learning Lab Assistant

Betty L. Ward ..... Fayetteville Technical Institute
Learning Lab Assistant

Business Education Division

Esther Arne ..... B.S., University of North Carolina
Chairperson of Marketing and Retailing — M.B.A., New York University

Gloria Barber ..... B.S., M.B.A., Winthrop College
Business Administration

Mary P. Beyer ..... B.A., M.A., University of North Carolina
Electronic Data Processing

Johnny L. Blackwell ..... B.S., M.B.A., Bradley University
Accounting

Donald Biggerstaff ..... B.S., Pembroke State University
Electronic Data Processing

Brenda K. Britt ..... B.A., St. Andrews Presbyterian College
Business Administration — M.S., University of North Carolina

Joe Brum ..... B.A., Methodist College
Business Administration — M.B.A.,Campbell University

Walter R. Coker ..... B.S., M.B.A., Syracuse University
Chairperson of Business Administration

Walter McD. Croom ..... B.S., M.Ed., Ed.D., North Carolina State University
Chairperson of Agricultural Business/ Horticulture Business

Ingrid A. Cummer ..... A.A.S., Fayetteville Technical Institute
Agriculture/ Horticulture Lab Assistant

Christine Dabrowski ..... B.A., Fayetteville State University
Electronic Data Processing

Kenneth E. Digby ..... B.S., Ohio State University
Industrial Management — M.B.A., University of Connecticut

Richard E. Esslinger ..... B.S., M.B.A., University of Utah
Chairperson of Industrial Management

Thomas J. Hall ..... B.S., M.B.A., University of North Carolina
Chairperson of Insurance

William T. Hall, Sr. ..... B.S., M.B.A., East Carolina University
Accounting

Douglas A. Hibbert ..... B.B.A., M.B.A., Campbell University
Business Administration

James T. Holden ..... B.S., University of Florida
Electronic Data Processing — North Carolina State University

Virgil D. House ..... B.A., Carleton College
Electronic Data Processing — M.A., Ph.D., Duke University

Bonnie Hunt ..... B.A., Pembroke State University
Accounting — M.S., Radford College
M.B.A., University of North Carolina

Richard C. Jarvies ..... B.S., Fordham University School of Business
Chairperson of Accounting — Certified Public Accountant

Cedric Jones ..... B.S., Campbell College
Electronic Data Processing — M.A., East Carolina University

Dickey V. Jones ..... B.S.S.A., M.Ed., University of North Carolina
Secretarial Science

L. Dwain Joyce ..... B.S., M.Ed., University of North Carolina
Secretarial Science

Karen H. Keel ..... B.S., M.B.A., University of North Carolina
Business Administration

Linda Rose Lee ..... A.B., M.A., Appalachian State University
Chairperson of Secretarial Science and General Office Technology

Steve Medlin..... B.S., M.B.A., East Carolina University
Business Administration

Carolyn Nails ..... B.S., M.S., North Carolina Central University
Secretarial Science

Renu Nijhawan ..... B.A., Fayetteville State University
Electronic Data Processing

Charles M. Oldham ..... B.S., M.B.A., East Carolina University
Marketing and Retailing

Robert Ralph ..... B.S., M.S., University of Akron
Chairperson of Electronic Data Processing

Gina Sexton ..... B.S., Middle Tennessee State University
Electronic Data Processing

Robert Sherman..... B.S., Clemson University
Horticulture M.S., Michigan State University

James A. Sinclair ..... A.B., M.B.A., University of North Carolina
Chairperson of Banking and Finance

John W. Smith ..... B.S., North Carolina State University
Banking and Finance M.Ed., University of North Carolina

John F. Streit, Jr. ..... B.A., University of Omaha
Chairperson of Real Estate M.S., University of Utah

Margene Sunderland ..... B.A., College of Notre Dame
Business Administration M.A., Central Michigan University

Donna Turner ..... B.S., M.Ed., East Carolina University
Secretarial Science

James Vanderpool ..... B.B.A., Campbell College
Accounting M.A., Webster College

Neil Walworth ..... A.A.S., Fayetteville Technical Institute
Electronic Data Processing

John Warner..... B.S., University of North Carolina
Business Administration/Insurance M.B.A., Georgia State University

Houston Warren ..... B.S., M.A., East Carolina University
Agriculture

Hilda C. Wilson ..... B.A., M.Ed., University of North Carolina
Secretarial Science

Engineering Technology Division

Granville C. Byrd, Jr. ..... B.S., M.S., Rochester Institute of Technology
Chairperson of Electronics Engineering

Gordon L. Dwiggins ..... B.S., M.S.S.E., University of North Carolina—
Civil Engineering — Professional Engineer

Robert S. Gordon ..... Undergraduate study—North Carolina State University
Electronics Engineering

Robert Hill ..... B.E.T., University of North Carolina
Electronics Engineering

Alton B. King ..... B.S., University of Alabama
Chairperson of Civil Engineering — M.S., Ph.D., Utah State University

Eugene H. Shannon ..... B.S., M.S.P.H., University of North Carolina
Chairperson of Water and Wastewater Plant Operators and Chemical Engineering — Certified Wastewater Treatment Plant Operator & Waste Treatment Facility Operator

General Education Division

Murphy A. Alexander ..... B.A., Queens College
English — M.A., University of North Carolina

Geraldine L. Arnold ..... R.N., B.A., Olivet Nazarene College
Biology — M.Ed., North Carolina State University

Ann N. Ashford ..... B.A., M.A.T., Duke University
English

Janice A. Blum ..... B.S., Methodist College
Biology — M.S., North Carolina State University

Clarence H. Cannady ..... B.S., M.M., University of South Carolina
Mathematics

Suzanne Carmichael ..... A.B., Randolph Macon University
English — M.A., John Hopkins

Emily A. Cash ..... B.S., Methodist College
Mathematics — M.Ed., Campbell University

Thomas P. Coyne ..... B.A., Campbell College
Chairperson of Social Science — M.S., North Carolina State University
Ed.D., Nova University

Walter C. Craver ..... B.S., M.A., Appalachian State University
Social Science

Betty G. Davis ..... B.S., M.A., East Carolina University
English

Edwina Evans ..... B.S., Shaw University
Social Science — M.Ed., University of North Carolina

Scott Garrow ..... B.S., Hampden-Sydney College
English — M.A., Ph.D., University of North Carolina

Sandra A. Gillikin ..... B.A., Methodist College
English — M.A., East Carolina University

Glenn T. Godwin ..... B.S., M.A., East Carolina University
Biology

Collins G. Gray, Jr. ..... B.S., M.A., University of North Carolina
Biology

Mamie L. Griffin ..... B.A., St. Augustine's College
English M.S., North Carolina A&T University

Calton G. Hall ..... B.S., M.A.E., East Carolina University
Chairperson of Physical Science

Ingelore Holthe ..... B.A., M.Ed., North Carolina State University
Social Science

Robin M. Horner ..... B.S., Methodist College
Physics/Chemistry M.A., East Carolina University

Gerald Ittenbach ..... B.S., North Carolina State University
Biology M.Ed., East Carolina University

Wallace L. Jernigan ..... A.B., Elon College
Mathematics M.A.T., University of North Carolina

Doty B. Johnson ..... B.A., M.S., Purdue University
Social Science

Larry T. Jones ..... B.S., Campbell College
Mathematics M.A., East Carolina University

Thomas R. Koballa ..... B.A., M.Ed., North Carolina State University
Social Science

Clifton Lecornu ..... B.A., Mississippi State University
Social Science M.Div., Emory University

Paul Lewis ..... B.S., Wake Forest University
Physics M.A., East Carolina University

Rebecca Lommel ..... B.S., Louisiana State University
English M.A., University of Texas

Joseph A. McCulloch ..... B.S., University of North Carolina
Mathematics M.Ed., North Carolina State University

Michael D. McLaurin ..... B.S., University of North Carolina
Chairperson of Mathematics M.A.T., Duke University

Loretta M. Monk ..... B.S., Fayetteville State University
Mathematics M.M., Utah State University

Eleanor H. Ninestein ..... B.A., Agnes Scott College
Mathematics M.A., Duke University

Leslie Nordhaugen ..... B.S., Pembroke State University
Physics/Chemistry M.Ed., Campbell College

Charles M. Norris ..... B.S., Auburn University
Psychology M.A.C.T., University of North Carolina

Nanette Norris ..... B.S., M.M., Appalachian State University
Mathematics

Pamolu E. Oldham ..... B.A., Sweet Briar College
English M.F.A., Columbia University

Ronald D. Orban ..... B.A., Pfeiffer College
Mathematics M.S., Stephen F. Austin State University

Sylvia T. Pierce ..... A.B., Queens College
English M.A., University of North Carolina

Marsha M. Ralph ..... B.A., University of North Carolina
Mathematics M.Ed., Campbell University

Frederick C. Salter .....B.S., M.A., East Carolina University
English

Lonnie G. Smith .....B.S., M.A., Appalachian State University
English

T. Patrick Stephenson.....B.S., University of North Carolina
Chairperson of Biology M.A., East Carolina University

Carol Stewart ..... B.S., North Carolina State University
Biology M.A., University of Georgia

Susan P. Varner.....B.S., M.A., University of North Carolina
Mathematics

Jesse B. Waters..... A.B., East Carolina University
Physics M.S., College of William & Mary

Robert E. West..... B.S., Pembroke State University
Mathematics

Floyd D. Whitehead .....B.S., U.S. Military Academy
Social Science M.Ed., Tufts University

Daphne M. Williams..... B.S., East Carolina University
English M.A., Appalachian State University

Christine W. Womble ..... B.S., Fayetteville State University
English

Eugene Wood.....B.S., M.S., North Carolina A&T University
Chairperson of English

Health Occupations Division

Ellon Barlow.....B.S., University of North Carolina
Chairperson of Pharmacy Technology

Pamela Best .....B.S.N., M.S.N., East Carolina University
Associate Degree Nursing

Mary C. Boudreau.....B.S., Old Dominion University
Dental Hygiene

Mary Bradley .....B.S.N., Medical College of Virginia
Licensed Practical Nursing

Janet L. Chernega .....B.S., University of North Carolina
Chairperson of Dental Assisting

Garry Brookshire.....A.A.S., Sandhills Community College
Respiratory Therapy

Kathleen Brotherton ..... B.S., R.N., University of Rochester
Licensed Practical Nursing

Fern Cooper..... R.N., B.S.N., University of South Carolina
Chairperson of Respiratory Therapy

Anna Eaton .....B.S.N., Walter Reed Army Institute of Nursing
Associate Degree Nursing M.S.N., University of California at Los Angeles

Mary Jane Gentry ..... B.S., University of Nebraska Medical School
Chairperson of Radiological Technology — M.Ed., North Carolina State University
Certified Radiologic Technician

Susan Goodson ..... A.A.S., Fayetteville Technical Institute
Radiology Technology

Mary J. Greer ..... R.N., B.S.N., Marquette University
Associate Degree Nursing

Pamela R. Harsant ..... B.S.N., R.N., University of North Carolina
Associate Degree Nursing — M.Ed., North Carolina State University

Deborah Jackson ..... B.S., Pembroke State University
Dental Assisting

Mary G. James ..... R.N., B.S., M.Ed., North Carolina State University
Associate Degree Nursing

Doris S. Johnson ..... B.S.N., R.N., Winston-Salem University
Associate Degree Nursing — M.S.N., Medical College of Virginia

Charlotte M. Jordan ..... L.P.N., Fayetteville Technical Institute
Chairperson of Nursing Assistant — R.N., Highsmith School of Nursing

Eileen F. Joyner ..... R.N., B.S., M.Ed., North Carolina State University
Associate Degree Nursing

Aileen Kellam ..... A.A.S., Midland Technical College
Respiratory Therapy

Deborah Lefevers ..... B.S., Medical College of Georgia
Dental Hygiene — M.A., Webster College

Judith Moore ..... R.N., B.S., M.S., Pace University
Associate Degree Nursing

Mercedes R. O'Hale ..... R.N., B.S., M.S., University of Chicago
Director of Nursing Education

Ethelyn O. Page ..... R.N., Highsmith Hospital School of Nursing
Chairperson of Surgical Technology — B.S.P.A., St. Joseph's College

Mary Perkins ..... B.S.N., Hampton University
Associate Degree Nursing — M.S.N., Marquette University

Marjane B. Selleck ..... B.S., State University of New York
Physical Therpay — M.S., The College of St. Rose

Della Stewart ..... B.S., North Carolina A&T University
Licensed Practical Nursing

Mary Louise Suddath ..... B.S., M.S., Case Western Reserve University
Chairperson of Physical Therapy — Certified Physical Therapist

Robert Timbers ..... B.S., South Illinois University
Chairperson of Dental Hygiene — M.A., North Carolina State University

Sharon Van Slambrook ..... B.S.N., Duke University School of Nursing
Chairperson of Emergency Science

Lettie Vinson ..... Certified Radiologic Technician,
Radiologic Technology — University of North Carolina

Kathy Weeks ..... R.N., B.S.N., Western Carolina University
Associate Degree Nursing — M.S.N., University of North Carolina

John W. Williford ..... B.S., D.D.S., University of North Carolina
Director of Dental Auxiliary Programs M.S.D., Indiana University

Mary L. Williford ..... B.S., University of North Carolina
Pharmacy Technology

Connie B. Wolfe..... R.N., B.S.N., University of Nebraska
Associate Degree Nursing M.Ed., North Carolina State University

Public Service Division

Jinx A. Averitte ..... B.S., M.Ed., Colorado State University
Chairperson of Recreation Associate

Fred J. Baker ..... Certificate, Kentucky School of Mortuary Science
Funeral Service Education B.A., Jacksonville State University

David Brumble..... B.A., Fayetteville State University
Criminal Justice M.S., University of South Carolina

Darl H. Champion..... B.A., Indiana University of Pennsylvania
Chairperson of Criminal Justice M.S., University of South Carolina

Carol D. Dickey..... B.A., University of North Carolina
Paralegal J.D. Law, University of North Carolina

William L. Eanes, Jr..... B.S., Appalachian State University
Recreation Associate M.A.E., East Carolina University

Kay Gilbert..... B.S., East Carolina University
Chairperson of Food Service

Melvin G. Hartley ..... B.A., Appalachian State University
Chairperson of Paralegal J.E., Law, University of Miami

John R. Lifsey ..... Certificate in Mortuary Science
Chairperson of Funeral Service Education B.S., Middle Tennessee State University
Licensed Funeral Director/Embalmer

Lorraine H. Means ..... A.B., J.D. Law, University of North Carolina
Paralegal

James D. New ..... B.S., Campbell College
Criminal Justice

George R. Newton..... B.S., Coker College
Food Service

W. Kent Pierce..... B.A., University of North Carolina
Criminal Justice

Janice A. Powell ..... B.S., East Carolina University
Food Service

Tina I. Royal ..... B.S., North Carolina State University
Recreation Associate

Vocational Education Division

Robert S. Barden..... A.A.S., Fayetteville Technical Institute
Architectural Drafting

Ronald F. Beard ..... Licensed Electrician
Electrical Installation

Charles A. Bell ..... North Carolina State University
Architectural Drafting/Commercial Art

John Cade ..... A.A.S., Fayetteville Technical Institute
Automotive

Edwin E. Core ..... Master Plumber
Plumbing

Steven C. Core ..... A.A.S., Fayetteville Technical Institute
Automotive Mechanics

Phillip M. Deese ..... North Carolina State University
Drafting

Herman Dunn ..... A.A.S., Fayetteville Technical Institute
Air Conditioning

Lelon H. Ellis ..... Journeyman Mason
Chairperson of Masonry

DeWayne E. Fields ..... B.S., University of Toledo
Chairperson of Carpentry

Merland F. Francis ..... A.A.S., Fayetteville Technical Institute
Welding

Hubert Hall ..... Master Carpenter
Carpentry

William E. Hancock ..... B.B.E., B.S., M.A., East Tennessee State University
Chairperson of Drafting — Certified Manufacturing Engineer

Denise H. Herring ..... B.A., Scripps College
Commercial Art

Thomas P. Holden ..... A.A.S., Lafayette College
Chairperson of Recreation Vehicle & Equipment Repair — B.B.A., Campbell College

George W. Jeffreys ..... Licensed Electrical Contractor
Chairperson of Electrical Installation and Maintenance — Licensed Plumbing & Heating Contractor

Forest E. Jernigan ..... A.B., Atlantic Christian College
Chairperson of Plumbing

Lloyd Maynard ..... Licensed Electrician
Electrical Maintenance

Frank M. McDonald ..... Master Mechanic
Chairperson of Automotive Mechanics

Ed McDuffie ..... Diploma, Fayetteville Technical Institute
Air Conditioning

Bobby W. Perkins ..... A.A.S., Fayetteville Technical Institute
Automotive Mechanics

James B. Pittman ..... A.A.S., Fayetteville Technical Institute
Chairperson of Machine Shop — Certified Manufacturing Engineer

Hollis D. Richardson ..... Master Electrician
Chairperson of Industrial Maintenance

Paul B. Sharpe ..... A.A.S., Danville Technical Institute
Chairman of Air Conditioning, Heating and Refrigeration — A.A.S., Fayetteville Technical Institute
Licensed Air Conditioning & Heating Contractor