FAYETTEVILLE TECHNICAL INSTITUTE

1977-79

Ron
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FAYETTEVILLE TECHNICAL INSTITUTE

1977-79

CATALOG

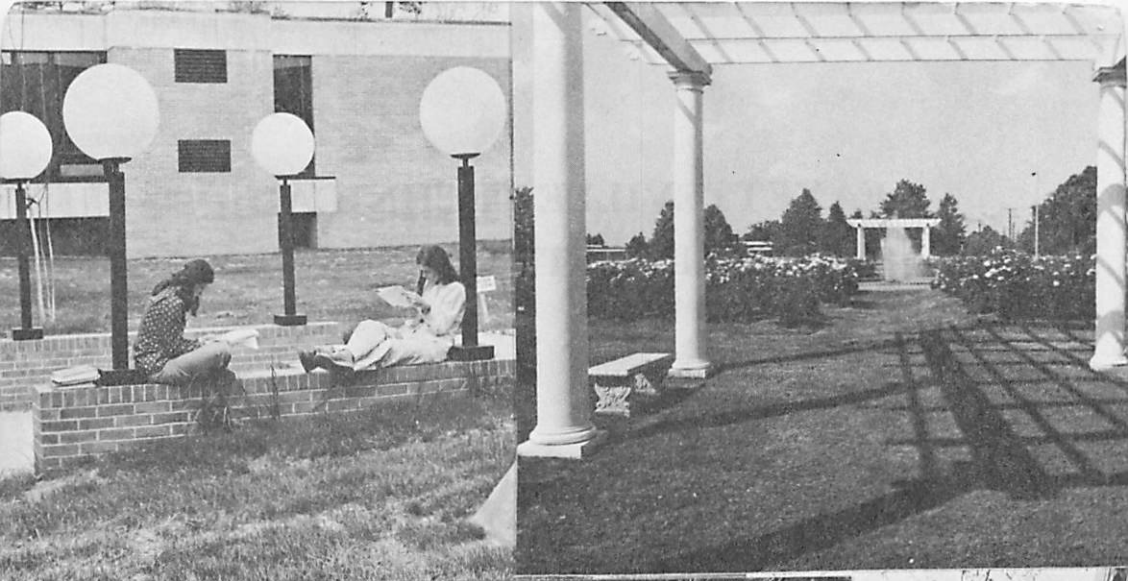
VOLUME VI

Tuition changed by 1977 N. C. State Legislature to:

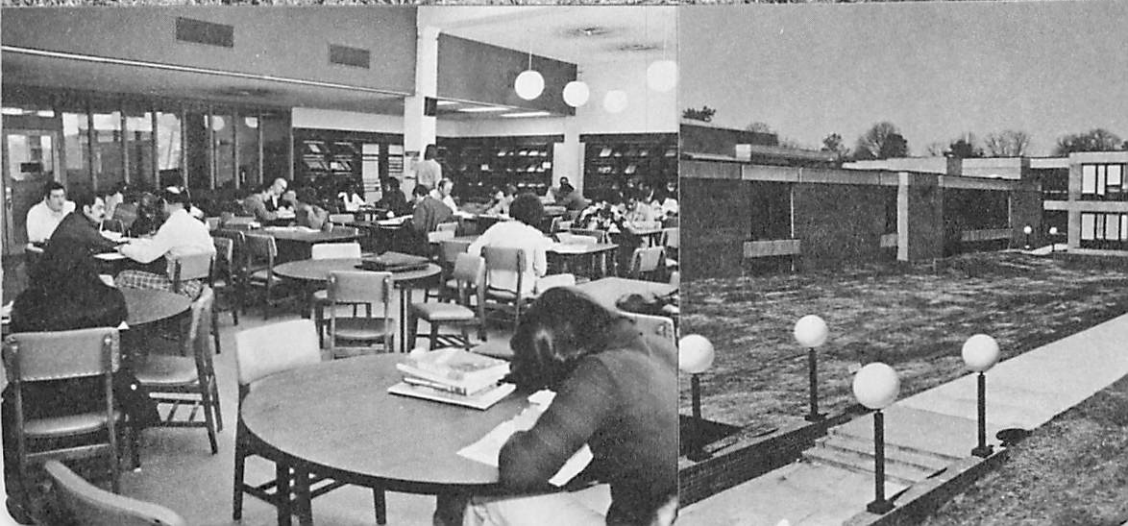
In-State: $39 per quarter, $117 (3 quarters) and $156 (4 quarters), and under 11 credit hours $3.25 per credit hour.

Out-of-State: $198.50 per quarter or $16.50 per quarter hour under 12 quarter hours (reference page 35).

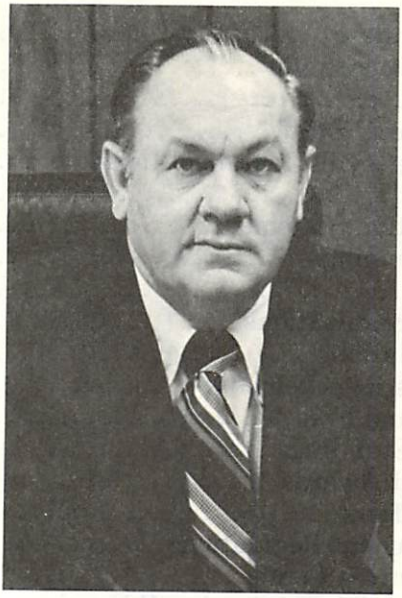
P. O. BOX 5236, FAYETTEVILLE, NORTH CAROLINA 28303
PHONE 323-1961




FAYETTEVILLE
TECHNICAL INSTITUTE



Greetings from the President



Fayetteville Technical Institute, a charter member of the North Carolina Department of Community Colleges, was founded in September of 1961. Since its initial enrollment of 58 full-time curriculum students, FTI has grown and expanded its facilities to meet the challenges imposed by an ever-increasing and changing society. The citizens of Fayetteville and Cumberland County have witnessed and have been part of a tremendous growth pattern during the past sixteen years.

Many changes have occurred over these years in the areas of curriculum, physical facilities, faculty, and students. Without the full cooperation and enthusiasm shared by the citizens of this area, these changes would not have been possible.

FTI has touched the lives of many thousands of citizens seeking educational opportunities. The educational needs of these people vary from the highly skilled technology subjects to their leisure and avocational desires. We have made a determined effort to meet the needs of this area and will continue to offer educational programs to accommodate the ever-changing and complex society in which we live and work.

Howard E. Boudreau, President
Fayetteville Technical Institute.

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ACADEMIC CALENDAR 1977-1978

Fall Quarter

Registration for all students	August 8 - 11
Orientation for beginning and freshman students	August 30
Classes begin for all students	August 31
Last day to drop courses without penalty	September 2
Last day to request refund	September 7
End of 6 weeks	October 12
Last day of Fall Quarter	November 16

Labor Day Holidays—September 5
Last day of classes—September 2
Classes resume—September 6

Winter Quarter

Registration for all students	To be announced
Classes begin for all students	November 22
Last day to drop courses without penalty	December 2
Last day to request refund	December 7
End of 6 weeks	January 17
Last day of Winter Quarter	February 22

Thanksgiving Holidays—Nov. 24 - 27
Last day of classes—Nov. 23
School resumes—Nov. 28
Christmas Holidays—Dec. 19 - Jan. 1
Last day of classes—Dec. 16
School resumes—Jan. 2

Spring Quarter

Registration for all students	To be announced
Classes begin for all students	February 28
Last day to drop courses without penalty	March 6
Last day to request refund	March 9
End of 6 weeks	April 4
Last day of Spring Quarter	May 17
Graduation Exercises	May 20

Easter Holidays—March 24-27
Last day of classes—Mar. 23
School resumes—Mar. 28

Summer Quarter (1st Session)

Registration for all students	To be announced
Classes begin for 1st session	May 23
Last day of classes	June 29

July 4th Holidays—July 4
Last day of classes—July 3
Classes resume—July 5

Summer Quarter (2nd Session)

Registration for all students	To be announced
Classes begin for 2nd session	July 5
Last day of classes (Four-Quarter Curricula)	August 8
Last day of classes—Second Session	August 11

ACADEMIC CALENDAR 1978-1979

Fall Quarter

Registration for all students	To be announced
Orientation for beginning and freshmen students	September 6
Classes begin for all students	September 7
Last day to drop courses without penalty	September 13
Last day to request refund	September 18
End of 6 weeks	October 19
Last day of Fall Quarter	November 22
Labor Day Holidays—Sept. 4	
Last day of classes—Sept. 1	
Faculty returns—Sept. 4	

Winter Quarter

Registration for all students	To be announced
Classes begin for all students	November 29
Last day to drop courses without penalty	December 5
Last day to request refund	December 8
End of 6 weeks	January 10
Last day of Winter Quarter	February 28
Thanksgiving Holidays—Nov. 23 - 26	
Last day of classes—Nov. 22	
School resumes—Nov. 27	
Christmas Holidays—Dec. 18 - Jan. 2	
Last day of classes—Dec. 15	
School resumes Jan. 2	

Spring Quarter

Registration for all students	To be announced
Classes begin for all students	March 5
Last day to drop courses without penalty	March 9
Last day to request refund	March 14
End of 6 weeks	April 16
Last day of Spring Quarter	May 21
Graduation	May 26
Easter Holidays—Apr. 14-16	
Last day of classes—Apr. 13	
School resumes—Apr. 17	

Summer Quarter (1st Session)

Registration for all students	To be announced
Classes begin for all students	May 25
Last day to drop classes without penalty	May 28
Last day of classes (First Session)	July 3
July 4th Holiday—July 4	
Last day of classes—July 3	

Summer Quarter (2nd Session)

Registration for all students	To be announced
Classes begin for 2nd session	July 9
Last day of classes (Four - Quarter Curricula)	Aug. 10
Last day of summer quarter	August 14

ACADEMIC CALENDAR 1979-1980

Fall Quarter

Registration for all students	To be announced
Orientation for beginning and freshmen students	September 4
Classes begin for all students	September 5
Last day to drop courses without penalty	September 12
Last day to request refund	September 17
End of 6 weeks	October 17
Last day of Fall Quarter	November 20

Winter Quarter

Registration for all students	To be announced
Classes begin for all students	November 28
Last day to drop courses without penalty	December 4
Last day to request refund	December 7
End of 6 weeks	January 23
Last day of quarter	February 25
Christmas Holidays—Dec. 19 - Jan. 1	
Last day of classes—Dec. 18	
Classes resume—Jan. 2	

Spring Quarter

Registration for all students	To be announced
Classes begin for all students	March 3
Last day to drop courses without penalty	March 10
Last day to request refund	March 13
End of 6 weeks	April 14
Last day of quarter	May 20

Graduation	May 24
Easter Holidays—April 4-7	
Last day of Classes—April 3	
Classes resume—April 8	
Summer Quarter	
Registration for 1st Session	To be announced
Classes begin for all students	May 26
Last day to drop without penalty	May 27
Last day of classes (First Session)	July 2
July 4th Holidays—July 4-6	
Second Session	
Registration for 2nd Session	To be announced
Faculty Workday	July 7 & 8
Classes begin for all students	July 9
Last day of quarter for 4-quarter Curricula	August 11
Last day of quarter	August 13

FAYETTEVILLE TECHNICAL INSTITUTE

BOARD OF TRUSTEES

Harry F. Shaw, Chairman
John T. Henley, Vice-Chairman
Howard L. Hall, Secretary

APPOINTMENTS

Name	Expiration Date	Appointed By
William C. Beard, Jr.	June 30, 1977	Board of County Commissioners
Mrs. Daniel S. Currie, Jr.	June 30, 1979	Board of County Commissioners
Roscoe L. Blue	June 30, 1981	Board of County Commissioners
Steve Satisky	June 30, 1983	Board of County Commissioners
Neill A. Currie, Jr.	June 30, 1977	City and County School Boards
Thornton W. Rose	June 30, 1979	City and County School Boards
John T. Henley	June 30, 1981	City and County School Boards
Howard H. Hall	June 30, 1983	City and County School Boards
Harry F. Shaw	June 30, 1977	Governor
F. C. Franklin	June 30, 1979	Governor
David G. Wilson	June 30, 1981	Governor
Bruce R. Pulliam	June 30, 1983	Governor

ATTORNEY

L. Stacy Weaver, Jr.

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President

Marcellus W. Bounds ..... B.S., U.S. Military Academy, West Point
Administrative Assistant to the President: Security and Plant

William L. Bryant ..... B.S., M.Ed., North Carolina State University
Administrative Assistant to the President: Special Projects.

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Personnel Officer

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Vice President for Academic Affairs. Doctoral Study — North Carolina State University

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Dean of Instruction. Doctoral Study — North Carolina State University

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Dean of Student Affairs

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Dean of Adult Continuing Education

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Associate Dean of Instruction
(General Education)

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Associate Dean of Instruction Doctoral Study — Nova University
(Occupational Education)

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Associate Dean of Instruction
(Learning Resources)

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Associate Dean of Student Affairs

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Associate Dean of Fiscal Affairs

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Director of Student Activities

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Director of Instruction (Night School)

Cader C. Terrell ..... B.B.A., M.A., Webster College
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Director, CETA

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Computer Operator

John W. Gales ..... A.A.S., Fayetteville Technical Institute
Computer Operator

Helen F. Cheng ..... Diploma, China Data Processing Center, B.S., Sheing Chien College
Programmer

David R. Joyce ..... A.A.S., Rockingham Community College
Programmer

Terri Pelaez ..... Diploma, Fayetteville Technical Institute
Keypunch Operator

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Public Information Officer

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Counselor

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Counselor

John M. Duncan ..... B.A., M.A., University of North Carolina
Counselor

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Counselor

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Counselor

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Counselor

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Counselor

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Testing Coodinator

Bunnie Pere ..... A.A.S., Fayetteville Technical Institute
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Library Assistant

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Library Technician

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Audio Visual Technician

William G. Izquierdo ..... Fayetteville Technical Institute
Audio Visual Technician

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Educational Media Specialist

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Audio Visual Technician

Patricia H. Nunalee ..... B.S., East Carolina University, graduate study, North Carolina State University, Appalachian State University
Learning Lab Coordinator

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Learning Lab Assistant

Juanita S. Clement ..... A.B., Livingston College
Learning Lab Assistant

Flora G. Dunham ..... B.S., Indiana University
Learning Lab Assistant

Jan L. Folsom ..... B.S., East Carolina University
Learning Lab Assistant

Carolyn Freeman ..... B.S., Flora McDonald College, graduate study, Columbia University
Learning Lab Assistant

Willisteen D. Hall ..... B.A., Methodist College
Learning Lab Assistant

Judith A. Marsh ..... B.A., Stonehill College
Learning Lab Assistant

Nell P. Mayville ..... R.N., Highsmith Hospital School of Nursing
Learning Lab Assistant

Betty L. Ward ..... Fayetteville Technical Institute
Learning Lab Assistant

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Accounting

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Secretarial Science

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Physical Science

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Physical Science

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Physical Science

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Chairperson of English Department

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English

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Mathematics

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English

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English

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Social Science

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Study Skills

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Dental Hygiene

Sue S. Huddleston ..... Certified Dental Assistant, University of North Carolina
Chairperson of Dental Assisting Department

Mary G. James ..... R.N., B.S., M.Ed., North Carolina State University
Associate Degree Nursing

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Physical Therapy

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Associate Degree Nursing

Ada M. Leonard ..... R.N., B.S., Limestone College
Chairperson of Practical Nurse Education Department

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Associate Degree Nursing

Mercedes R. O'Hale ..... R.N., B.S., M.S., University of Chicago
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Judith Pace ..... R.N., B.S., University of North Carolina
Associate Degree Nursing

Ethelyn O. Page ..... R.N. Highsmith Hospital School of Nursing
Chairperson of Operating Room Technician Department

Mary Jane Richardson ..... B.S., University of Nebraska Medical School, Certified Radiologic Technician
Chairperson of Radiologic Department

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Mary Louise Suddath ..... B.A., M.S., Case Western Reserve University, Certified Physical Therapist
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Lettie Vinson ..... Certified Radiologic Technician, University of North Carolina
Radiologic Department

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Law Enforcement—Criminal Justice

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Chairperson of Cosmetology Department

Franz J. Grebner ..... B.A., M.Ed., St. Thomas College
Chairperson of the Law Enforcement—Criminal Justice Department

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James D. New ..... B.S., Campbell College
Law Enforcement—Criminal Justice

John W. Smith ..... B.S., M.Ed., University of North Carolina
Chairperson for Recreation Associate Department

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Charles A. Bell ..... North Carolina State University
Chairperson of Architectural Drafting and of the Commercial Art Departments

James H. Christie ..... B.S., North Carolina State University
Chairperson of Welding Department

Edwin C. Core ..... Master Plumber
Plumbing

Steven C. Core ..... Diploma, Fayetteville Technical Institute, Certified by the National Institute of Automotive Service Excellence
Automotive Mechanics

Herman W. Dunn ..... A.A.S., Fayetteville Technical Institute, Refrigeration & Air Conditioning Licensed Contractor, undergraduate study—North Carolina State University
Air Conditioning & Refrigeration

Merland F. Francis ..... Diploma, Fayetteville Technical Institute
Welding

DeWayne E. Fields ..... B.S., University of Toledo
Carpentry

Hubert Hall ..... Diploma, Fayetteville Technical Institute
Carpentry

Sarah S. Hood ..... A. A., Peace College, Diploma, Fayetteville Technical Institute
Architectural Drafting

George W. Jeffreys ..... Licensed Electrical Contractor, Licensed Plumbing & Heating Contractor
Electrical Installation & Maintenance

Forest E. Jernigan ..... A.B., Atlantic Christian College
Plumbing

Ronald L. Mace ..... B.A., North Carolina State University
Architectural Drafting

Franklin M. McDonald ..... Master Mechanic, Certified by the Institute for Automotive Service Excellence, undergraduate study—North Carolina State University
Chairperson of Automotive Mechanics and of the Recreational Vehicle and Equipment Repair Departments

Edmond E. Nute ..... Master Mechanic, A.A.S., Fayetteville Technical Institute, Certified by the Institute for Automotive Service Excellence
Automotive Mechanics

Ervin D. Oakes, Jr. ..... A.A.S., Fayetteville Technical Institute, Licensed Refrigeration Contractor, Licensed Electrical Contractor, undergraduate study—North Carolina State University
Chairperson of Electrical Installation & Maintenance Department

Bobby W. Perkins ..... Master Mechanic, Diploma, Fayetteville Technical Institute, Certified by the National Institute for Automotive Service Excellence
Automotive Mechanics

Bernard L. Pittman ..... Master Brick Mason
Chairperson of Masonry Department

James B. Pittman ..... Master Machinist, A.A.S., Fayetteville Technical Institute, Certified Manufacturing Engineer, undergraduate study—North Carolina State University
Chairperson of Machine Shop Department

Paul B. Sharpe, Jr. ..... Diploma, Danville Technical Institute, A.A.S., Fayetteville Technical Institute, Licensed Air Conditioning & Refrigeration Contractor, undergraduate study—North Carolina State University
Chairperson of Air Conditioning & Refrigeration Department

Donald G. Steen ..... Master Brick Mason
Masonry

Charles A. Stone, Jr. ..... Master Machinist, undergraduate study—
Machine Shop North Carolina State University

Lorimer P. Thomas ..... Master Machinist, undergraduate study—North
Chairperson of Tool & Die Department Carolina State University

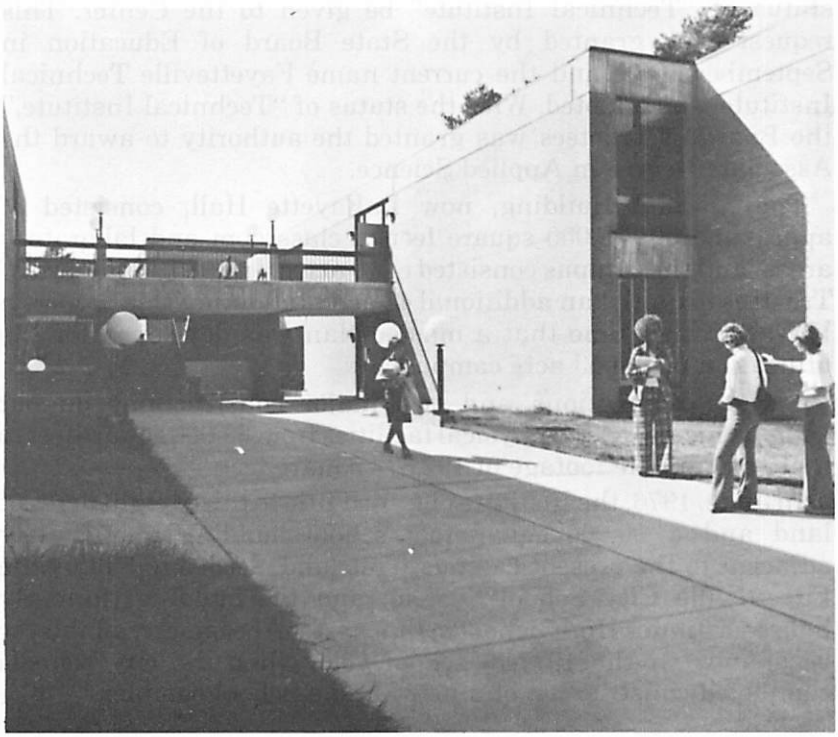
OFFICE AND GENERAL STAFF

Cathy Barefoot ..... Secretary to the Director of Admissions
Linda Bass ..... Equipment Requisition Clerk
Sharon Bergeron ..... Registration Clerk/Adult Education
Judy Bethune ..... Secretary to the Dean of Fiscal Affairs
Sarah Bradshaw ..... Clerk/Library
Brenda Byrd ..... Accounting Machine Operator
Gerri Campbell ..... Accounting Clerk
Karen Carlton ..... Secretary/CETA
Charlotte Coheley ..... Secretary to the Vice President for Academic Affairs
Betty Coley ..... Cashier
June Cooke ..... Secretary to the Director of Occupational Extension Education
Ruth Davis ..... Faculty Secretary
Celeste DePriest ..... Secretary to the Director of Admissions
Verlinda Doles ..... Secretary to the Director of Counseling Services
Sharon Eason ..... Secretary to the Director of Extension Education
Kathy England ..... Secretary to the President
Nancy Fields ..... Faculty Secretary
Beverly Flowers ..... Faculty Secretary
Ruby Glass ..... Faculty Secretary
Martha Hall ..... Secretary/Control Clerk—Computer Center
Mary Sue Hall ..... Secretary to the Dean of Adult Continuing Education
Ruth Hankins ..... Secretary to the Dean of Student Affairs
Linda Hawley ..... Secretary to the Association Dean of Instruction: General Education
Audrey Huttner ..... Purchasing Accounting Clerk
Linda Jackson ..... Accounting Clerk
Gloria Johnson ..... Accounting Clerk
Linda Jones ..... Accounting Clerk
Mary Jones ..... Secretary to the Director of General Adult Education
Sandy Klinger ..... Accounting Clerk
Phyllis Lane ..... Relief Switchboard Operator/Mail Clerk
Wanda Long ..... Secretary to the Associate Dean of Student Affairs
Mary Ann McBennett ..... Evening Secretary, Student Affairs
Martha MacDonald ..... Faculty Secretary
Lonice McKoy ..... Faculty Secretary
Kathy McLaurin ..... Switchboard Operator
Judy McLeod ..... Secretary to the Personnel Director
Deborah McWilliams ..... Secretary to the Assistant to the President
Janet Melvin ..... Student Financial Aid Accounting Clerk
Dorothy Miller ..... Secretary to the Director of Instruction—Night School
Linda Miller ..... Switchboard Operator/Student Affairs
Mary Mitchell ..... Clerk—Veteran Services Office
Jane Pheffer ..... Faculty Secretary
Aleta Pigliacampo ..... Secretary to the Associate Dean of Instruction: Occupational Education
Debbie Ratley ..... Secretary to the Registrar
Jill Russell ..... Secretary to the Director of Instruction—Off-Campus
Linda Scott ..... Secretary/Bookstore
Betty Shackelford ..... Secretary to the Dean of Instruction
Carolyn Shaw ..... Bookkeeper
Annette Smith ..... Assistant Bookkeeper
Armida Spell ..... Faculty Secretary

Judy Taylor ..... Faculty Secretary
Frankie Waters ..... Faculty Secretary
Andrea Wallace ..... Secretary to the Director of Admissions
Judy Wilkins ..... Secretary/Library
Brenda Williams ..... File Clerk/Student Affairs

Auxiliary Services

Tommy H. Byrd ..... Supervisor, Duplicating & Printing Department
Donald R. Hutchinson ..... Printer/Duplicator
Thomas C. Mearns ..... Printer/Duplicator
Jimmy H. Taylor ..... Equipment Coordinator
Tommy Owen ..... Warehouseman
Floyd Bryant ..... Mail Clerk
Luther Brewer ..... Supervisor, Security
Don Estes ..... Manager, Food Service Department
Dan Rogers ..... Manager, Bookstore
Al Ford ..... Supervisor, Custodial
Orville O. Gravley ..... Supervisor, Maintenance
Richard I. Payne ..... Maintenance Technician



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 throughout the State offering 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 of "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 the authority to award the Associate Degree in Applied Science.

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 our 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 school building immediately adjacent to the present campus. This land, deeded to FTI by the Fayetteville City School System, and the building (formerly housed a Junior High School in that system) became available for occupancy in the 1977-78 school year when the city schools completed construction of a new Middle School complex.

PURPOSE

The purpose of Fayetteville Technical Institute is to provide specialized occupational education to fill the manpower needs in our society and to provide for the fullest possible development of the potential of each student so that he or she may attain effective citizenship in his or her society.

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

NONDISCRIMINATION STATEMENT

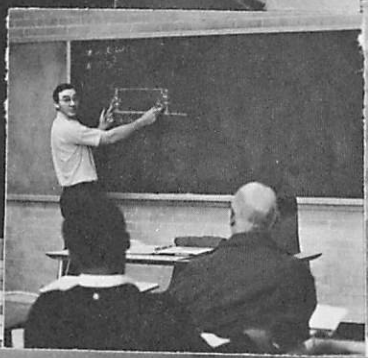
Fayetteville Technical Institute is dedicated to equality of opportunity within its community. Accordingly, Fayetteville Technical Institute does not practice or condone discrimination, in any form, against students, employees, or applicants on the grounds of race, color, national origin, religion, sex, age, or handicap. Fayetteville Technical Institute commits itself to positive action to secure equal opportunity regardless of those characteristics.

Fayetteville Technical Institute supports 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, Title IX of the Education Amendments of 1972, Sections 799A and 845 of the Public Health Service Act, the Equal Pay and Age Discrimination Acts, the Rehabilitation Act of 1973, and Executive Order 11246.

For information concerning these provisions, contact:

John E. McDaniels
Affirmative Action Officer/Personnel Officer
P. O. Box 5236
Fayetteville Technical Institute
Fayetteville, North Carolina 28303


NO SMOKING



CURRICULUM GROUPINGS

To accomplish the Institute's purpose, the major areas of specialized occupational education are presented within instructional Divisions which group related courses according to discipline, instructional orientation, and focus. The six instructional divisions are: (1) Business Occupation Education, (2) Engineering Technology Education, (3) General Education, (4) Health Occupational Education, (5) Public Service Occupational Education, and (6) Vocational Occupational Education.

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

The curricula and instructional concentration in this Division are in the following instructional departments:

Accounting
Agricultural Business
Agricultural Science and Mechanization
Agricultural Science Technology
Banking and Finance
Business Administration
Electronic Data Processing
General Office Technology
Horticulture Business Technology
Industrial Management
Marketing and Retailing
Real Estate
Secretarial Science

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.

The curricula and instructional concentration in this Division are in the following instructional departments:

Civil Engineering Technology
Electronics Engineering Technology
Environmental Engineering Technology

C. **General Education**—Instruction which is general to two or more Divisions such as English, mathematics, physical






science, and the social sciences and the humanities.

The Associate Degree in General Education is essentially a two-year residental program in which a student may complete all work toward an Associate Degree. Courses include those which are usually the entire requirements of the freshman and sophomore program in four-year colleges of arts and sciences (exclusive of foreign languages required by some colleges). Courses offered are the same high quality as those offered in four-year colleges.

Developmental Studies Program—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 a high likelihood of success in one of the several curricular areas that he/she might select for continuing study.

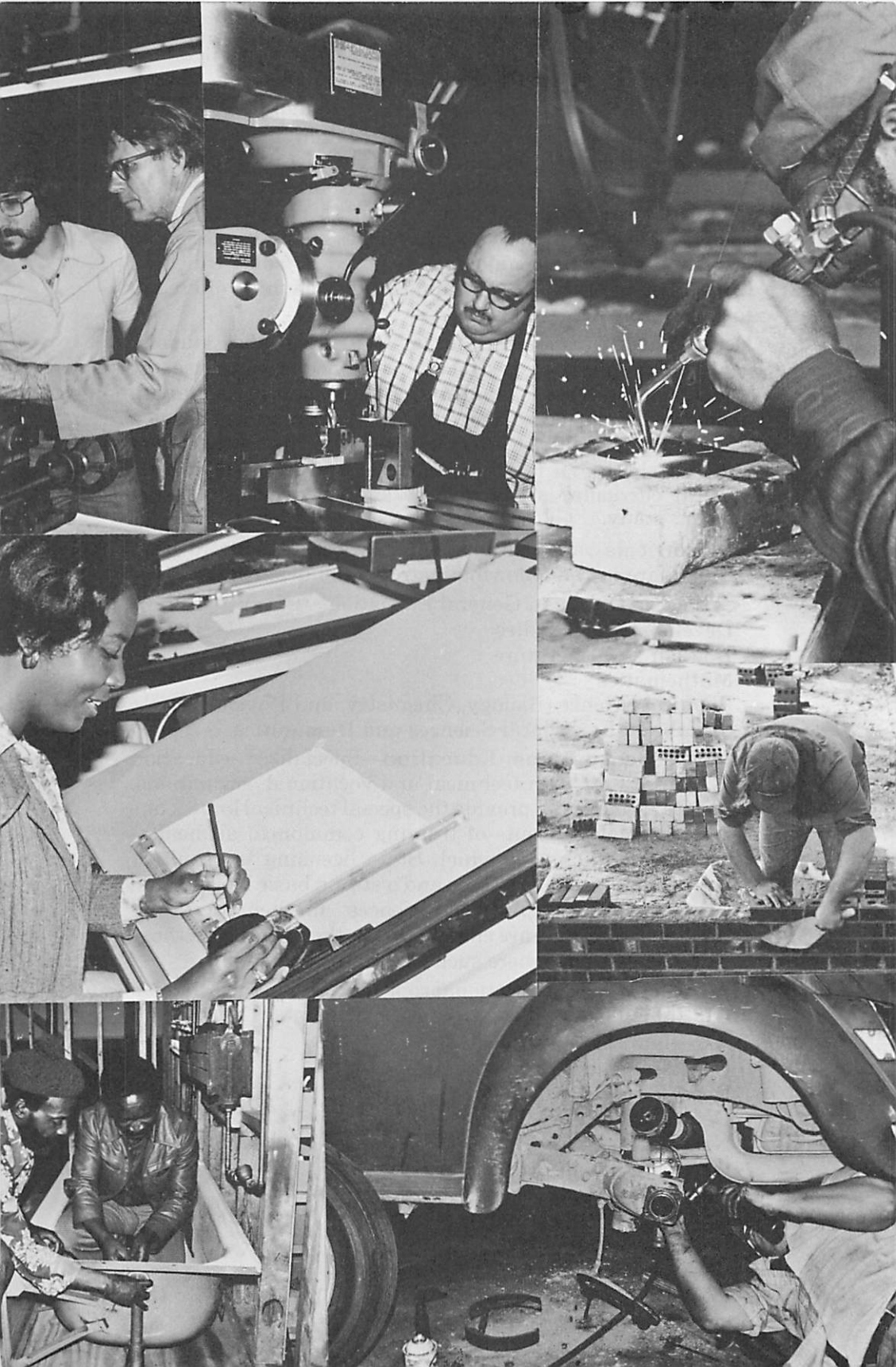
The curricula and instructional concentrations in this Division are in the following instructional departments:

Associate Degree in General Education
Developmental Studies
English and Literature
Mathematics
Physical Science (Biology, Chemistry, and Physics)
Social and Behavioral Sciences and Humanities.

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.

The curricula and instructional concentration in this Division are in the following instructional departments:

Associate Degree in Nursing
Dental Assistant
Dental Hygienist
Dental Laboratory Technology
Nurses' Assistant
Operating Room Technician
Physical Therapy Assistant
Practical Nurse Education
Radiologic Technologist



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 prerequisite to success in public service occupations.

The curricula and instructional concentration in this Division are in the following instructional departments:

Cosmetology
Food Preparation Specialist
Food Service Management
Funeral Service Education
Law Enforcement-Criminal Justice
Paralegal Technology
Recreational Technology

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 sciences, and communicative skills.

The curricular and instructional concentration in this Division are in the following instructional departments:

Air-Conditioning and Refrigeration—Mechanics
Architectural Drafting and Design
Automotive Mechanics
Carpentry
Commercial Art
Drafting—Mechanical
Electrical Installation and Maintenance
Machine Shop Trade
Masonry
Plumbing
Recreation Vehicle and Equipment Repair
Tool and Die Making
Water and Wastewater Plant Operator's Program
Welding

ACCREDITATION

Department of Community Colleges

Fayetteville Technical Institute is chartered by the North Carolina State Department of Community Colleges under the State Board of Education, as specified in Chapter 115 A of the General Statutes of North Carolina.

The Department of Community Colleges and the State Board of Education has granted the Institute's Board of Trustees the authority to award the Associate of Applied Science Degree for the completion of the two-year engineering technology curricula and the two-year business curricula, the General Education Associate Degree, and to award the Diploma for all vocational curricula.

North Carolina State Board of Education

Fayetteville Technical Institute is fully accredited by the North Carolina State Board of Education in accordance with accreditation procedures set forth by the Board. Reaffirmed June 10, 1977.

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.

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

Engineers' Council for Professional Development

The following curricula offered by Fayetteville Technical Institute have been accredited by the Engineers' Council for Professional Development:

1. Civil Engineering Technology
2. Electronic Engineering Technology
3. Environmental 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 these

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 high standards of ethics in their educational programs and in published materials and other public announcements. 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.

The American Board of Funeral Service Education

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

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 recognized agency for the Accreditation of programs in nursing is the National League for Nursing. 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.

Council on Dental Education

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 education training for auxiliary personnel who will provide dental health care to people. Fayetteville Technical Institute has been granted full accreditation.

American Physical Therapy Association

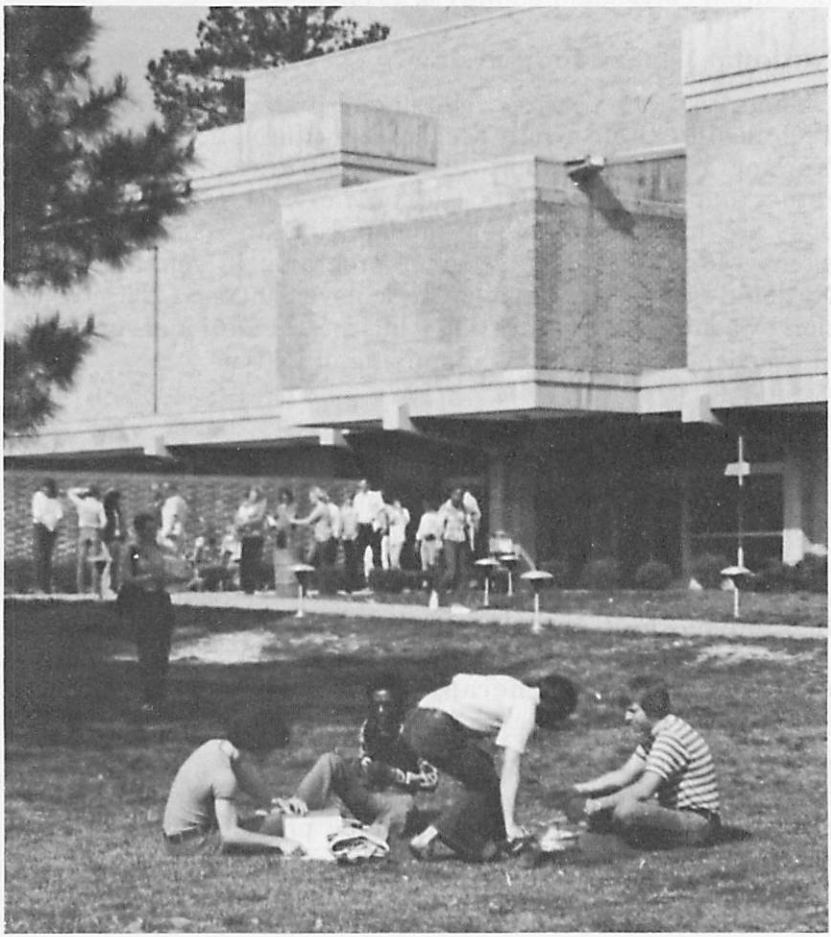
Fayetteville Technical Institute has attained Candidate status with the American Physical Therapy Association, the national organization which accredits quality physical therapy assistant programs. Full accreditation must be preceded by Candidate status.

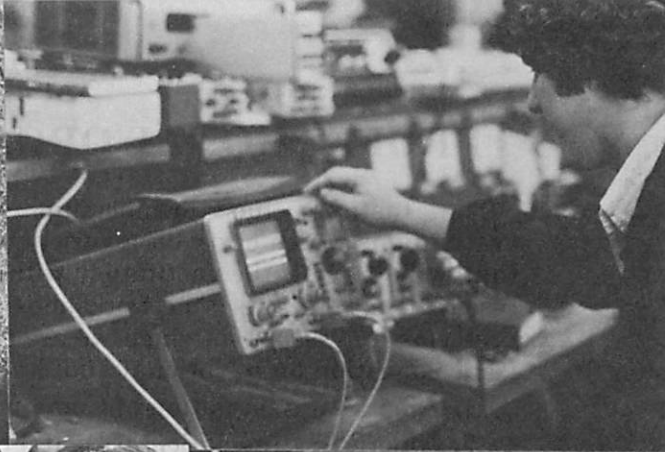
Joint Review Committee on Education in Radiologic Technology

Fayetteville Technical Institute's Radiologic Technology program is recommended for Preliminary Accreditation to the Council on Medical Education of the American Medical Association by the Joint Review Committee on Education in Radiologic Technology. This action is preliminary to full accreditation.

American Bar Association

Fayetteville Technical Institute has initiated steps that are preliminary to full accreditation of the Paralegal Technology curriculum by the American Bar Association.





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 Society for Engineering Education
6. American Technical Education Association
7. Association of Business Officers of United States and Canada
8. Association of Community College PIO
9. Association of Community College Trustees
10. Association of Physical Plant Administrators of Universities
11. Joint Review Commission on Education
12. National League for Nursing
13. North Carolina Trustees Association of Community Colleges
14. Southeastern NCR Computer Users Group
15. Southern Association of Colleges and Universities
16. Southern Association of Community and Junior Colleges
17. University Mortuary Science Education Association

GENERAL INFORMATION

ADMISSIONS REQUIREMENTS

Statement of Policy

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 reasonable 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 aptitude and achievement test battery, a personal interview and an evaluation of the applicant's prior school record. When the admission counseling process indicates that an applicant lacks sufficient academic background to pursue credit courses, he 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 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.

Residency Status

Each applicant must complete a residency form as required by State law. This form is used to determine in-state or out-of-state tuition charges.

Your current residential classification, for purposes of applicable tuition rates, is required to be changed if, since original establishment of your current classification, your state of legal residency has changed.

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, were 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 semester, quarter, or term 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.

Copies of the applicable North Carolina law and institutional regulations which govern such classification determinations are available in the Student Affairs Office for inspection upon request. You are responsible for being familiar with the contents of these two sources of regulation.

Entrance Requirements:

1. Applicants must have completed high school or must have attained the North Carolina Equivalency GED scores.
2. Applicants for Engineering Technology curricula, Radiologic Technology and General Education must have a minimum of two units of algebra in their backgrounds, one unit of chemistry is required for Environmental Engineering Technology and Radiologic Technology applicants.
3. Applicants for Associate Degree Nursing, Dental Hygiene, and Physical Therapy Technology must have a minimum of one unit of algebra, one unit of biology, and one unit of chemistry in their academic backgrounds.
4. Applicants for Funeral Service Education must have a minimum of one unit of algebra and one unit of biology in their academic backgrounds.
5. Applicants for Electronic Data Processing and Accounting must have a minimum of one unit of algebra in their academic backgrounds.
6. 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.

See Faculty Handbook Pages VI-14a & VI-15

7. For exploration purposes a student may take a maximum of 11 quarter hours credit before meeting all general entrance requirements except as listed in number 8, below. Progress in such courses will be used as an evaluative factor in further educational planning.
8. Applicants applying for VA benefits must meet all entry requirements before they can be certified by this institution to the Veterans Administration Regional Office.
9. Applicants must complete: (a) an official application form, (b) a residency status form, (c) a health form, (d) take the entrance test battery, (e) provide admissions office with high school transcript and/or post-secondary transcripts, and (f) attend a personal interview.

Steps in Admission Procedures:

Application

All applicants must submit a completed formal application. Applications may be secured by writing the Director of Admissions at the institution's address.

Transcripts

Each applicant must request that his or her high school forward to the Director of Admissions a transcript of all courses taken. The applicant should request that available standardized test scores be included on the transcript. Transfer students must request official transcripts of all work attempted from each post-secondary institution previously attended in addition to their high school records. The high school transcript requirement may be waived if other official post-secondary transcripts indicate high school graduation. Proof of prerequisite high school courses is incumbent upon the applicant.

Entrance Test Battery

The institution's Entrance Test Battery requirement are administered as follows:

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 certain academic and physical 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 interviews. These applicants will be accepted without being required to take the current entrance test battery.

b. 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 certain academic and physical 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 interviews. These applicants will be accepted without having to take the current entrance test battery.
c. 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.
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.
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.
i. See faculty handbook page II-15.

Admissions Interview

Each applicant will be scheduled for an individual interview to discuss his/her educational plans with trained personnel. High school records and the results of the Entrance Test Battery will be used in conjunction with the student's personal aspirations to help him plan a workable educational goal.

Health Status

Each applicant is required to submit a medical record. Medical records will be examined to help an applicant determine possible limitations that may interfere with his or her progress in a chosen field of work.

Admission with Advanced Standing

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 curricula offerings at Fayetteville Technical Institute and be of "C" grade quality or better. No quality points are assigned for transfer grades. The results of CLEP examinations also will be considered for transfer credit.

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 subject for which they are requesting credit.

Fayetteville Technical Institute is a Serviceman's Opportunity College (SOC). Under this concept, credit may be received for service school completion, for college level examination programs (CLEP), and credit earned from courses taken through correspondence from a nationally accredited college or university. Courses completed through CLEP examinations must have a minimum score at the 25th percentile, and all courses accepted through service schools, correspondence, or non-traditional areas will be equated with the curriculum in which the student is enrolled. The SOC policies listed above are also applicable to bona fide dependents of military members and to veterans who start their programs prior to separation from the service.

EXPENSES AND FEES

Regular Fees (In-State):

All students will be charged a small activity fee each quarter.

Tuition — $33 per quarter .....$ 99 (3 quarters)
$132 (4 quarters)

Under 11 credit hours $2.75 per credit hour

Books (estimated) $65 - $100 per quarter.

Payment of tuition and other fees or costs may be made by cash, personal check (in-state bank only), Bankamericard, or Master Charge. Personal checks will be accepted for the amount of tuition or fees only. *Personal checks drawn on out-of-state banks, second party checks, and checks in excess of actual costs will not, repeat, will not, be accepted for payment of fees.*

Other Fees:

1. Certain curricula require additional costs to cover items which may include uniforms, instruments, tools, malpractice insurance, and dues to student association groups.
2. On campus parking is described in the Parking Regulations Bulletin. Parking stickers are issued on payment of fees at registration. Students are held responsible for all parking regulations as stated in the Parking Regulations Bulletin.

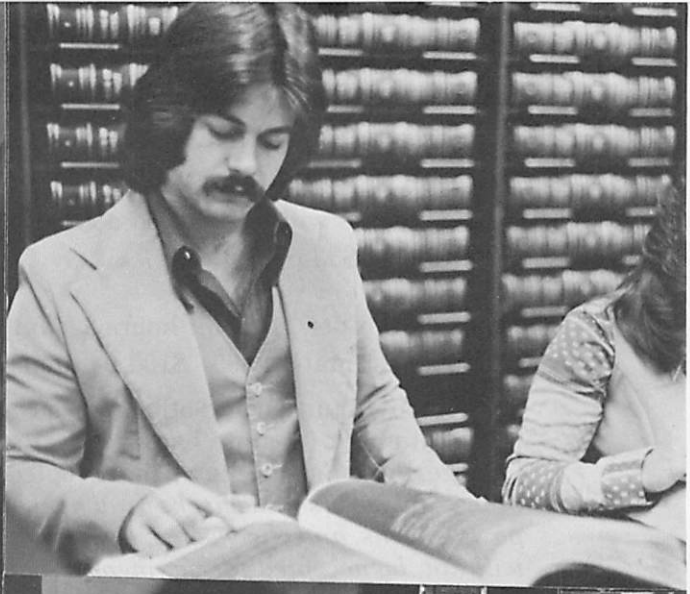
Late Registration Fee

A late registration fee of $5 will be charged those students who register after the dates listed in the school calendar for student registration. The student is responsible for class work from the first day of classes as listed in the school calendar.

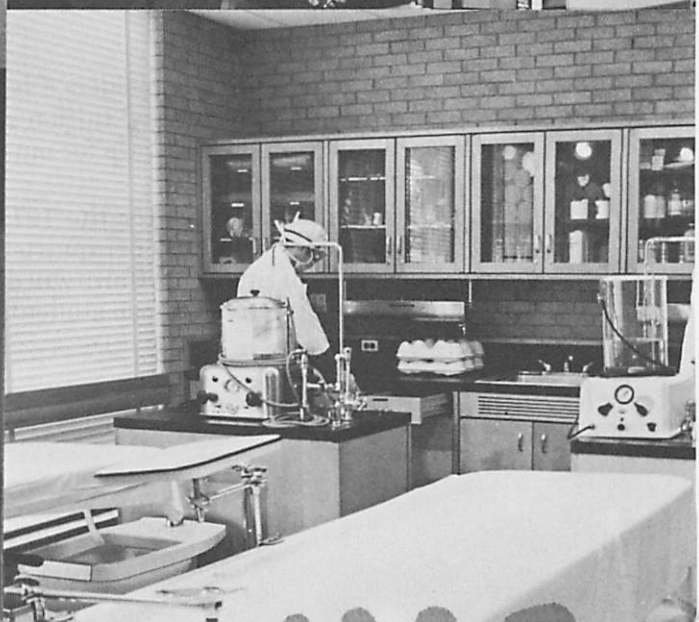
Out-of-State Student Fees

Any student whose legal residence is outside of the State of North Carolina will be charged tuition rates as set forth by the North Carolina State Legislature for out-of-state students and in effect at time of registration.

Out-of-state student rates for the 1977-78 academic year are $162.50 per quarter or $13.50 per quarter hour under 12 quarter hours. The Office of Student Affairs will determine, in accordance with applicable directives, those students required to pay out-of-state tuition fees.




SHERIFF'S DEPT.
CUMBERLAND
COUNTY
N.C.



ACADEMIC STANDING

Credits

A. All curricula 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 Education to award the Associate of Applied Science Degree, Associate Degree in General Education, and the Diploma upon successful completion of curriculum 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 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 his faculty advisor to take credit hours excessive to the normal curriculum load as stated in the curriculum outline. Students falling below a 2.50 quality point average *will not* be permitted to attempt credit hours beyond the stated curriculum 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)

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—No Grade: A student may withdraw from a course anytime within the first five (5) school days of each quarter with no grade penalty.
3. W-P or W-F: A student withdrawing after the mid-term of any quarter will receive an automatic W-F unless he is compelled for unavoidable reasons to withdraw from the institution, in which case, with the instructor's consent, he may withdraw passing (W-P).
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 known areas of competency. A student who elects the "No Credit" plan will receive the "No Credit" notation on his records, which will indicate "O" grade points—no credits earned. 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 from 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.

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 the 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 curriculum 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.

Academic Deficiency

A student whose quality point average for any given quarter's work falls below the minimum as stated in the following progress chart 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 he may be placed on academic suspension. Certain curricula have minimum course grade requirements which will be specified either in the Student Handbook or a Division Bulletin.

Quality Point Average to Determine
Continuance in Program

Two-Year Curricula

All Qtr. hrs. credit attempted	Quality Point Average (QPA) to continue in curriculum	Quality Point Average below which student is on Academic Probation
1-20	No required QPA to begin Fall Quarter	End Fall Quarter 1.25
21-40	To begin Winter Qtr. .25	End Winter Quarter 1.50
41-62	To begin Spring Qtr. 1.00	End Spring Quarter 1.85
Summer	To begin Summer Qtr. 1.50	End Summer Quarter 1.90
63-79	To begin Sophomore year 1.85	End Fall Quarter 1.95
80-99	To begin Winter Qtr. 1.90	End Winter Quarter 2.00
100-over	To begin Spring Qtr. 1.95	End Spring Quarter 2.00
	To Graduate 2.00	

One-Year Curricula

1-15	No required QPA to begin Fall Quarter	End Fall Quarter 1.50
16-38	To begin Winter Qtr. .25	End Winter Quarter 1.70
39-51	To begin Spring Qtr. 1.00	End Spring Quarter 1.95
52-over	To begin Summer Qtr. 1.70	End Summer Quarter 2.00
	To Graduate 2.00	

One quarter, two quarter, and three quarter programs will be assessed on the basis of a similar pattern. Failure in major subject courses may result in academic suspension regardless of QPA.

Developmental Studies

All Quarter hours credit attempted	Quality Point Average to continue in Developmental Program	Quality Point Average below which student is on Academic Probation
1-11	No requirement to begin Quarter	1.25
12-22	.25	1.50
23-24-over	1.00	2.0

Attendance

Due to the nature and purpose of the institution and the necessity for sequential scheduling of course work, attendance is an incumbent factor upon the student.

Officially, class work at Fayetteville Technical Institute is designed for classroom attendance, and it is assumed by the institute that you will be present. However, the responsibility for deciding whether or not to attend classes is entirely up to you. A decision to be absent from regularly scheduled classes does not excuse you from assignments, examinations, and work missed.

Make-up of missed assignments and examinations is totally at the discretion of the instructor. If you know you will be absent, you should consult with your instructor in advance to arrange for completion of work missed.

Veterans are responsible for providing completed attendance sheets to the Veterans Service Office at the end of each month and at the end of each quarter when the quarter ends prior to the last

day of the month. Veterans whose attendance sheets are not received by the 5th day following the ending dates will be terminated for VA certification.

The above policy does not release the veteran from those regulations required by Fayetteville Technical Institute in compliance with the Veterans' Administration regulations. Veterans are responsible, also, for other regulations as published in the current Veterans Handbook.

Course Drop Policy

A student may drop a course at anytime under the following provisions:

1. No penalty will be incurred for dropping a course within the first five days of class of a regular quarter.
2. A student *must* contact the Registrar and advisor and complete a drop form.
3. All students receiving VA benefits must notify the Veteran Services Office when they drop a class or withdraw from the institution.

Withdrawals

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 the Registrar before an official withdrawal can be recorded.

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

A student's record will not be released until his financial obligation to the institution has been satisfied.

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 of Student Affairs to repeat a course they have already passed. 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.

Continued Enrollment

In order to re-register for a continuing quarter, a student must have satisfied all financial obligations with the Business Office.

No student will be permitted to enroll for subsequent quarters when his/her name appears on the financial delinquent list published by the Business Office.

Refunds

Tuition refunds for students shall not be made unless the student is, in the opinion of the institution, 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 giving the reason for withdrawing from the course. No requests for refunds will be approved after the periods indicated above.

Re-admittance

When a student withdraws from the college for unavoidable reasons, he/she may be considered for re-entry at the beginning of the next quarter. A student who is dismissed from the college by administrative action may re-enter only upon approval by the administration. A student dismissed due to disciplinary action in two successive quarters jeopardizes his right to re-enroll in the institution. All students are given the right of due process as provided under current Federal and State laws governing the rights and privileges of students.

Requirements for Graduation

To be eligible for graduation, the student must:

1. Successfully complete the curriculum requirements in effect at the time the student entered the curriculum. Students who enter a curriculum after the Winter Quarter are subject to the curriculum requirements in effect for the following Fall Quarter,
2. Have sufficient quality points to average 2.0 in the the 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), and

4. Must have taken care of ALL financial indebtedness to Fayetteville Technical Institute.

Applications for degrees or diplomas must be made in writing to the Dean of Student Affairs no later than the completion of the fourth quarter for a two-year curriculum, the second quarter of a four-quarter curriculum, and the first quarter of a three-quarter curriculum.

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 45 quarter hours credit.

Sophomore: A student who has 45 or more quarter hours credit and has satisfied freshman requirements.

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

Student Handbook

Other student regulatory policies are stated in the Student Handbook, and *all* students are responsible for observing those regulations.

HONORS AND AWARDS

Graduation With Honors

Any student who has earned a quality point average of at least 3.5 and has completed at least half of his diploma or degree requirements in residence at Fayetteville Technical Institute will be granted a diploma or degree with honors.

Scholastic Awards

A scholastic award will be presented to three students who have obtained the highest grade average in all curricula work taken at Fayetteville Techical Institute. To be eligible to receive this award, a student must have taken a minimum of two quarters of work in a four quarter curriculum, and a minimum of four quarters of work in a two year curriculum in residence at Fayetteville Technical Institute. The awards presented are as follows: (1) One-Year Diploma Curricula, (2) Two-Year Diploma Curricula, and (3) Two-Year Associate of Applied Science Degree Curricula.

Outstanding Student Award

The criteria used by the faculty in the selection of the Outstanding Student Award includes the degree which the student:

1. Has demonstrated definite leadership ability,
3. Respects the responsibilities of the faculty, administrators, and fellow students,
3. Exhibits an attitude of thoroughness in the completion of assigned tasks,
4. Manifests good sportsmanship and a respect for public property,
5. Exhibits a high degree of integrity and general loyalty to the college, and
6. Exhibits leadership roles in the application and consideration for general rules and regulations of the college.

Citizenship Award

The criteria used by the faculty in the selection of the Citizenship Award includes the degree which the student:

1. Demonstrates respect for the position of faculty, administrators, and fellow students.

2. Demonstrates a willingness to follow the leadership of others and actively exhibits good sportsmanship in his participation in school activities,
3. Shows a willingness to work within the general rules and regulations of the college to the general public as a loyal citizen, and
4. Assumes additional responsibilities and completes the tasks assigned in a thorough and orderly manner.

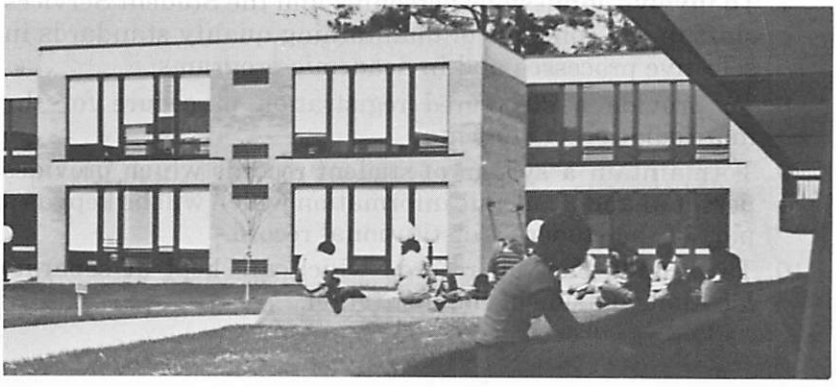
Trox Poland Memorial Award

The criteria set forth for this award are:

1. Student must have minimum overall quality point average of 3.00,
2. Student must have been in continuous enrollment on a full-time basis at FTI during year of nomination,
3. Student will be selected during the Spring Quarter of his/her year of graduation at FTI,
4. Student will be judged on "attributes" and "contributions" while attending FTI, and
5. Student should demonstrate a genuine concern for FTI and its role in the community. In addition, he/she should exhibit and promote good student morale.

Who's Who

Each year the faculty nominates 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.



STUDENT AFFAIRS

The office of Student Affairs is held responsible for the following functions: recruitment, testing, admissions, registration, student records, orientation, guidance, counseling services, veterans affairs, financial aid, student housing, health services, student activities, graduate job placement, and alumni and follow-up studies. The purpose of Student Affairs is to provide the professional services needed to effectively administer the functions listed above and to assist the students in their adjustment to the learning experience as presented in the instructional programs offered at Fayetteville Technical Institute. The counseling services provide the necessary supportive role to the student to assist in the highest possible achievement of a realistic self-concept. Student Services are available to all students from pre-admission through graduation, including transfer or placement.

In order to fulfill the purpose of Student Affairs 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 Services staff in the concerns of maintaining quality standards in selective processes and in academic programs.
8. To provide a 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 planned group participation as a part of the counseling services.
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 maintain an outreach program specifically designed to reach those veterans not normally included in the regular recruitment program.
17. To provide a Financial Aid Officer who will assist the student in assessing his financial needs and who will provide information on all available financial resources to meet those needs.
18. To maintain a plan for assisting students in locating off-campus housing, locating jobs consistent with their training background, and to provide a method through which their emergency health needs can be met.
19. To have a planned extra-curricular activities program which will provide the students with a variety of out-of-class experiences.
20. 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

These services are provided by trained personnel who are available daily during school hours. Every student is assigned a faculty advisor and a counselor. The faculty advisor serves to assist the student with specific course planning and registration. Under the topic Academic Standing, you will find more details concerning the part your faculty advisor will serve in helping you with your academic program. Counselors serve as contact persons and students are encouraged to get acquainted with their counselor *before* problems arise.

Students may come to a counselor's office at any time to discuss personal problems which may arise affecting their progress in school. Students should feel free to use this service if needed. Appointments are set up at intervals throughout the year to discuss each individual student's educational course of study and progress.

Students may see the Dean of Student Affairs or the Associate Dean of Student Affairs at any time, or make appointments on a scheduled basis through their counselor.

Special Testing

Interest, aptitude, achievement, ability and human relation tests are available for the students desiring personal and occupational counseling. For more information, students are encouraged to contact their counselor.

Financial Aid

A student needing financial assistance must submit an application to the Financial Aid Coordinator after approval for enrollment. Based on the student's needs and resources available, the Financial Aid Coordinator will help meet those needs through the various loans and scholarship programs. A "package deal" composed of several types of available monies may be awarded in an attempt to meet the student's needs. Those financial assistance sources available are as follows:

1. Basic Educational Opportunity Grant,
2. Supplemental Educational Opportunity Grant,
3. National Direct Study Loan,
4. College Work-Study,
5. Federal funds for a Nurses Loan and Nurses Scholarship program specifically for Associate Degree Nursing students,
6. College Foundation (a federally insured student loan program available to all in-state students),
7. 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 Coordinator,
8. Emergency Loan Fund (short-term loans not to exceed $100 and repayable in 30/60/90 days),
9. American Board of Funeral Service Education Scholarship, and

10. Fayetteville Technical Institute also has a short term book loan which helps during registration.

Requests for all financial aid should be made during the admission interview or as soon as possible after being approved to attend school. Applications should be no later than June 1. Those received after that date may not receive consideration for first quarter aid; however, applications will continue to be accepted and awards will be met as funds become available. Any student who needs financial aid should contact the Financial Aid Coordinator.

Health Services

Since Fayetteville Technical Institute is a commuter college, health services are handled through an arrangement with the local hospital. Students are referred to the Emergency Room when emergency treatment is needed. Each shop and lab is equipped with first-aid kits. The college does not have a paid medical staff on campus; however, it is in close proximity to a number of medical facilities. Each student is required to submit a medical form which is reviewed by the Admissions Staff.

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.

Faculty Guidance Function

The faculty advisor function is an integral part of the total educational process of the institution. Each student is assigned to a faculty advisor according to the student's curriculum. This function provides each student with the opportunity to develop a relationship with a person who has experience and expertise in the field in which the student is training. Having a faculty advisor to whom the student is specifically assigned gives the student a definite source of help. No one is better qualified to furnish specific curriculum information to the student than the major subject area instructor. In addition, the advisor will be able to determine that a student should see his counselor before a serious problem arises.

Job Placement

The Placement Office offers assistance to all students who successfully complete a program of study at FTI. The services rendered are available to students continually. The Placement Office is instrumental in arranging and coordinating job interviews between students and employer representatives. The office maintains an active file of prospective employers which contains data regarding employment opportunities, salaries, fringe benefits, etc. Employers from all parts of North Carolina and other states visit Fayetteville Technical Institute to interview prospective graduates. A student folder is kept of each graduate from the institution. The folder contains a student resume and other pertinent information which will aid the graduate in employment goals. This information can only be released by order of the student. Graduates are urged to take advantage of the Placement Office in order to explore every facet of the working world. Records are maintained of graduate employment. These records are utilized for follow-up with reference to geographical location, length of employment, type of employment, and salary scale.

A list of part-time jobs available for students currently enrolled is posted on the Student Bulletin Board.

Student Records

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:
   a. Completed application,
   b. Completed medical form,
   c. Veterans records,
   d. Statement of residency,
   e. Transcript/s, and
   f. Any statement of waiver by the student concerning release of records.
   g. A list of those persons to whom the records were made accessible.
2. Recent enactment of Amendment to Public Law 93-380, Section 438, "Protection of Rights and Privacy of Parents and Students," sets forth certain obligations for the maintenance and release of certain student information. In keeping with the

provisions of this Act, those documents described in a, above, become a part of the institutional records, except that only directory information (name, address, and telephone number) become public information.

3. Fayetteville Technical Institute will use the above information for the sole purpose of assisting the student in the attainment of educational goals at this institution. The information gathered as listed above may be shared with appropriate professional of the institution for the accomplishment of this goal.
4. Each student has the right to request and be permitted, within the limitations of Public Law 93-280, to review the above listed records to establish the accuracy of those records.
5. The above information designated as public directory information may also be shown to other personnel unless the student has signed a waiver of such rights. A student may sign a waiver, in which case records can be released only on written request over the student's signature.
6. When records are requested by persons other than the student, the institution will notify the student of such a request and identify those persons who are making such a request. If a waiver of release has been signed by the student, the institution will not release records except upon written request of the student.
7. The students' records will contain a list of those persons, firms, or other institutions to which a copy of the institutional records has been sent.

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: Dean of Student Affairs, Vice President for Academic Affairs, President, and Board of Trustees. This due process is administered without regard to race, creed, national origin or sex.

Student Activities

The Student Government Association, student publications, intramural activities and student disciplinary codes are stated in the current issue of the Student Handbook.

GENERAL STUDENT REGULATIONS

The total educational program of the college is designed to assist the student to reach his highest level of potential in his 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 accomplish inter-social training, certain rules and regulations must be followed to allow for an orderly transition into the program of the college. These rules and regulations may generally be summarized by the following statements:

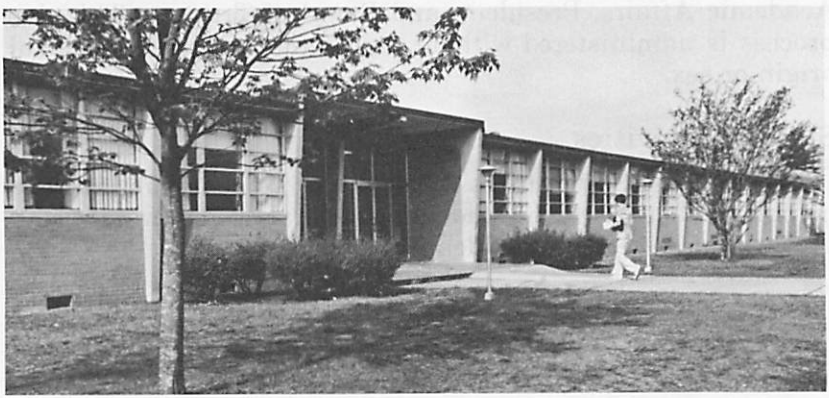
Students are expected to exhibit the qualities of courtesy and integrity that characterize the behavior of ladies and gentlemen. The college does not permit the use or the possession of alcoholic beverages or drugs on the campus or at social functions sponsored by the college.

Fayetteville Technical Institute students dress informally; however, in all cases, neatness of dress is encouraged and neatness in personal appearance is a strong characteristic of FTI students.

The few rules and regulations necessary for the smooth operation of the college are listed in the student handbook, and each student is held responsible for information in the Student Handbook, which is revised periodically.

Dismissal

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



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 lab, and the audio-visual center.

The library provides excellent facilities for study, research, browsing, self-improvement and enjoyment. The library houses over 26,000 volumes of books and subscribes to over 240 current magazines and newspapers. Back issues of periodicals are available in bound volumes, unbound issues and on microfilm. Audio-visual software, such as filmstrips, disc recordings, cassettes, 16 mm films, and slides are available to provide a wide range of information in various forms to students, faculty, and the community. Space and equipment are provided in the library for viewing and listening. Teaching of individualized or group library skills is a function of the library staff.

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

Through the use of programmed materials and teaching machines, the learning lab enables a person to further his 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.

The audio-visual center provides a qualified staff and excellent facilities to support the instructional programs with materials production and equipment. Equipment that circulates is controlled through the audio-visual center.

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, and the faculty and the staff of Fayetteville Technical Institute and the community.

DEPARTMENT OF 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 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 FTI.

Purposes

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

1. To administer and supervise a broad range of Adult Continuing Education courses,
2. 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,
3. To maintain constant contact with local industry to determine the occupational educational needs of the county, and
4. 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 $5 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 FTI Book Store, which will

be opened in the evening for the convenience of students enrolled in Adult Continuing Education classes.

Certificates

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

EDUCATIONAL PROGRAMS

Adult Basic Education

Adult Basic Education (ABE) is a program designed for students who require instruction in grades 0 - 8. Classes meet two nights weekly in the Adult Education centers where there is a sufficient number of interested adults. Based on the availability of federal funds, registration fees for ABE will not be charged and materials will be provided. In the event federal funds are not available, the standard $5 registration fee is required.

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 placed in 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.

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.

Through the above course offerings in Occupational Extension, Fayetteville Technical Institute functions in a post high school capacity, serving the adults who are unable to participate in full-time day programs.

ENRICHMENT EDUCATION

In order to meet the needs of adults in avocational areas, Fayetteville Technical Institute sponsors many courses of a self-enrichment nature. These courses include art and crafts, home economics, and other areas of special interest.

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.

Comprehensive Employment Training

The Comprehensive Employment Training Act (CETA) is a current, federally funded program established to alleviate conditions of substantial and persistent unemployment and under-employment in economically distressed areas of the State. The CETA Division of Adult Continuing Education sponsors such a program in the Cumberland County area.

Program needs are identified by the local manpower community in compliance with the criteria outlined in the Comprehensive Employment Training Act and referred to the Director of the CETA Program at Fayetteville Technical Institute.

Fayetteville Technical Institute is responsible for budget preparation, administration, supervision, and instruction of CETA classes.

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 man-power 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 various positions in business and industry such as: accounting positions, accounting clerk, payroll clerk, auditor, and cost 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 Coursess	
BUS 102 or 103, 110, 115, 116, 123, 124, 229, 234, 247, 282	37
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	**123**

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 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

As agricultural business and industry firms expand in size and number, they are experiencing rapid changes in technologies of production, sales, and management in an increasingly competitive environment. Future employees of such firms must be prepared to understand these changes and adapt themselves accordingly. Successful completion of this curriculum should enable a person to assume responsibilities in an agricultural firm and should enable him to advance within such a business.

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

The trend towards larger farming operations with increased non-farm control of production means that there will be greater employment opportunities for well-trained individuals who can efficiently and profitably supervise the production and marketing of agricultural products.

AGRICULTURE BUSINESS TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 104, 125, 170, 185, 201, 204, 205, 218, 228, 258, 299	57
Required Business Courses	
BUS 110, 115, 120, 121, 123, 185, 229, 272, 285	38
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 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 men 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 operations.

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

Job Description

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

AGRICULTURAL SCIENCE AND MECHANIZATION CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 101A, 101B, 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 Courses for Associate of Applied Science Degree	
ENG 101, 102, 103, 204	12
PSY 206 or Social Science Elective	3
SOC 101	3
	18
	96
Total Required Hours For Associate Degree	114

AGRICULTURAL SCIENCE TECHNOLOGY

Purpose of Curriculum

There is a growing scarcity of young men 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.

Job Description

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

AGRICULTURE SCIENCE TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 101A, 101B, 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 AND REFRIGERATION MECHANICS

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 men who plan for a vocation in this broad sphere of activity.

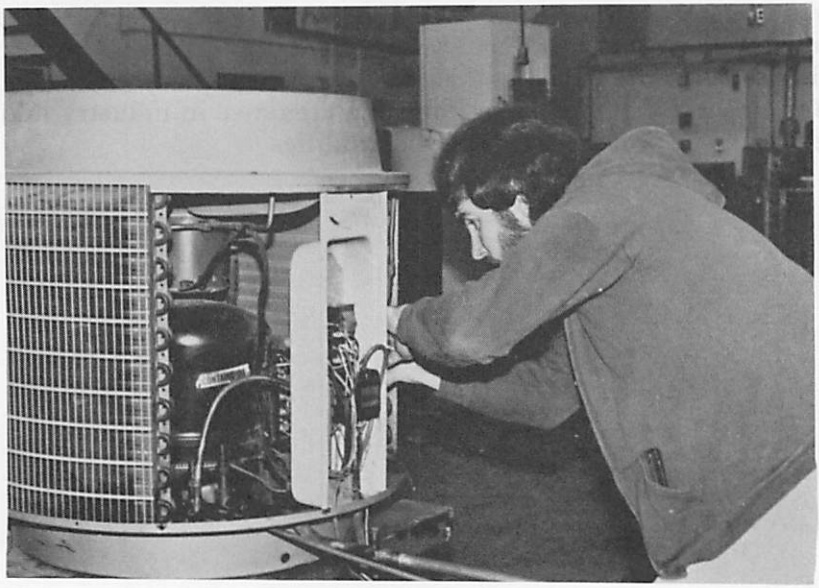
A comprehensive study of theory and fundamentals of refrigeration, heating and air conditioning is completed and the student is enabled to understand rather than merely accept the functions of the mechanical equipment involved. Great emphasis is placed on manipulative skills, installation and service procedures, exercise and training in practical thinking. The related subject phase of the program provides for a better rounded individual through work in the areas of math, English, and social studies.

Job Description

An abundance of job opportunities exist in the many mechanical contracting organizations in business today. Graduates may pursue one of the many lines of work that make up this great industry. They may remain entirely in the refrigeration branch following the trade of installation or service mechanic or both. Some of the larger contractors engage in all phases and provide a vast assortment of jobs including pipe work, metal work, insulation work, control and service work. Background afforded the students often enables them to elevate themselves to foremen and supervisory positions. Plant maintenance in industry and government provide attractive possibilities.

AIR CONDITIONING AND REFRIGERATION MECHANICS CURRICULUM

	Quarter Hours Credit
Required Air Conditioning Courses	
AHR 1121, 1122, 1125, 1129, 1130, 1132, 1133, 1135, 1136, 1141, 1142, 1145, 1146, 1148	69
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1116, 1180	6
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
Required Elective	
Any Approved Elective	3
Total Required Hours	**115**



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.

Although instruction is given in many other areas of architecture, the curriculum is basically oriented towards drafting. Also, since one involved in architecture associates with many levels of personnel and must communicate effectively with them, instruction will be given in the areas of mathematical communications, social studies, language communications, and the physical sciences. This will provide for the student skills, architectural knowledge, confidence in his relations with other persons, and the ability to advance rapidly and proficiently upon entering the field.

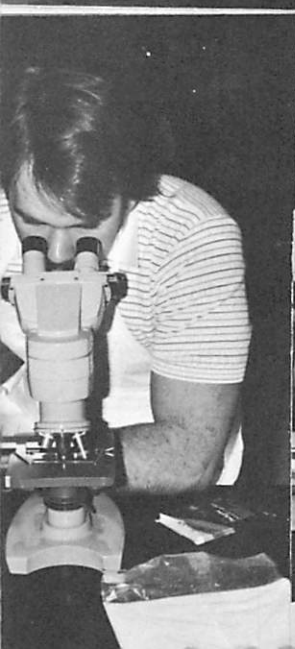
Job Description

If you are interested in a field of endeavor that is creative in nature and has unlimited opportunities, an architectural drafting and design career could well be the course to pursue.

This curriculum 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 AND DESIGN CURRICULUM

	Quarter Hours Credit
Required Architectural Courses	
ARC 1112, 1145, 1226, 1227, 1228, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1238, 1239, 1241, 1242, 1243, 1244, 1245, 1246, 1250, 1251, 1264, 1265	84
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	**118**



ASSOCIATE DEGREE IN GENERAL EDUCATION

Purpose of Curriculum

Typically, post-secondary education in North Carolina has been of two types: mainly academic or primarily job-related. While efforts at developing programs embracing both academic and job-related instruction have been largely successful, the opportunities to receive this instruction have been restricted to full-time day students for the most part. Thus, persons who, due to economic necessity or myriad other reasons, decided to forego the academic pursuits during the workday have been denied the opportunity to further their general educational goals in a structured, degree-earning sense.

The aspirational and intellectual growth of persons who did not pursue post-secondary education has continued without a means by which this growth may be brought under systematic development. Thus, the persons who now make up middle management, wives whose families are semi-independent, as well as the more traditional college students (who crave to understand and fully appreciate the intellectual, political, and rational world in which we, today, find ourselves) are provided a means by which they can gain orderly, progressive, awarenesses of the enriching factors which have contributed to our present and which will, in part, determine our future as individuals and as a people.

This program may be terminal (with a degree) or contributory to further individual development, designed specifically along general education lines, with parallel classes offered in the day and in the evening.

Job Description

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, many of the required and elective courses in the program are the equivalent of regular freshman and sophomore work which 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 104 quarter hours credit, he/she will be granted a General Education Associate Degree (GEAD).

ASSOCIATE DEGREE IN GENERAL EDUCATION CURRICULUM

	Quarter Hours Credit
Required English Courses	
ENG 104, 105, 106, 107, 108, 209	18
Required Math Courses	
One "academic" mathematics (algebra, trigonometry, calculus, etc.)	
One mathematics from the quantitative subjects (Business Math, Computer Science, Statistics, etc.)	10
Required Physical Science Courses	
BIO 201, 202	10
Required Social and Behavioral Science Courses	
ART 104	3
HIS 104, 105, 106	9
MUS 104	3
PHI 101, 102	6
Two electives from the following areas: education, history, political science, psychology, sociology	6
Other Required Electives	
Non-duplicating courses from Education, General Education, Business, Health, or Technology Curricula	~~39~~ 31
Total Required Hours	~~104~~ 96

GENERAL EDUCATION ELECTIVES

English			Class Hours	Lab Hours	Clinic/ Shop Hours	Quarter Hours Credit
ENG	103	Report Writing	3	0	0	3
ENG	204	Oral Communications	3	0	0	3
ENG	210	American Literature I	3	0	0	3
ENG	211	American Literature II	3	0	0	3
ENG	212	Creative Writing	3	0	0	3
ENG	214	Mythology	3	0	0	3
ENG	216	Modern Drama	3	0	0	3
ENG	217	Childrens Literature	3	0	0	3
Mathematics						
MAT	111	College Trigonometry	5	0	0	5
MAT	201	Calculus I	5	0	0	5
MAT	202	Calculus II	5	0	0	5
MAT	203	Calculus III	5	0	0	5
MAT	204	Calculus IV	5	0	0	5

Physical Science

BIO	106	Human Anatomy & Physiology I	4	3	0	5
BIO	107	Human Anatomy & Physiology II	4	3	0	5
BIO	108	Microbiology	5	3	0	6
BIO	113	General Pathology	3	0	0	3
CHM	101	General Chemistry	3	2	0	4
CHM	102	General Chemistry	3	2	0	4
CHM	103	General and Introductory Analytical Chemistry	3	2	0	4
PHY	101	Properties of Matter	3	2	0	4
PHY	102	Work, Energy, Power	3	2	0	4
PHY	104	Light and Sound	3	2	0	4

Social Science

ART	102	Drawings and Composition	1	2	0	2
ART	103	Drawing and Oil Painting	1	2	0	2
ART	105	Ceramics I	1	2	0	2
ART	106	Ceramics II	1	2	0	2
ART	107	Advanced Drawing I	1	5	0	3
ART	108	Advanced Oil Painting	1	5	0	3
ART	109	Advanced Drawing II	3	0	0	3
ART	110	Pottery I	1	2	0	2
ART	111	Pottery II	1	2	0	2
EDU	100	Principles of Learning	3	0	0	3
EDU	102	Introduction to Library Science	0	2	0	1
EDU	103	Foundations of American Education	3	0	0	3
EDU	104	Teacher's Aide Methods	3	0	0	3
EDU	105	Teacher's Aide Role in the Classroom	3	0	0	3
EDU	204	Adult Growth and Parent Education	3	0	0	3
EDU	205	Teacher's Aide of Reading	3	0	0	3
EDU	206	Basic Reading Skills	3	0	0	3
EDU	207	Reading Readiness and Development	3	0	0	3
EDU	208	Creative Writing and Speaking	3	0	0	3
EDU	210	Art in Early Childhood Programs	3	0	0	3
EDU	211	Social Studies and Primary Children	3	0	0	3
EDU	215	The Exceptional Child	3	0	0	3
EDU	216	Working with the Problem Child & Family	3	0	0	3
EDU	222	Teacher's Aide Seminar/ Practicum	1	6	0	3
EDU	223	Teacher's Aide Seminar/ Practicum	1	6	0	3
EDU	224	Teacher's Aide Seminar/ Practicum	1	6	0	3

EDU	225	Teacher's Aide Seminar/ Practicum	3	2	0	4
EDU	226	Teacher's Aide Seminar/ Practicum	3	2	0	4
EDU	227	Teacher's Aide Seminar/ Practicum	3	2	0	4
EDU	234	Methods & Materials in Early Childhood	3	0	0	3
HIS	201	American History I	3	0	0	3
HIS	202	American History II	3	0	0	3
HIS	203	American History III	3	0	0	3
HIS	210	North Carolina History I	3	0	0	3
HIS	211	North Carolina History II	3	0	0	3
MUS	107	Concert Chorus I	0	3	0	1
MUS	108	Concert Chorus II	0	3	0	1
MUS	109	Concert Chorus III	0	3	0	1
PED	101	Personal Hygiene	2	0	0	2
PED	102	Personal and Community Health	5	0	0	5
PED	111	First Aid and Safety	2	0	0	2
PED	116	Physical Education	0	3	0	1
PED	120	Swimming (Beginner)	0	2	0	1
PED	121	Swimming (Intermediate)	0	3	0	1
PED	122	Swimming (Advanced)	0	3	0	1
PED	124	Water Sports	0	2	0	1
PED	137	Golf—Beginning	0	3	0	1
PED	138	Golf—Intermediate	0	3	0	1
PED	139	Golf—Advanced	0	3	0	1
PED	143	Tennis	0	3	0	1
PED	211	First Aid and Safety	3	2	0	4
PED	212	First Aid and Safety	3	2	0	4
POL	102	State and Local Government	3	0	0	3
POL	103	National Government	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
PSY	202	Human Growth and Development	3	0	0	3
PSY	204	Abnormal Psychology	3	0	0	3
PSY	208	Grief Psychology	3	0	0	3
PSY	280	Forensic Psychology	5	0	0	5
SOC	101	Introduction to Sociology	3	0	0	3
SOC	102	Marriage and the Family	3	0	0	3
SOC	210	Contemporary Social Problems	3	0	0	3
SSC	205	American Institutions	3	0	0	3

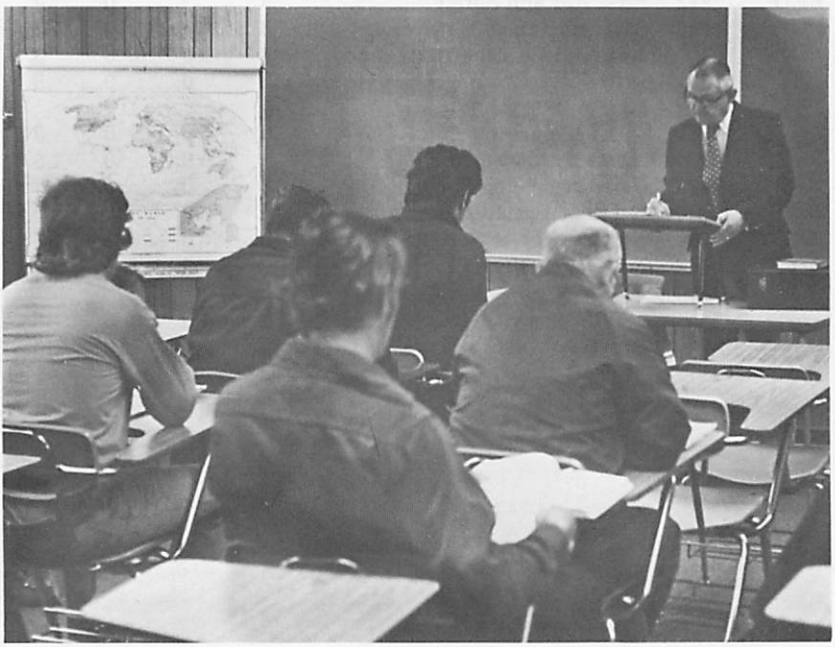
TEACHING ASSISTANT CONCENTRATION

A student may elect a group of courses specifically oriented toward assisting teachers in the classroom and, using those courses as elective in the GEAD curriculum, receive a GEAD upon completion of the program with a Concentration in Teaching Assistant.

The specific courses which must be taken to satisfy the Teaching Assistant Concentration are:

	Quarter Hours Credit
General Education Associate Degree Required Courses (See above) ..	65
Required Education Courses	
EDU 100, 102, 103, 104, and 205, 222, 223, and 224 or 225*, 226*, and 227*.	25-28
Required English Course	
ENG 217	3
Electives	
Select three or four from:	
EDU 204, 206, 207, 208, 210, 211, 215, 216, 234	8-11
Total required credits for the General Education Associate Degree with a Concentration in Teaching Assistant	104

*On-the-job Teacher's Aides may take EDU 225, 226, and 227, in lieu of EDU 222, 223, and 224.



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 the Institute with academic deficiencies. The goal of this program is to develop the academic ability of every entering student to the extent that he has an above average likelihood of success in one of the several regular curricula areas.

Students are initially assigned to courses appropriate to their desires, to their tested abilities, and as deemed proper by their counselors. As each student progresses, he/she is permitted to develop at his/her own speed in classes which are within his/her 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 applicatory understanding 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, physical science, social science, and curricula-related shops and laboratories.

During each quarter, a student takes a course in English, math, and physical science. In addition to these, he may select an elective from the Business, Vocational, Technical, Health, Social Science, or Learning Skills areas.

English—instruction is designed to develop the student's functional ability in the successful use of the language and includes:

a. Vocabulary and Reading—designed to promote interest in reading while enhancing the student's vocabulary, and dictionary and research skills.
b. Grammar and Composition—review of the rules related to meaningful English usage which provides the students with the opportunity to apply those rules, while focusing on the writing of good sentences, paragraphs, and short papers.

c. Speech—the oral use of English as a communicative tool improves the student's enunciation, pronunciation, and language usage. Speech instruction and application is integrated in all English instruction.

Mathematics—instruction is designed to teach knowledge and skills needed in everyday life and in advanced instruction.

a. Level I introduces basic operations of the numbers system, kinds of numbers, addition, subtraction, division and multiplication to develop accuracy and speed through drill and problem solving. Success in Level I Mathematics increases the student's likelihood of success in Vocational and Business Curricula.
b. Level II introduces the student to algebra and geometry, and builds the concepts needed in dealing with equations and geometrical problems necessary to succeed in Technical curricula. Included are the application of mathematics to problem solving by using ratio and proportion, direct measurement, line, angles, perimeters, areas, volumes, indirect measurement, triangles, and polygrams. Emphasis is placed on the application of mathematics and mathematical procedures to the industry of today.

Physical Science—instruction is designed for students who have had little or no laboratory experience at the high school level, and to others who may have had such experience but who lack sufficient opportunity to understand the scientific method and scientific discipline.

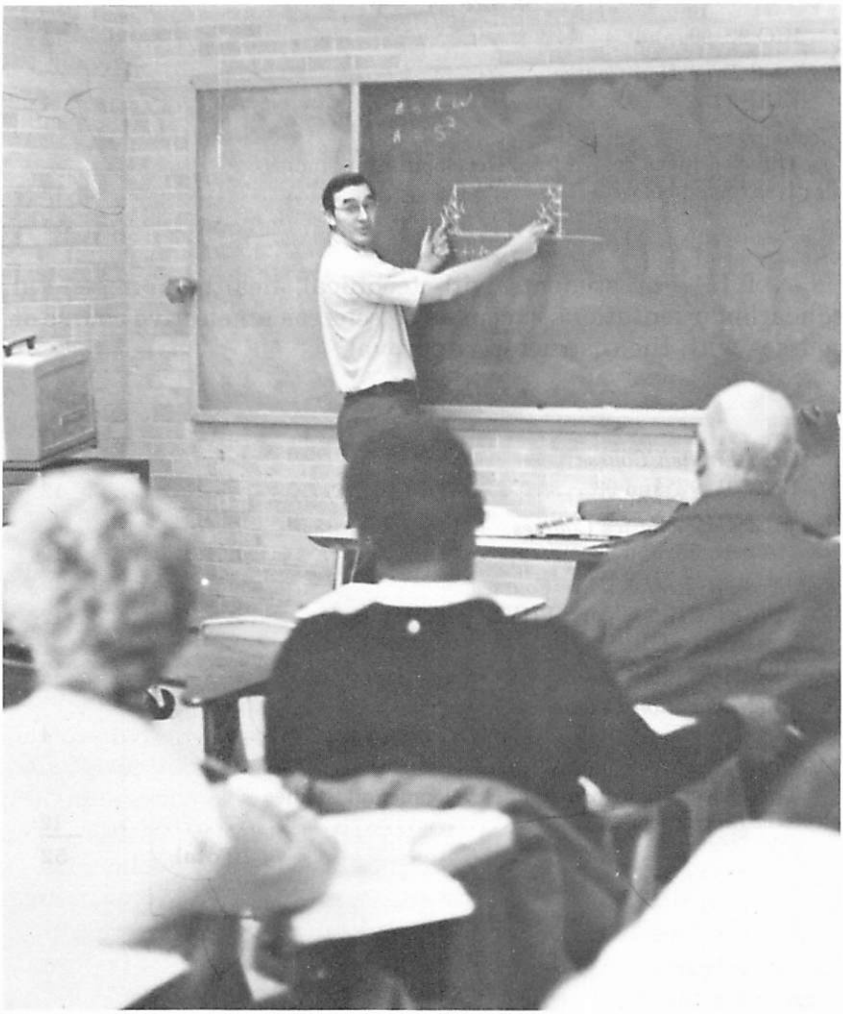
Developmental Physical Science acquaints the student with laboratory equipment and practices, scientific terminology, and the scientific method by using instruction and practical experiments.

a. Level I Physical Science includes basic physical phenomena and scientific practices and is appropriate for students who plan to continue in Vocational and/or Business curricula.
b. Level II Physical Science includes a more advanced approach to the subject.
c. Chemistry includes an introduction to chemical elements and chemical phenomena and is appropriate for students who plan to pursue Technical and Health curricula.
d. Biology includes basic and advanced knowledge of and experimentation with living organisms. Biology is appropriately studied by students who plan to major in any of the Health sciences, such as Nursing.

Levels of biology instruction appropriate to students planning to enter the ADN and LPN curricula are offered.

Social Science Instruction—Man in his social environment is integrated with the instruction primarily designated English and Physical Science. Social Science instruction fosters the understanding that each of us is dependent upon and supportive of the society of which we are a part, and is presented by examples drawn from history, geography, sociology, economics, psychology, and the humanities.

Social Science instruction in the Developmental Studies Program is intended to facilitate the development of individual values and value systems in each student appropriate to his/her own life circumstance, style, and environment.



DEVELOPMENTAL STUDIES PROGRAM CURRICULUM

Level I—For students with vocational and business orientations except as selected as an elective course or courses with the instructor's approval.

	Quarter Hours Credit
Required English Courses	
ENG 91, 92, and 93	12
Required Mathematics Courses	
MAT 91, 92, and 93	12
Required Physical Science Courses	
PHY 91, 92, and 93	
or	
BIO 92, 93, and 94	12
Required Education Course	
EDU 80	4
Electives	
Three electives drawn from Developmental Studies electives (listed below).	12
Total	**52**

Level II—For students with technical, health, and general education orientations except as selected as an elective course or courses with the instructor's approval.

	Quarter Hours Credit
Required English Courses	
ENG 91, 92, and 93	12
Required Mathematics Courses	
MAT 94, 95, and 96	12
Required Physical Science Courses	
PHY 94, CHM 93, and PHY 95 or CHM 96	12
OR	
BIO 92, 93, and 94	12
Required Education Course	
EDU 80	4
Electives	
Three electives drawn from Developmental Studies electives (listed below).	12
Total	**52**

DEVELOPMENTAL STUDIES ELECTIVES

AHR	95	Shop Practice	2	0	4	4
BUS	81	Filing	3	2	0	4
BUS	85	Typing I	2	3	0	3
BUS	86	Typing II	2	3	0	3
BUS	94	Bookkeeping I	3	2	0	4
BUS	95	Bookkeeping III	3	2	0	4
BUS	98	Bookkeeping II	3	2	0	4
BUS	99	Family Economics	5	0	0	5
CIV	93	Introduction to Technology	2	2	0	3
DFT	90	Mechanical Drawing I	2	2	0	3
DFT	92	Mechanical Drawing II	2	2	0	3
DFT	93	Elementary Drawing	2	2	0	3
EDU	87	Language Skills	3	2	0	4
EDU	88	Learning Skills	0	5	0	2
EDU	89	General Science	3	2	0	4
EDU	90	Career Planning	3	2	0	4
MEC	96	Shop Practice (Machines)	2	0	4	4
PNE	93	Introduction to Practical Nursing	2	7	0	5
SSC	90	Introduction to the Social Sciences	3	2	0	4
WLD	95	Shop Practice (Welding)	2	0	4	4

PRELIMINARY DEVELOPMENT STUDIES CURRICULUM

To provide access to levels of instruction within their capabilities, a preliminary series of Developmental Studies courses is available to students who cannot profitably function on either Level I or on Level II. 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 Courses	
ENG 50, 60 and 70	12
Required Mathematics Courses	
MAT 50, 60, and 70	12
Required Education Courses	
EDU 50, 60, and 70	12
Required Physical Science Courses	
SCI 50, 60, and 70	12
Total	**48**

ASSOCIATE DEGREE NURSING

Purpose of Curriculum

One of the great needs of this community in the field of health is the same found in communities across the nation, that being for registered nurses who are prepared to function at the bedside. It is the purpose of the Associate Degree Nursing curriculum to prepare nurses to help meet this need through a well-balanced program of general education and nursing education.

The formal classroom teaching is conducted at Fayetteville Technical Institute. 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 curriculum are granted an associate degree and are eligible to write National State Board Test Pool Examination as a Registered Nurse.

Job Description

The registered nurse with an associate degree licensed for the practice of nursing carries out nursing and other therapeutic measures with a high degree of skill, using principles from an ever-expanding body of science.

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	16
Required Economics Course	
ECO 102	3
Required English Courses	
ENG 104, 105, 204, 210	12
Required History Course	
HIS 106	3
Required Psychology Courses	
PSY 101, 202, 204	9
Required Sociology Courses	
SOC 101, 102	6
Required Electives	
Two Humanities	6
Total Required Hours	**118**

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.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, buses, and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

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 using shop manuals and other technical publications.

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

AUTOMOTIVE MECHANICS CURRICULUM

	Quarter Hours Credit
Required Automotive Courses	
PME 1101, 1102, 1123, 1124, 1125, 1132, 1133, 1135, 1170, 1181, 1182, 1183	70
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 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	**115**

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 earlier. Many bank employees are presently enrolled in AIB certificate courses for professional development. These same courses, successfully completed, can lead systematically to an Associate Degree in Banking and Finance from FTI. Further, through transfer of credits to a four-year institution, a student can 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 have knowledge, skills, and attitudes consonant with employment opportunities in bank middle management. With only a minimum of specific on-the-job instructions, graduates quickly are 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 Electronic 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 102, 103, 110, *120, *121, 123, 204, 206, 220, 225, 227, 231, 232, 239, 259

*AIB 120 and 121 are equivalent to BUS 120.

BUSINESS ADMINISTRATION

Purpose of Curriculum

In North Carolina, the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. This curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in average businesses.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.
3. Knowledge in specific elements of accounting, finance, and business law.

Job Description

The graduate of this curriculum may enter a variety of career opportunities from beginning sales person 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, insurance, 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 Electronic 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 125, 229, 235, 243, 257, 260, 272, 279, 282, 286
ECO 201
RLS 286

***Business Electives*

Any technical course approved by Department Chairperson and Advisor.

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 powertools. 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 must have a knowledge of mathematics, blueprint reading, estimating materials, methods of construction and a thorough knowledge of building materials.

The modern carpenter will work on new construction, maintenance, and repair of many types of structures, both residential and commercial. He should have an understanding of building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, and the installation of cabinets and fixtures.

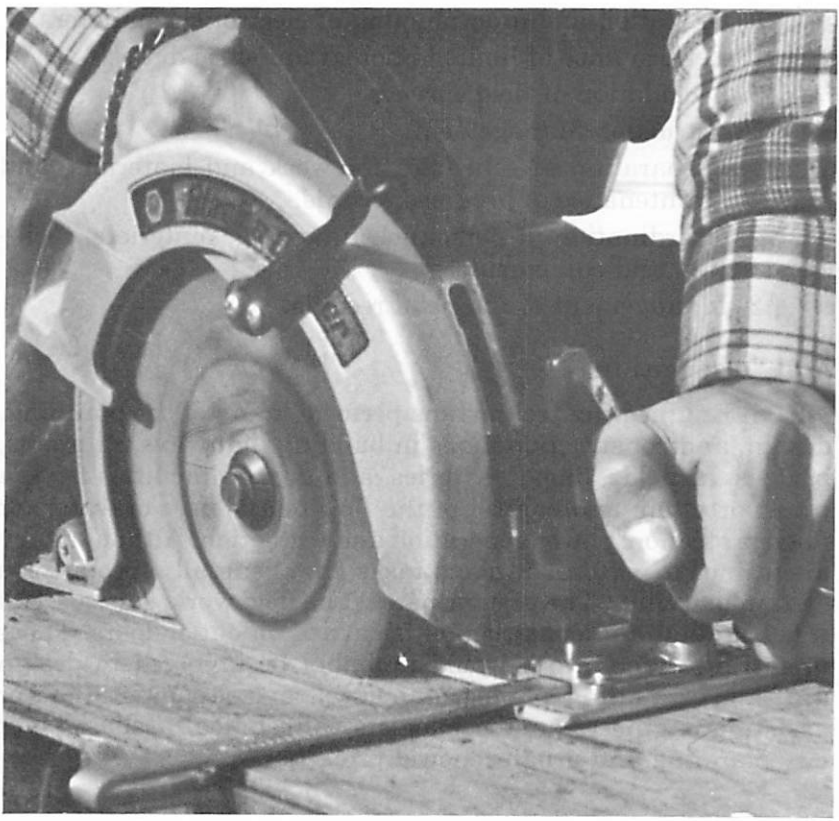
Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job is designated according to the specialty as layout carpenter, framing carpenter, concrete form carpenter, scaffolding carpenter, accoustical and insulating carpenter,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

Job Description

The carpenter constructs, erects, installs, and repairs structures and fixtures of wood, plywood, wallboard, and other materials, safely using carpenters handtools and powertools to conform to local building codes. He 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**



CIVIL ENGINEERING TECHNOLOGY

Purpose of Curriculum

Civil Engineering is the oldest branch and 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:

A. Field Operations
   1. Field surveys (i.e., plane, geometric and site surveys, utility surveys, geological and traffic surveys).
   2. Project inspections and tests of soils, concrete, asphalt and aggregates and structures.

B. Office Services
   1. Preparation of cost estimates, designs, and drawings.
   2. Writing of specifications, reports, letters, and job orders.
   3. Operation and programming of electronic computers.
   4. Performance of limited photogrammetric duties.
   5. Calculation of field surveys.

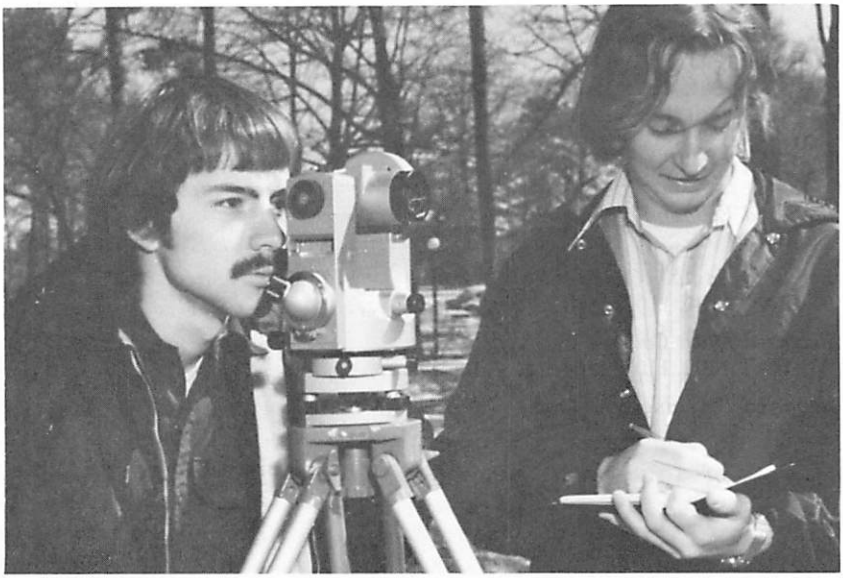
C. Construction Management
   1. Preparation of schedules for work and materials, and maintenance of progress records.
   2. Coordination of personnel, financing, materials, facilities, and equipment.
   3. Management of financial records.

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. The greater part of the field work, surveys, soil investigation and construction is carried on out-of-doors. Those preferring indoor work would probably be involved in design drafting, estimating, photogrammetry, traverse computations or assisting engineers and sociologists as technical assistants for city planning and urban renewal projects.

CIVIL ENGINEERING TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Civil Courses	
CIV 101, 102, 103, 107, 108, 114, 202, 204, 217, 219 221, 223, 225, 228, 229, 230, 231, 271	72
Required Drafting Course	
DFT 101	3
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 101, 102, 103	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 professional life. The background is developed to prepare the student for performance on a contemporary professional level. Graduates 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 1109, 1110, 1111, 1112, 1113, 1120, 1121, 1126, 1201, 1202, 1203, 1211, 1212, 1213, 1221, 1222, 1230, 1232, 1251, 1260	85
Required Architectural Courses	
ARC 1226, 1227, 1228	12
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1102, 1103, 1104	11
Required Psychology Course	
PSY 1106	3
Total Required Hours	**123**

COSMETOLOGY

Purpose of Curriculum

Professional tonsorial and cosmetic care for today's women and men has attained professional status as the once-luxury has become a contemporary necessity. It is generally recognized that the demands for 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

After fulfilling course work and passing the State Board Cosmetology Test, the cosmetology graduate may begin work immediately. A six-month apprenticeship is required to provide in-depth professional experience with a licensed, experienced cosmetologist while earning and learning. After that, the cosmetologist will be eligible to work in any existing licensed cosmetology establishment or he/she will be free to open his/her own business and be able to perform any duties outlined in the curriculum.

COSMETOLOGY CURRICULUM

	Quarter Hours Credit
Required Cosmetology Courses	
COS 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108 1109	61
Total Required Hours	**61**

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.

In North Carolina, educational criteria for dental assistants are established. The 1970 amendments to the North Carolina Dental Practice Act designated two categories of dental assistants: Dental Assistant I and Dental Assistant II. Furthermore, qualifications and the functions for each classification are defined. The Dental Assistant II is legally permitted to perform certain procedures within the patient's mouth.

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 transfering instruments to the dentist during operative procedures.

DENTAL ASSISTING CURRICULUM

	Quarter Hours Credit
Required Dental Courses	
DEN 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009 1010, 1011, 1012, 1013, 1022, 1025	58
Required English Courses	
ENG 1102, 1103	6
Required Psychology Course	
PSY 1101	3
Total Required Hours	**67**

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. The demand for graduates far exceeds the present supply and it is anticipated that this will continue into the future.

Subjects in the two-year program in Dental Hygiene may be grouped under four general headings: general education, basic sciences, dental sciences, and clinical practice.

Approximately 20% of the credits earned in a two-year program may be earned in general education, 30% in basic sciences, 30% in dental sciences, and 20% in clinical practice.

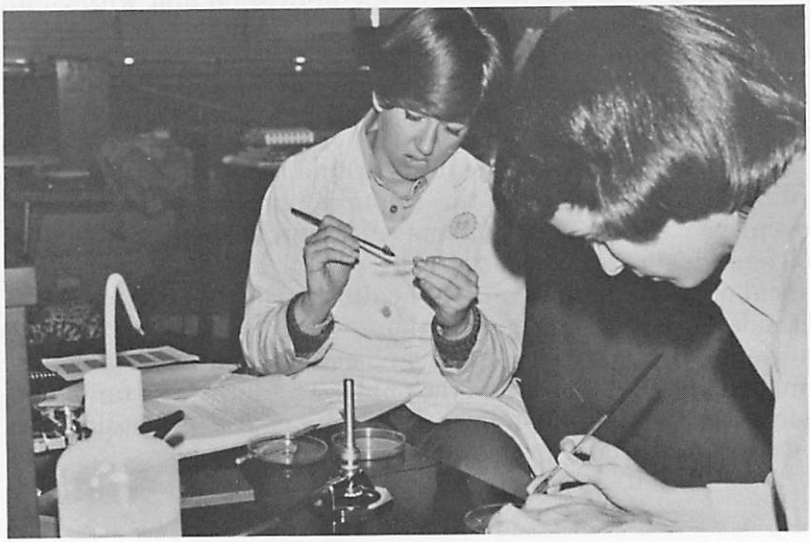
To comply with the policies of the profession and with State dental practice acts, a licensed dentist is available to supervise and direct all clinical phases of Dental Hygiene training.

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, 131, 133, 141, 210, 211, 212, 213, 214, 216, 221, 222, 223, 224, 225, 231, 232, 233, 298	76
NUT 101	3
Required Biology Courses	
BIO 106, 107, 108, 113	19
Required English Courses	
ENG 104, 105, 204	9
Required Psychology Course	
PSY 101	3
Required Sociology Course	
SOC 101	3
Required Elective	
One English Elective from the following:	
ENG 106, 209, 210, 211	3
Total Required Hours	**116**



DENTAL LABORATORY TECHNOLOGY

Purpose of Curriculum

The Dental Laboratory Technology Curriculum prepares a person to enter the dental health field trained in the art and science of fabricating artificial dental restorations for the dental profession.

Dental technology courses incude classroom study and laboratory time for manipulative application.

Candidates should have a high degree of manual dexterity, good color perception, and enjoy detailed work.

Job Description

This program prepares the student for employment as either a general laboratory technician or as a specialist in removable prosthetics (complete and partial dentures) or fixed prosthetics (crowns and bridges).

DENTAL LABORATORY TECHNOLOGY

	Quarter Hours Credit
Required Dental Courses	
DEN 101, 102, 104, 106, 107, 108, 109, 110, 114, 117, 118, 201, 202, 203, 204, 205, 206, 207, 208, 209	82
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 Elective	
One English elective from the following:	
ENG 106, 209, 210, 211	3
Total Required Hours	**104**

ELECTRICAL INSTALLATION AND MAINTENANCE

Purpose of Curriculum

The rapid expansion of the national economy and the increasing development of new electrical products is providing a growing need for qualified people to install and maintain electrical equipment. By mid-1960, more than 350,000 were employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional workers are required each year to replace those leaving the industry. It is expected that the total requirements for electrical tradesmen will reach 500,000. The majority of the electrical tradesmen today are trained through apprenticeship or on-the-job training programs.

This 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 is qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he/she assists in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He/she has an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. He/She has 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 Electronics 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 is able to process programs dealing with business applications such as: accounting reports, sales reports, production reports, inventory control and related topics.

The curriculum is developed on three general levels of depth. The first level is introductory including courses in Computer Logic, Accounting, and Introduction to EDP. The second level is Compiler Languages and their applications including courses in Cobol, Assembler and RPG II. The third level is Introduction to Systems including courses in Computer Systems and Business Statistics. Analysis and solution decision-making are taught to the student to prepare him as a programmer-analyst trained to solve business and industry problems from inception to completion.

Job Description

As a programmer-analyst in the business environment, the graduate is capable of handling problems at the system level rather than simply program-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 this curriculum is prepared.

ELECTRONIC DATA PROCESSING CURRICULUM

	Quarter Hours Credit
Required Electronic Data Processing Courses	
EDP 103, 104, 109, 110, 114, 204, 207, 208, 216, 221, 223, 230, 231	61
Required Business Courses	
BUS 102 or 103, 115, 120, 121, 122, 123, 229, 234, 282	42
Required Economics Courses	
ECO 102, 104	6
Required English Courses	
ENG 101, 102, 204, 206	12
Required Math Course	
MAT 106	5
Required Elective	
One Social Science	3
Total Required Hours	**129**

ELECTRONICS ENGINEERING TECHNOLOGY

Purpose of Curriculum

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

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

Job Description

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

ELECTRONICS ENGINEERING TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Electronics Courses	
ELC 101, 103, ELN 103, 104, 106, 206A, 206B, 209, 211, 214, 215, 220, 235, 240, 245	61
Required Drafting Courses	
DFT 101, 102	6
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, 298	19
Required Physics Courses	
PHY 101, 102, 104	12
Required Psychology Course	
PSY 206	3
Total Required Hours	**120**

ENVIRONMENTAL ENGINEERING TECHNOLOGY

Purpose of Curriculum

Our ever-increasing population and industrial expansion carries with it the demand for many services. One of the most vital of these services is the production and safeguarding of our water supply. The production and protection of our water supply represents an economic investment in which North Carolina alone is spending over 20 million dollars per year for the construction and reconstruction of water and waste treatment facilities. Our industries use tremendous amounts of water daily in industrial processes and are spending thousands of dollars each year in research on treatment of liquid waste before it is returned to the streams and rivers. Industrial expansion coupled with rapid increase in automotive vehicles is beginning to create air problems which can only be solved by personnel technically trained in air resources control and sampling techniques.

These activities require increasing numbers of highly skilled personnel to perform the many specialized tasks involved.

These technicians are also being utilized for inspection and safe operation of milk production and processing, meat packaging, food processing and service, together with housing and allied health problems, and the control of diseases.

This curriculum is designed to train technicians to work in areas related to Environmental Engineering and Public Health. The student receives related courses in mathematics, science, drawing and surveying in addition to specialized technical courses such as water and waste treatment, sanitation and control systems, air pollution sampling and air resources management.

Job Description

The graduate of this curriculum has a knowledge of laboratory procedures and skill in performing many types of tests on liquid and solid wastes, foods, water and air to determine physical, chemical, and bacteriological characteristics. He/She is qualified for entry into a variety of positions such as public health engineering aide, sanitarian aide, treatment plant operators, stream sanitation technician positions with federal, State, and local governments and municipalities, related to food, water and air pollution problems.

ENVIRONMENTAL ENGINEERING TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Environmental Courses	
ENV 101, 102, 104, 105, 108, 109, 112, 204, 205, 206, 216, 217, 218, 226, 236	
MEC 237	61
Required Civil Course	
CIV 101	4
Required Drafting Courses	
DFT 101, 285	5
Required Economics Course	
ECO 205	3
Required Electronics Course	
ELC 205	4
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 101, 102	10
Required Physics Courses	
PHY 101, 102	8
Required Psychology Course	
PSY 206	3
Total Required Hours	**110**

FOOD PREPARATION SPECIALIST

Purpose of Curriculum

The food service industry, one of the largest in the nation, has undergone many changes and substantial expansion during the past two decades. Large increases in population coupled with greater per capita income, and improved equipment requiring greater operative skills have created an unprecedented demand for well trained personnel. As the population of the nation continues to expand, the food service industry will also experience a similar growth rate. Industry expansion will stimulate the development of more efficient food preparation techniques and equipment; these improvements will simplify production processes which will make possible greater productivity. As a consequence, the demand for well trained food service workers will grow.

This curriculum is designed to train students in the art and science of quantity food preparation with particular emphasis on institutional food service. In addition to the development of knowledge and skills in the art and science of food preparation, the student develops an understanding and appreciation of food and equipment purchasing, financial control, record keeping, basic nutrition and menu planning, and supervision.

Job Description

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

FOOD PREPARATION SPECIALIST CURRICULUM

	Quarter Hours Credit
Required Food Service Courses	
FSO 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 117, 122	48
Required English Courses	
ENG 103, 104, 105	9
Required Psychology Course	
PSY 206	3
Required Elective	
Social Science	3
Total Required Hours	**63**

FOOD SERVICE MANAGEMENT

Purpose of Curriculum

The food service industry, one of the largest in the nation, has undergone many changes and substantial expansion during the past two decades. Large increases in population coupled with greater per capita income, and improved equipment requiring greater operative skills have created an unprecedented demand for well trained personnel. As the population of the nation continues to expand, the food service industry will also experience a similar growth rate. Industry expansion will stimulate the development of more efficient food preparation techniques and equipment; these improvements will simplify production processes which will make possible greater productivity. As a consequence, the demand for well trained food service workers will grow.

This curriculum was developed for the training of students on the supervisory or "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	78
Required Business Courses	
BUS 235, 272	6
Required English Courses	
ENG 103, 104, 105, 204	12
Required Psychology Course	
PSY 206	3
Required Electives	
Two Social Science	6
Two Business	6
Total Required Hours	**111**

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 the basic funeral service skills which include embalming techniques and restorative art practices.

The principles, techniques, and practices of the operation of the historic and modern funeral home are taught for the students to acquire a foundation on which to build a professional practice.

A very important function of the program is to provide communications and human relations skills so the student can be better qualified to counsel the families of the deceased.

The student examines the current mortuary case law, death registration and the laws, rules, and regulations of both funeral service and vital statistics from the state in which he seeks licensure.

In the Professional Practicum, the student applies what he has been previously taught and experiences the panorama of modern funeral service practice following funeral services from removal through interment.

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 salesmen 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 Courses	
FSE 101, 115, 121, 206, 209, 210, 211, 212, 213, 214, 215, 224, 225, 257, 268, 280, 282	54
Required Biology Courses	
BIO 106, 107, 108	16
Required Business Courses	
BUS 115, 116, 120	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, BUS 235, PSY 204, PSY 260, SOC 210	3/5
One English elective from the following:	
ENG 106, 107, 206, 209, 210, 211	3
Total Required Hours	**115/118**

GENERAL OFFICE TECHNOLOGY

Purpose of Curriculum

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

This 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 psychology.

Job Description

The graduate of this 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, 183B, 184B, 203, 204, 205, 211, 256, 261, 262, 270, 290	53
Other Required Business Courses	
BUS 115, 120, 248, 263, 185	19
Required Economics Course	
ECO 102	3
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 110, 204, 206	18
Required Math Course	
MAT 110	4
Required Sociology Course	
SOC 102	3
Required Electives	
One approved Business elective	3
One Social Science	3
Total Required Hours	**109**

*Credit will be given if high school grade is C or better.

HORTICULTURE BUSINESS TECHNOLOGY

Purpose of Curriculum

Horticulture has experienced accelerated development in recent years in response to the growing demand for house, garden, agriculture, and ornamental plants. This expansion in the horticulture field has generated a specific need for the preparation of horticulture business technicians to work in supervisory and managerial positions in the production, operation, and sales of horticulture plants.

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.

Job Description

As horticulture business firms increase in number and size, the demand for technically trained business-oriented personnel becomes much 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. Successful completion of this curriculum should enable a person to assume responsibilities in a horticulture business and to advance at an acceptable rate.

Upon graduation from this curriculum, an individual should qualify for various jobs in the production of a variety of horticulture plants in greenhouses, the operation of garden shops and nurseries and certain service types of activities, such as lawn and garden establishment and maintenance.

The broad-based business training offered in this curriculum, coupled with on-the-job training, should enable the graduate to advance rapidly to a managerial position with high level responsibility.

HORTICULTURE BUSINESS TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Horticulture Courses	
HOR 151, 153, 204, 205, 228, 254, 258, 299	36
Required Agriculture Courses	
AGR 104, 170, 185, 201	21
Required Business Courses	
BUS 110, 115, 120, 121, 123, 185, 229, 272, 285	38
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 electives from the following: PSY 101, 206, SOC 101, 102, 201, SSC 205	6
Total Required Hours	**121**

INDUSTRIAL MANAGEMENT

Purpose of Curriculum

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

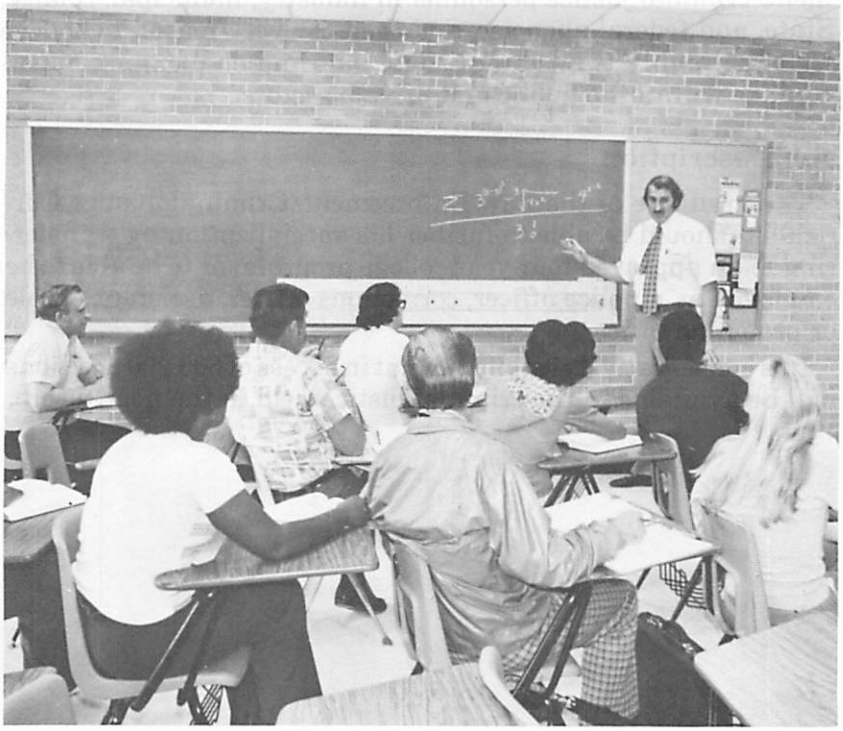
The program is prepared to develop the individual's abilities in the art of communicating with his fellow worker by providing him with training in business and industrial management, psychology, production methods, and the general and social education that broadens one's perspective. This training should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

Job Description

The supervisor or foreman coordinates the activities of workers in one or more occupations. His/Her duties may encompass the interpreting of company policies to workers, being involved in planning of production schedules and 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, 204, 220, 221, 232, 235, 240	33
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 Psychology Course	
PSY 206	3
Required Electives	
One Social Science	3
Electives (any technical courses approved by Department Chairperson and Advisor)	14
Total Required Hours	**120**



LAW ENFORCEMENT/CRIMINAL JUSTICE

Purpose of Curriculum

Today's criminal justice personnel must be knowledgeable in many areas if they are to function effectively in our complex society. They are expected to handle matters dealing with human relations often handled by those specifically trained in the behavioral sciences; they frequently must act in legal matters requiring trained law personnel much deliberation to resolve; they must be skilled in the most recent operational techniques in order to insure equality of justice to all.

To this end, the Law Enforcement/Criminal Justice Curriculum is dedicated to the purpose of developing proficiency in both pre-service high school graduates and in-service personnel. Its development is based on present and future educational needs. It offers theoretical and practical instruction to meet the requirements of various law enforcement/criminal justice agencies and provides the student with the skills, knowledge, and attitudes necessary for employment in the various areas of this profession.

There is an increasing demand for properly trained law enforcement/criminal justice personnel in industry, municipal, county, State, and federal agencies, and there is every reason to believe that the highly trained individual will find challenging opportunities within the public and private sectors.

Job Description

The graduate of the Law Enforcement/Criminal Justice Curriculum should be able to further his specialization by transferring to an approved four-year college program, or to be able to be employed as a police officer, corrections officer, assistant parole or probation officer.

It is conservatively estimated that in excess of 600,000 positions will be available in the criminal justice field in the near future.

LAW ENFORCEMENT/CRIMINAL JUSTICE CURRICULUM

	Quarter Hours Credit
Required Law Enforcement Courses	
LCJ 101, 102, 103, 104, 203, 209, 210, 211, 212	40
Required English Courses	
ENG 101, 102, 103, 204	12
Required Physical Education Course	
PED 111	3
Required Political Science Courses	
POL 102, 103	6
Required Psychology Courses	
PSY 101, 204	6
Required Sociology Course	
SOC 101	3
Required Electives	
*Law Enforcement	25
**Math	5
***Two Science	8
Sociology	3
Other Approved Electives	9
Total Required Hours	**120**

*LCJ 108, 201, 204, 205, 206, 207, 208, 213, 214, 215, 216, 217, 218, 219, 220

**MAT 101, 108, 109, 110

***BIO 106, 107
CHM 101, 110
PHY 101, 102, 104

Note: Both science electives must be in the same scientific disciplinary area.

LIFE INSURANCE

Purpose of Curriculum

The purpose of this curriculum is to provide the student with a broad understanding of the general fields of life 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 specialities 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, investing, and in public relations.

Graduates of the program may want to apply for the examination prerequisite to the Chartered Life Underwriter (CLU) designation. Individuals employed in the life insurance industry are encouraged to enter this program.

LIFE INSURANCE CURRICULUM

	Quarter Hours Credit
Required Life Insurance Courses	
INS 201, 202, 203, 204, 205, 206, 207, 208, 209, 210	
BUS 247	33
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 185, 234, 239	27
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**

MACHINIST

Purpose of Curriculum

This curriculum was prepared to meet a definite need for the 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.

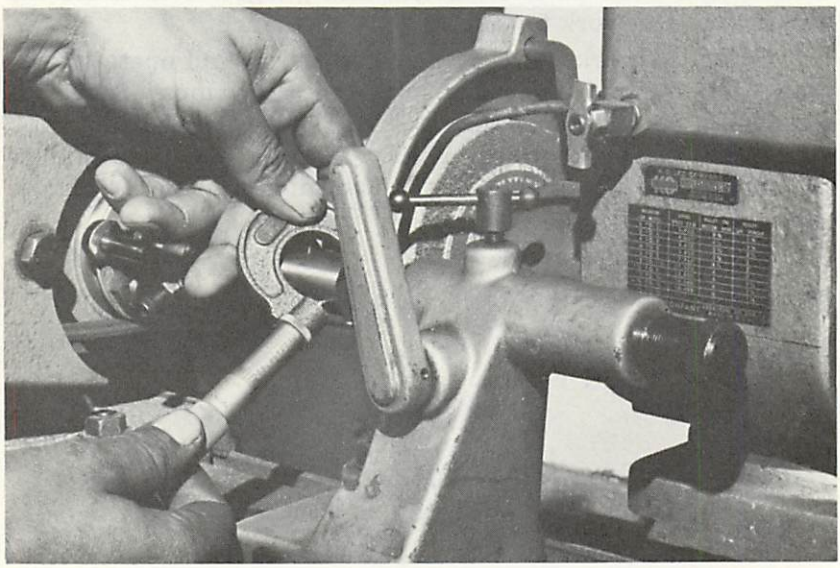
Job Description

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. He 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 can complete the finished work according to blueprint or written specifications. He/She makes standard shop computations relating to dimensions of work, tooling, feeding, and controlling speeds of machining by using precision measuring instruments such as micrometers and gauges to measure the accuracy of the work to thousandths of an inch.

This skilled worker must be able to set up and operate most types of machine tools. The machinist also must know the composition of metals so that tools and parts can be heated and quenched to improve machinability. A wide knowledge enables the machinist to turn a block of metal into an intricate, precise part.

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
Required Elective	
Approved Elective	3
Total Required Hours	**118**



MARKETING AND RETAILING

Purpose of Curriculum

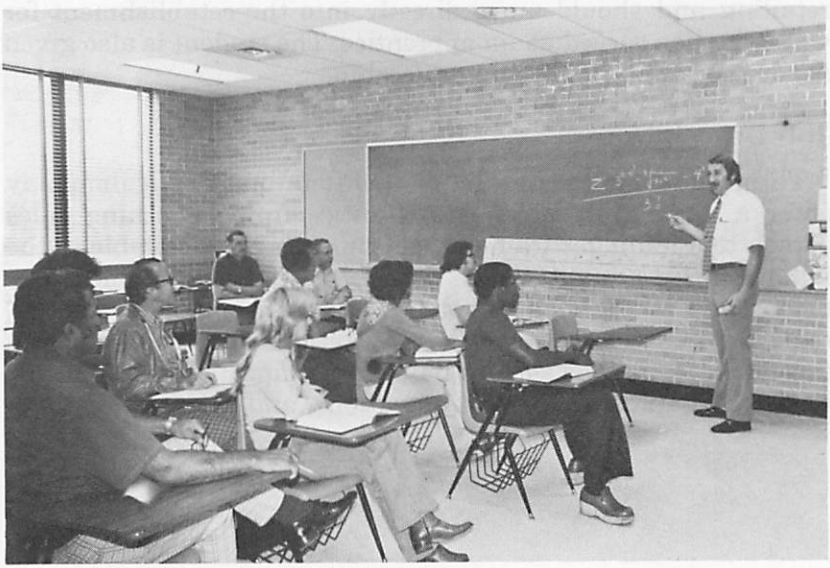
Marketing and Retailing is a program of instruction which teaches students the techniques of marketing, management, and distribution which are used in many businesses. The program is designed to give the student a chance to learn the theoretical, as well as practical aspects of marketing and retailing occupations at the mid-management level. Marketing and retailing occupations are those which are followed by workers engaged in marketing or merchandising activities or in contact with buyers and sellers when, (1) distributing to consumers, retailers, jobbers, wholesalers, and others, the products of farm and industry or selling services or (2) managing, operating, or conducting retail, wholesale, or service businesses. Distribution pertains to business and industrial goods as well as to consumer goods, and to business and consumer services. Marketing and retailing occupations are many and diverse, ranging from stock clerk to the head of a giant distribution-oriented corporation. Thus, there are hundreds of entry occupations in this field. Ideally, the student would start into his profession as a management trainee. After having served as an apprentice in his second year, the student would be well prepared in his chosen area of marketing and retailing and should move directly into the establishment for which he has served as an apprentice. The student is also given academic credit for his apprenticeship.

Job Description

The graduate of the Marketing and Retailing Curriculum may enter a variety of career opportunities from beginning sales person to a manager trainee. Opportunities are available in the following type institutions: retailing, wholesaling, manufacturing, and others such as hotel, motel, transportation, finance, real estate, insurance, and other institutions that are performing the market functions such as buying, management, and marketing (export, industrial, credit operations, and sales promotion).

MARKETING AND RETAILING CURRICULUM

	Quarter Hours Credit
Required Marketing and Retailing Courses	
BUS 239, 243, 249, 268, 285, 287, 288, 289, 291	41
Other Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 123, 185, 234, 247	40
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 Psychology Course	
PSY 206	3
Required Electives	
Any Approved Technical Course	5
Social Science	3
Total Required Hours	**120**



MASONRY

Purpose of Curriculum

Masons are the craftsmen in the building trades who 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/her to perform effectively. He/She must have a knowledge of basic mathematics, blueprint reading and masonry technology. He/She 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.

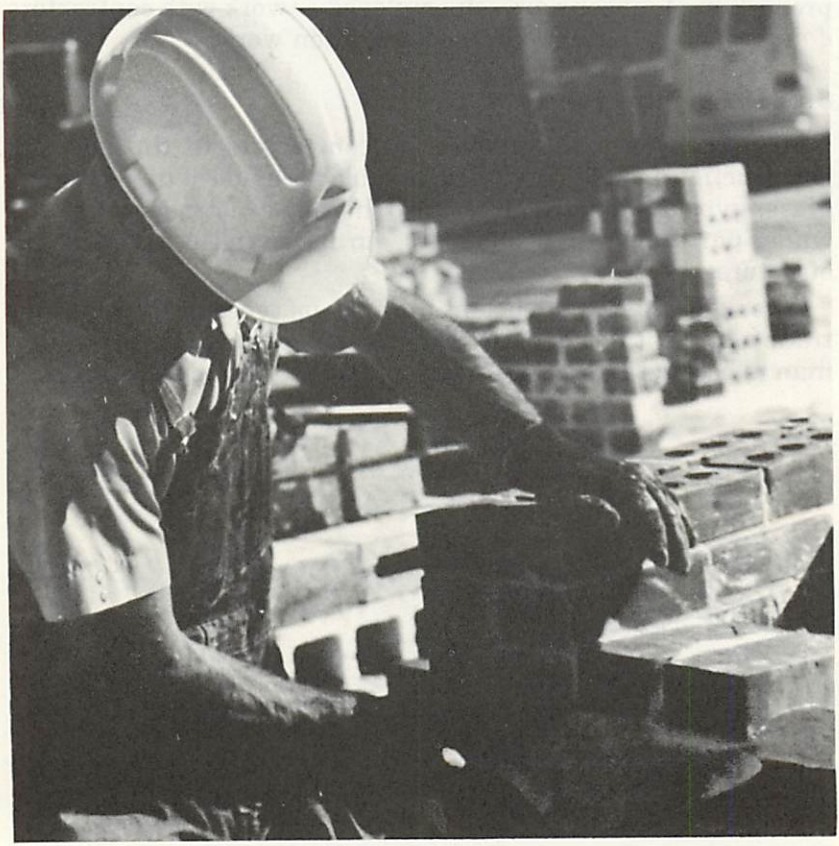
Job Description

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, he/she constructs or repairs 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.

MASONRY CURRICULUM

	Quarter Hours Credit
Required Masonry Courses	
MAS 1101, 1102, 1103, 1104, 1105	45
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1111, 1114	6
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**



MECHANICAL DRAFTING

Purpose of Curriculum

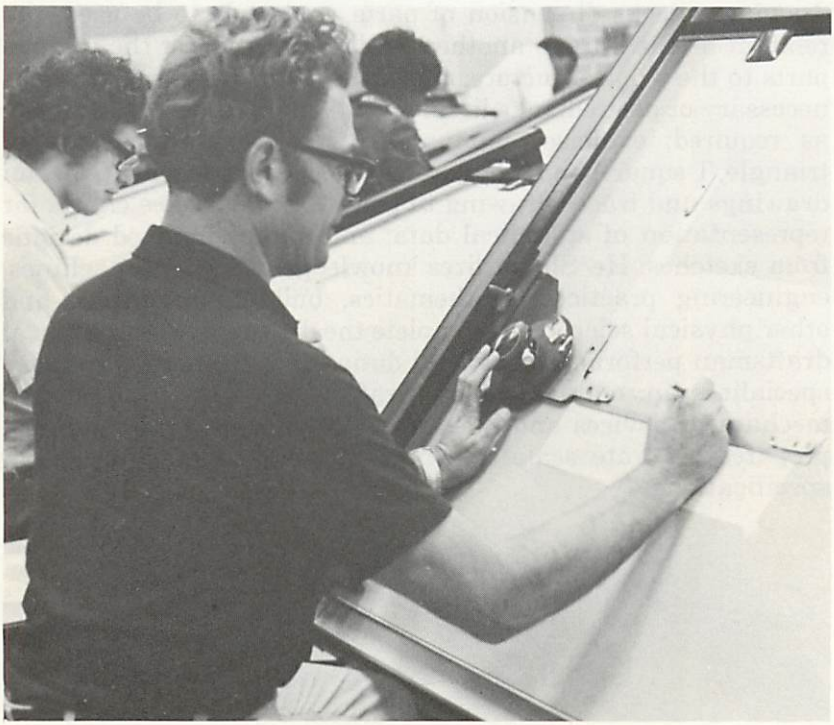
Each course is prepared to enable an individual to advance rapidly in drafting proficiency upon entering the field of work. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel—administrative, engineers, skilled workmen—and must be able to communicate effectively with them. Courses to develop knowledge and skills in communication, human relations, economics, and industrial organization are provided to assist the student in developing understandings and confidence in his relations with other persons.

Job Description

A draftsman prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for engineering or manufacturing purposes, according to the specified dimensions; makes final sketch of the proposed drawing, checks dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure; makes any adjustments or changes necessary or desired; inks in lines and letters on pencil drawings as required; exercises manual skill in the manipulation of triangle, T-square, and other drafting tools; lays tracing paper on drawings and traces drawing in pencil or ink; makes charts for representation of statistical data; and makes finished designs from sketches. He/She utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings. A mechanical draftsman performs the general duties of a draftsman and also specializes in making rough drafting sketches of proposed mechanical devices and then draws the necessary details, and prepares accurate scale drawings of parts or machines from specifications.

MECHANICAL DRAFTING CURRICULUM

	Quarter Hours Credit
Required Drafting Courses	
DFT 1125, 1169, 1170, 1171, 1172, 1173, 1190, 1191, 1192, 1193, 1194	29
Required English Courses	
ENG 1101, 1102	6
Required Math Courses	
MAT 1101, 1102, 1104	12
Required Machinist Courses	
MEC 1108, 1110, 1111, 1179	13
Required Physics Courses	
PHY 1101, 1103	8
Required Psychology Course	
PSY 1101	3
Required Elective	
DFT 1195	2
Total Required Hours	**71**



NURSES' ASSISTANT

Purpose of Curriculum

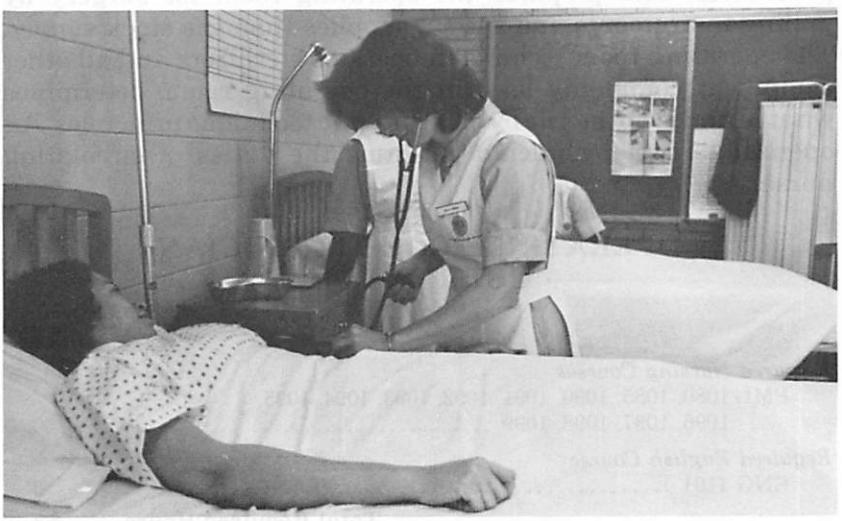
This program is designed to prepare qualified men and women to give effective nursing care to selected patients, to make report observations, and to carry out routine aspects of ward management. Classroom teaching is centered around modern concepts of health, functional relationships within a hospital, fundamentals of effective interpersonal relations, and nursing procedures related to daily needs of patients and to common therapeutic measures. Throughout the course, emphasis is given to the role of the nurses' assistant. Clinical experiences provide opportunities for applying classroom learnings to practice in the hospital setting.

Job Description

The Nurses' Assistant is a member of the nursing team who performs professional nursing care prescribed by and under the direction of a registered nurse or a licensed practical nurse.

NURSES' ASSISTANT CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PML 1001, 1190, 1191, 1192, 1193, 1194, 1195, 1196	17
Total Required Hours	**17**



OPERATING ROOM TECHNICIAN

Purpose of Curriculum

This is an introductory program devoted to developing an understanding of the principles of operating room techniques and to acquiring fundamental skills essential to assisting in the operating room. Instruction includes environmental and personal orientation; weights and measures; anesthesia, operating room procedures; operating room techniques; operating room personnel duties; and ethical, moral and legal responsibilities. Laboratory exercises are designed to provide support through practice and skill development for the principles and techniques discussed in class.

Job Description

The operating room technician is prepared to be part of the medical-surgical team by working directly with patients' surgical preps, transportation to the operating room, positioning of patients and applications of dressing. The operating room technician always works under the direct supervision of a registered professional nurse while cleaning, stocking, and preparing the operating room; functions as scrub nurse at the operative field, assists the surgeon by anticipating his needs; handles sterile instruments, sutures and equipment.

The operating room technician assists the anesthetist and the anesthesiologist, prepares specimen, prepares notes on operative procedures, and prepares the operating room for surgery by pulling instruments and special supplies from the stock supply. The operating room technician operates sterilizers and all other equipment commonly used in the operating room, determines what is and is not sterile by using aseptic technique principles. An operating room technician performs the duties of circulating nurse.

OPERATING ROOM TECHNICIAN CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PML 1080, 1085, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099	50
Required English Course	
ENG 1101	3
Total Required Hours	**53**

PARALEGAL TECHNOLOGY

Purpose of Curriculum

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

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

The paralegal technician is capable of doing independent legal work under the general supervision of a lawyer.

Job Description

The graduate of the Paralegal Curriculum is able to directly assist the lawyer in most facets of law, but must always work under the supervision of a lawyer. In no case may the paralegal technician give legal advice, enter into courtroom procedure, or be involved in litigation except as an assistant to the lawyer. The paralegal technician is able to assist and supervise legal secretaries, not only as to general pleading and practice, but also in general office management.

PARALEGAL TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Paralegal Courses	
LEG 101, 113, 132, 135, 204, 212, 214, 215, 217, 224, 225, 235, 290	55
Required Business Courses	
BUS 102 or 103, 115, 116, 120, 228	20
Required English Courses	
ENG 101, 102, 204, 206	12
Required Electives	
Math	4/5
Paralegal	2/3
Social Science	6
Any Approved Electives	5/6
Total Required Hours	**104/107**

PHYSICAL THERAPY ASSISTANT

Purpose of Curriculum

This program is designed to prepare the individual to fill the role of a technical assistant working under the supervision of a qualified physical therapist in providing quality physical therapy care.

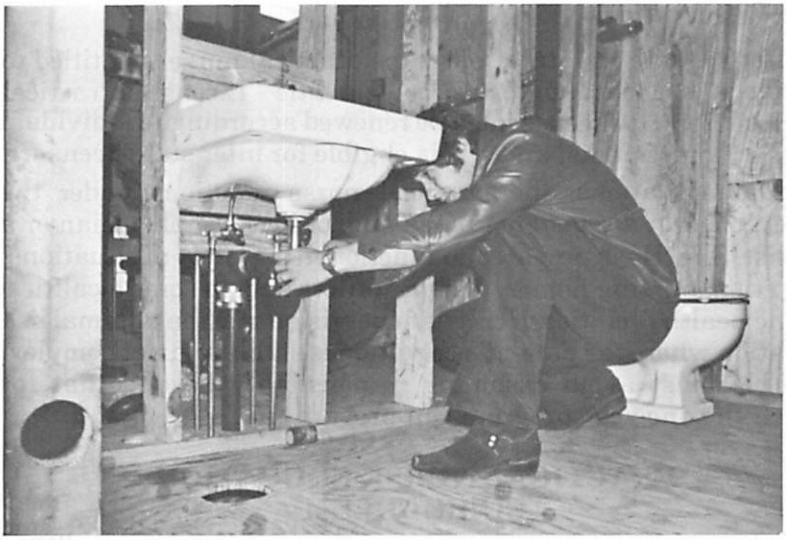
Increasing demands are being placed upon the profession of Physical Therapy as a patient-care service. This is due to an increasing number of persons who are living today with chronic diseases or disabilities, an increasing number and new types of facilities which are serving patients who can benefit from physical therapy services, and an ever-increasing amount of knowledge and skill within the profession itself which is required to meet the needs of the patients.

Job Description

Many of these patient care needs can be met by developing physical therapy services which utilize a technical level worker—the physical therapy assistant. Such a worker is recognized by the American Physical Therapy Association and the North Carolina Chapter of that association. The profession has long utilized supportive personnel for clerical, maintenance, and transportation duties. The formal education of a second level worker in physical therapy will produce more people to provide therapeutic care for the patient. At the same time, this will permit the professional physical therapist to extend his/her services in specialized therapy, supervision, consultation, and teaching.

PLUMBING CURRICULUM

	Quarter Hours Credit
Required Plumbing Courses	
PLU 1110, 1111, 1112, 1120, 1121, 1123, 1125, 1126	44
BMS 1134	3
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	**70**



PRACTICAL NURSE EDUCATION

Purpose of Curriculum

The accelerated growth of population in North Carolina and rapid advancement in medical technology demanded an increased number of well-trained personnel for health services. Realizing this need, Fayetteville Technical Institute in conjunction with local hospitals, public health services, nursing homes, and kindergartens, administers a program of Practical Nurse Education.

The administrative staff and faculty of FTI's Practical Nurse program believe that the practical nurse is a vital and integral segment of the health team; that 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; that her place is at the patients' bedside fulfilling needs requiring moderate nursing skills and assisting with activities dependent upon more complex skills always under the guidance of the professional leader.

Job Description

After passing the state board, the practical nurse is entitled to receive a license and to use a legal title "Licensed Practical Nurse." Her/His license must be renewed according to individual state's requirements, and she is eligible for inter-state licensure.

In all situations, the practical nurse functions under the supervision of a registered nurse and/or licensed physician or a dentist. She/He is prepared to function in a variety of situations: hospitals, nursing homes, doctors' offices and, in some localities, public health facilities. Her/His supervision may be minimal in a situation where the patient's condition is stable and not complex. She/He must avoid assuming responsibility beyond that for which the one-year program can prepare one.

PRACTICAL NURSE EDUCATION CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PNE 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1115, 1116	71
Required English Course	
ENG 1101	3
Required Math Course	
MAT 1105	3
Total Required Hours	**77**

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.

The completion of this two-year program fulfills the educational requisite for confirmation of the Associate Degree in Applied Science and meets the requirements for the examination by the American Registry of Radiologic Technologists for certification as a Registered Technologist in Radiologic Technology.

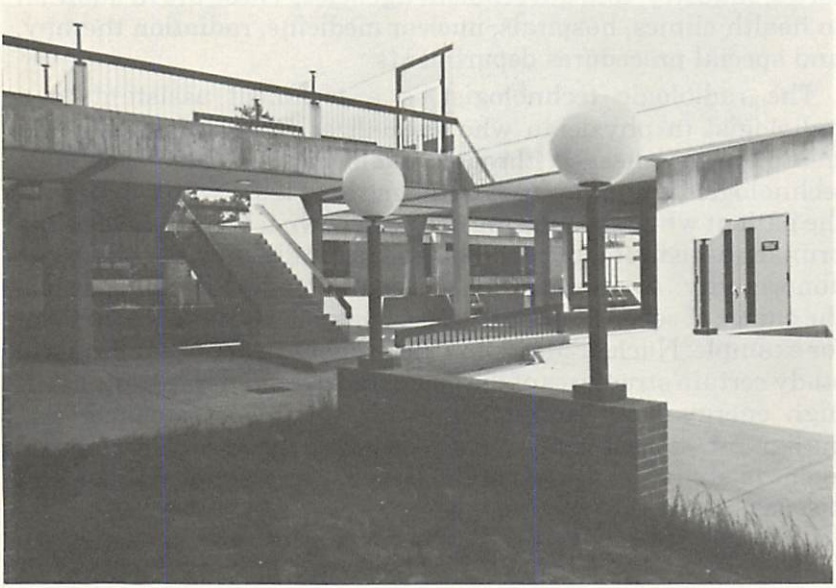
Job Description

Radiologic technologists are in demand in research laboratories, industry, and government agencies. These are in addition to health clinics, hospitals, nuclear medicine, radiation therapy, and special procedures departments.

The radiologic technologist is a technical assistant to a radiologist (a physician who specializes in the diagnosis and treatment of disease through radiography). The radiologic technologist is a major part of the medical team who works with the patient while specializing in his/her own technical field as the primary assistant for the radiologist in the diagnosis of disease or abnormality. As a professional, the radiologic technologist has the choice of several specialized occupations within his own field, for example: Nuclear Medicine, the use of radioactive materials to study certain structures of the body; Radiation Therapy, the use of high energy x-ray equipment in the treatment of cancer and malignant diseases; Special Procedures, the use of a contrast agent to study the vessels of the body for any abnormalities and disease.

RADIOLOGIC TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Radiologic Courses	
RDT 101, 102, 103, 111, 112, 113, 114, 204, 205, 206, 215, 216, 217, 218	97
Required Biology Courses	
BIO 106, 107, 208	13
Required English Courses	
ENG 103, 104, 105, 204	12
Required Math Course	
MAT 101	5
Required Physics Courses	
PHY 103, 110	7
Required Psychology Courses	
PSY 101, 202	6
Required Electives	
Two Social Science	6
Any Approved Elective	3
Total Required Hours	**149**



REAL ESTATE

Purpose of Curriculum

In North Carolina, the opportunities in the real estate business are increasing. With the increasing population and industrial development in this State, real estate has become a more competitive and very complicated industry. Better opportunities in real estate will be filled by students with specialized education beyond the high school level. The Real Estate Curriculum is designed to prepare the student for employment in one of many occupations common to real estate. The training is aimed at preparing the student in many phases of administrative work that are encountered in the real estate industry.

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 encompassments include preparing and filing sales reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, and assisting managers in supervision. Positions which are available in real estate include 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	30
Required Business Courses	
BUS 102 or 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 Math Course	
MAT 110	4
Required Paralegal Course	
LEG 214	3
Required Psychology Course	
PSY 210	3
Required Electives	
Social Science	3
Any Approved Elective	3
Total Required Hours	**120**

The following advanced courses may be taken in addition to those listed above with the permission of the Advisor: RLS 226, 228, 293, 294

RECREATION ASSOCIATE

Purpose of Curriculum

The Recreation Associate Curriculum is designed primarily to train young men and women to plan and supervise recreational activities for all age groups in a variety of settings. Students are taught one to one as well as group leadership responsibilities and abilities. Graduates are qualified to supervise/operate recreational facilities such as community centers, playgrounds, campsites, and resort facilities.

Job Description

A variety of career opportunities are available to graduates of the Recreation Associate Curriculum. Opportunities in community recreation programs as playground supervisors, activity specialists, center supervisors; in industry, planning programs of employee recreation; in summer camps, planning programs for young persons still within their pre-teen years and supervising activities in public and private resorts.

Professionals in the field are becoming acutely aware that the use of paraprofessionals is an asset to them as they try to fill the ever increasing need within the field of recreation.

RECREATION ASSOCIATE CURRICULUM

	Quarter Hours Credit
Required Recreation Courses	
REC 109, 110, 111, 112, 119, 120, 121, 201, 204, 207, 211, 220, 221, 225, 231, 250, 299	59
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	3
Required Psychology Courses	
PSY 101, 104	7
Required Sociology Course	
SOC 101	3
Required Electives	
Art or Physical Education	6
Business or Physical Education	3
English	3
Any Approved Elective	3
Total Required Hours	~~109~~ ~~102~~ 109

RECREATION 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, and golf carts, presented in class assignments, discussions, demonstrations, and shop practices.

Complexity in the technology of the recreation vehicle increases each year along with a tremendous increase in the number of recreation vehicles. This curriculum provides a basis for each student to learn the principles and techniques of recreation vehicle maintenance coupled with adaptation to current changes in equipment and engine designs.

Job Description

Recreation vehicle mechanics maintain and repair mechanical, electrical, and body parts of the recreation vehicle to include motorcycles, outboard motors, and small gasoline engines. Mechanics inspect, test, diagnose, and repair faulty operations of the recreation vehicle.

RECREATION VEHICLE AND EQUIPMENT REPAIR CURRICULUM

	Quarter Hours Credit
Required Vehicle and Equipment Repair Courses	
PME 1011, 1018, 1019, 1101, 1151, 1158, 1160	37
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	**64**

SECRETARIAL SCIENCE

Purpose of Curriculum

The need for better qualified secretaries in our ever-expanding business world is becoming more acute. The constant increase in job opportunities for the two-year graduate reflects this demand.

The Secretarial Science Curriculum is designed to offer the students the necessary secretarial skills in typing, office machines, dictation, transcription, and terminology for employment. The special training in secretarial subjects is 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 computer's impact, the students are acquainted with automated equipment and procedures which affect their secretarial duties. In addition to skill development, a special emphasis is placed on grooming habits and proper attitudes for the office situation.

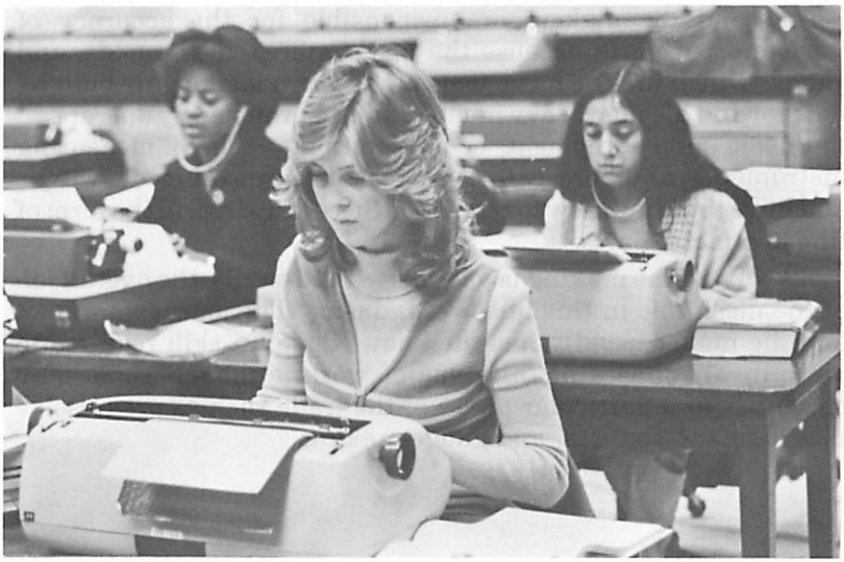
Job Description

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 also provides the background for jobs as office managers and administrative assistants.

SECRETARIAL SCIENCE CURRICULUM

	Quarter Hours Credit
Required Secretarial Courses	
BUS *102, 104, 105, **106, 107, 108, 110, 112, 183, 184, 205, 206, 207, 208, 211, 214, 262, 270, 271, 290	70
Other Required Business Courses	
BUS 115, 120, 248, 263	16
Required Economics Course	
ECO 102	3
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 110, 204, 206	12
Required Math Course	
MAT 110	4
Required Electives	
Two Social Science	6
Total Required Hours	**114**

*Credit will be given if high school grade is C or better.
**Credit will be given if high school grade is B or better.



TOOL AND DIE

Purpose of Curriculum

Year by year, the machines-tools industry is faced with an ever increasing shortage of tool and die makers. This shortage has been brought about by the rapid expansion of industry and the retirement of the older craftsmen in this field. The purpose of this curriculum is to provide a training program that gives the student the necessary background in theory and practice to enable him to become a capable tool and die maker in far less time than would be required to obtain these skills and knowledge without formal instruction.

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, gauges, and molds that must be built by the tool and die men. This curriculum provides a basis from which the student may equip himself 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 gauges 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 making is a term used to describe the overall job of the mechanic in this phase of industry. The journeyman tool and die maker usually has the knowledge and skill required to perform all phases of this type of work, although some may specialize in a particular phase of the trade such as progressive dies, jigs and fixtures, and gauge making.

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, 1170, 1171, 1180, 1181, 1182, 1183, 1184	98
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
Required Elective	
Approved Elective	3
Total Required Hours	**164**

WELDING

Purpose of Curriculum

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Survey shows quite clearly that many welders will be needed annually to fill present and projected vacancies in the state.

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

The field of welding offers a person prestige, security, and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production ship, job shop, and many others.

Job Description

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

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

WELDING 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 Hours	**72**

COURSE DESCRIPTIONS

Agricultural Courses

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
AGR 101A Farm Tractors I	1	3	0	2

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

AGR 101B Farm Tractors II	1	3	0	2

A course designed to continue the study of gas and diesel farm tractors. Emphasis is 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 the role of agriculture in the economy. A review of the functions of the manager and an introduction to the principles he 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	3	0	2

This course covers 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 is 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. Emphases are placed upon cow-calf and feeder cattle operations. Prerequisite: None.

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

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

AGR 112 Small Engine Repair	1	3	0	2

A study of two- and four-cycle, one cylinder gasoline engines and their power trains. The student is taught preventive maintenance, trouble shooting & repair of the typical auxillary 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 North Carolina 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.

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 are 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 plant 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

An introductory animal science course covering the fundamental principles of livestock enterprises. The course offers a study of the basic anatomy and physiology of farm animals, their breeding and feeding. Attention is given to the various classes of livestock as they relate to the total livestock industry. 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 to improve 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 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 are 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 & Plumbing Systems 2 0 0 2

This study deals 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.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
AGR 136 Agricultural Math	2	0	0	2

This course stresses the fundamental mathematical operations and their application to basic farm business problems and situations, the calculation of material needed and costs required for various on farm constructions, production of crops and livestock and costs involving financial transactions. 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 procedure of tax computation skills that can 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, and the use of transits and tapes in laying-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 agricultural with emphasis on the source of credit; lending institutions, credit instruments and repayment schedules. Practice in the procedure of evaluating farm resources with attention to information needed for valuation is 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 is 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 170 Plant Science	5	2	0	6

An introductory general botany course and a study of fundamental principles in crop production. The application of their principles to the major and minor field and horticultural crops in North Carolina. Lectures are supplemented by lab exercises involving the production of plants. Prerequisite: None.

AGR 183 Poultry and Egg Production	2	0	0	2

A study of the principles and practices associated with the production of broilers and laying flocks including selection, feeding, breeding, disease, parasite control and marketing. Prerequisite: None.

AGR 185 Soil Sciences & Fertilizers 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

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

AGR 190 Greenhouse Production & Management 3 2 0 4

A study of the principles involved in the operation of a greenhouse on a commercial basis. Exercises are provided for the development of skills in production of plants, in preparation of soil media, use of chemicals, and all phases of greenhouse management. Prerequisite: None.

AGR 200 Chemical Pest Control 2 2 0 3

A study of farm chemical pesticides, their importance, ingredients, formulation, and farm application with emphasis on the effective and safe farm utilization of chemicals in agricultural pest control. The course helps to prepare the student to take the test to obtain the farm chemicals applicators license. 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 farm business and the problems he 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 analyses of input-output potentials in the development of a farm management plan that results in an efficient farm operation. Prerequisite: AGR 104.

AGR 205 Agriculture 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.

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

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 and complete farm operation. Exercises provide for practice and the development of skill in determining 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 Agricultural 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 system. Prerequisite: None.

AGR 228 Livestock Disease & Parasites 3 2 0 4

A course dealing with the common disease 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 grinders, 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 New Sources of Farm Income 2 0 0 2

Consideration of new areas of production that are not in practice in the students' present program. The farm enterprise system will be analyzed and new enterprises suggested. Prerequisite: None.

AGR 245 Crop Insects 2 0 0 2

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

AGR 258 Agricultural Production Enterprises 4 4 0 6

A study of the selection of production enterprises such as field crops, horticultural crops, and livestock with consideration of the application of up-to-date practices of production and management. Consideration in also given to the most profitable way to utilize resources in the production of one or more kinds of crops and/or livestock. Prerequisite: AGR 185.

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 the harvesting of tobacco, and the preparation of tobacco for marketing. Prerequisite: None.

AGR 274 Pastures & Forage Crops 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 the production of forage crops of high nutrient value in keeping with livestock needs. Prerequisite: None.

AGR 296 Agricultural Programs & Agencies 3 0 0 3

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

AGR 299 Cooperative Training 0 15 0 5

This course is designed to provide the student with an opportunity to pursue and to 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. Conferences will be held with each student and employer in order to plan a realistic training program and to evaluate the progress the student is making. An objective is to incorporate the student's education into his on-the-job experience program so that he will be better prepared to be successful upon entrance into a job after graduation. Emphasis is placed upon assuring that the student is permitted to participate in a variety of job situations, occurring in sequence, which must be performed by an individual in a supervisory position in the particular type of operation. Prerequisite: Minimum of 35 hours curriculum courses.

Air Conditioning, Heating, and Refrigeration Courses

AHR 95 Shop Practices (Air Conditioning) 2 4 0 4

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 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 1121A Fundamentals of Refrigeration 3 0 3 4

Terminology used in the trade, principles of refrigeration, identification of basic system components. Prerequisite: None.

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

AHR 1121B Fundamentals of Refrigeration 2 0 3 3

Introduction to and practice with tools and shop equipment, standard procedures and safety measures are included. Prerequisite: AHR 1121A.

AHR 1122 Domestic & Commercial Refrigeration 4 2 6 7

A follow-up in basic refrigeration utilizing theory, procedures, tools and equipment relative to domestic and commercial refrigeration. Emphasis is placed upon mechanical problems and their solutions prevalent in the medium and low temperature range. Manufacturers' catalogs are used when selecting equipment for a proposed installation. Prerequisite: AHR 1121.

AHR 1125 Principles of Air Conditioning 3 2 0 4

Review of 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 1129 Air Condition 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, AHR 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 1142.

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 Condition 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 2 0 4 3

Work is divided between drafting room and metal shop. Layout procedures for elementary fittings are learned as patterns are developed on paper. Good shop practice is taught and applied as these same fittings are fabricated from metal. Prerequisite: DFT 1180.

AHR 1136 Sheet Metal Layout & Fabrication II 2 0 4 3

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 1137 Air Conditioning Heating Code 4 2 0 5

Code interpretation of the minimum standards, provisions and requirements for reasonable safety, stable design and methods of installation of air conditioning, heating, refrigeration and ventilation systems installed within the State of North Carolina. Prerequisite: None.

AHR 1140 Oil Burner Service 3 0 3 4

Pot burners, low and high pressure gun burners, domestic and commercial equipment electrical controls; service procedures; efficiency test; burner application and safety. Prerequisite: None.

AHR 1141 Control Systems I 2 0 3 3

Review of basic electricity and simple circuity 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, and electric and pneumatic operations. Prerequisite: AHR 1141.

AHR 1145 Heating Systems I 5 4 3 8

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

AHR 1145A Heating Systems I 3 2 1 4

Introduction to warm air systems; burners, fans, ducts, humidifiers. Prerequisite: AHR 1122.

AHR 1145B Heating Systems I 2 2 2 4

Systems are installed, operated, checked and adjusted. Prerequisite: AHR 1145A.

AHR 1146 Heating Systems II 4 0 6 6

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

AHR 1146A Heating Systems II 2 0 3 3

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

AHR 1146B Heating Systems II 2 0 3 3

Service Procedures, equipment selection. Prerequisite: AHR 1146A.

AHR 1148 Estimating & Contracting 5 0 2 6

Take-off procedures involving job plans and specifications; calculation of contractor's cost; job pricing; bids and contracts. Prerequisite: AHR 1146.

AHR 1199 Cooperative Training 0 0 15 5

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

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

American Institute of Banking Courses

AIB 102 Principles of Economics I 4 0 0 4

Macroeconomics—An introductory economics course with attention focused on such problems as the level of unemployment, the rate of inflation, the nation's total output of goods and services, the ways in which government raises and spends money, and other matters of economy-wide significance. Prerequisite: None.

AIB 104 Principles of Economics II 4 0 0 4

Microeconomics—An introductory economics 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: None.

AIB 110 Teller Operations 4 0 0 4

This course identifies and gives the student basic instructions in the fundamental teller functions. The course focuses on check cashing, security procedures, loss prevention and customer relations. The student is given the opportunity to demonstrate skills through simulated banking transactions. 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 & 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

This course presents the fundamentals of bank operations in a descriptive fashion so that the beginning banker may acquire a broad (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective so necessary for career advancement. Prerequisite: None.

AIB 203 Bank Investments 4 0 0 4

Because the bank's needs for primary reserves and loanable funds limit the funds available for investment, this course describes the nature of such funds and how their uses are determined. It also analyzes the primary and secondary reserve needs of commercial banks, the sources of reserves, and their random and cyclical fluctuations, showing the influence of these factors on investment policy. This analysis is followed by a study of yield changes as they effect a bank's longterm holdings. 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 presents new trends which have emerged in the philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management. The case method is introduced as a technique of evaluating effective management. Prerequisite: AIB 202.

AIB 206 Bank Letters & 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 is placed on the organization of ideas in a logical order, and the presentation of 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 stresses clear and concise communication by letter, report, memorandum, and telephone. Prerequisite: None.

AIB 207 International Banking 4 0 0 4

This course is an introduction to a vast field for those working in international departments as well as for those involved in the domestic activities of their banks. International banking has become a dynamic growth area dealing with the financing of trade, international agencies and foreign exchange. Beginning with these basic operational coverages, the course discusses various credit instruments and the principles underlying international lending. International banking activities are related in domestic situations. Prerequisite: None.

AIB 209 Installment Credit 4 0 0 4

The techniques of installment lending are presented concisely. Emphasis is placed on establishing the credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Each phase of the bank's installment credit operation is carefully scrutinized. Other topics discussed are inventory financing, special loan programs, business development and advertising, and the public relations aspect of installment lending. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
AIB 210 Money and Banking	4	0	0	4

This course stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply his knowledge to his particular job. Historical treatment has been kept to a minimum. Emphasis is also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in effecting yield curves and the structuring of portfolios. Prerequisite: None.

AIB 211 Federal Reserve System	4	0	0	4

This course examines the operations and policies of the Federal Reserve System during the past sixty years. The origins, administrative structure, and crucial periods in the history of the System are reviewed. Attention is given to international monetary affairs and economic developments effecting the American fiscal system. Prerequisite: None.

AIB 213 Trust Functions & 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, the student is given an opportunity to study all phases of speech situations. Although directed primarily to the student seeking to give an account of himself on the public platform, other speech situations have not been neglected. Having studied the basic principles involved in organizing and presenting a speech, the student is given suggestions to aid in developing speaking ability in such situations as conferences, panel discussions, and media presentations. 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. 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 (nonbank) 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 view point 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 & Time Deposit 4 0 0 4

This course reflects that a knowledge of the historical development of savings institutions and an awareness of the basic economic functions of the savings process are necessary to an understanding of the current operations and policies. A review of the savings process clarifies differences between financial savings by individuals or organizations and real savings that appear as capital formation. Different types of financial savings are reviewed in order to describe the system of financial flows of income to capital investment. 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 Analysis of 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 pretain 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 & Bank 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 is 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 1121 Interior Design 1 5 0 3

Basic concepts of interior design incorporating historical styles, current manufactured products, coordinations of color, furniture, floor coverings, fabrics, wall paper, drapery and accessories. Prerequisite: None.

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 are studied along with their legal and practical application to working drawings. Contract documents are 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; axonomatic, oblique, and perspective. Instruction also is given in methods of graphic reproduction. Prerequisite: None.

ARC 1227 Graphic Communications II 3 0 3 4

A continuation of ARC 1226. Prerequisite: ARC 1226.

ARC 1228 Graphic Communications III 3 0 3 4

A continuation of ARC 1227. Prerequisite: ARC 1227.

ARC 1231 Architectural Drafting & 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 is 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. Prerequisite: ARC 1231.

ARC 1233 Architectural Drafting and Design III 3 2 6 6

A continuation of ARC 1232. 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. Prerequisite: ARC 1238.

ARC 1241 Architectural Presentations I 3 2 6 6

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

ARC 1242 Architectural Presentations II 3 2 6 6

A continuation of ARC 1241. Prerequisite: ARC 1241.

ARC 1250 Site Surveying & 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: 1233.

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

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

ARC 1265 Materials and Methods of Architectural Construction II 3 2 6 6

A continuation of ARC 1264. Prerequisite: ARC 1264.

Art Courses

ART 102 Drawing & Composition 1 2 0 2

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

ART 103 Drawing & 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.

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 built processes of ceramics as a fine art. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
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 107 Advanced Drawing I	1	5	0	3

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

ART 108 Advanced Oil Painting	1	5	0	3

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

ART 109 Advanced Drawing	1	5	0	3

As ART 109 is a continuation of ART 107. ART 109 offers the opportunity for advanced study of design and composition through various drawing techniques. Structure and color are also studied. Prerequisite: ART 107.

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-built techniques. Prerequisite: 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-thrown and hand-built 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.

Audio Visual Course

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 92 Fundamental Biology I	3	2	0	4

An introduction to the cellular nature of life, including cell structure and function, nuclear division, reproduction laws of genetics and evolution. Prerequisite: None.

BIO 93 Fundamental Biology II 3 2 0 4

A basic course in biology with emphasis on the identification and association of the organism and its parts as associated with nursing. Prerequisite: None.

BIO 94 Fundamental Biology III 3 2 0 4

A basic course in biology with emphasis on the identification and association of the organism and its parts as associated with nursing. Prerequisite: None.

BIO 106 Anatomy & Physiology I 4 3 0 5

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 to organogenesis, with special emphasis on the cardiovascular, respiratory, skeletal and muscular systems. Designed laboratory experiments take the student through the dissection of the anatomies of the cat or fetal pig with an insight into the comparative anatomy of the human body. Prerequisite: BIO 92, CHM 93, CHM 96 or equivalent.

BIO 107 Anatomy & Physiology II 4 3 0 5

The student covers the nervous, digestive, urinary, reproductive, and endocrine systems. Designed laboratory experiments take the student through the dissection of the anatomies of the cat or fetal pig with an insight into the comparative anatomy of the human body. Prerequisite: BIO 106.

BIO 108 Microbiology 5 3 0 6

A basic course in microbiology with emphasis on micro-organisms and laboratory procedures for the identification, differentiation, eradication and preservation of the microbes both pathogenic and non-pathogenic. The use of chemical, physical and biological agents to accomplish the goals are emphasized. Prerequisite: BIO 107.

BIO 113 General Pathology 3 0 0 3

A study of differentiation between normal and abnormal tissues. Basic pathological processes and physical manifestations of selected diseases are discussed. Prerequisite: BIO 108.

BIO 201 Biology I 3 3 0 4

An introduction to cellular nature of life, including cell structure and function, organic molecules in protoplasm, enzymes, metabolism, nuclear division, reproduction, laws of genetics and evolution. A general survey of the plant kingdom with emphasis on classification, structure, life history of thallophytes, bryophytes, and tracheophytes. Prerequisite: None.

BIO 202 Biology II 3 3 0 4

A continuation of General Biology 201 with special emphasis placed on the invetebrate and vertebrate animals. Each phylum is surveyed with emphasis on classification; structure; life history of protozoans, parazoans, and metazoans. Comparative anatomy is emphasized between the frog and man. Prerequisite: BIO 201.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
BIO 208 Pathology for Paramedical Personnel	3	0	0	3

The student is acquainted with the general principles of pathology from the anatomic, histochemical, biochemical, and physiologic aspects. There is a study of frequently seen systemic diseases with a discussion of the pathology of the various systems. Emphasis is placed on the features of the various conditions which should be known by the technologist in performance of the indicated x-ray examinations. Prerequisite: BIO 107.

Building Maintenance Codes Courses

BMS 1133 Building Codes and Laws	2	2	3	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 interpretating local, State and national codes. Prerequisite: None.

BMS 1134 Building Codes: Plumbing	1	0	2	3

Building code requirements pertaining to residential and commercial structures; general study of heating, air conditioning, plumbing and electrical equipment, materials, and symbols; reading and interpreting local, State and national codes. Prerequisite: None.

Business Courses

BUS 81 Filing	3	0	0	3

A course designed to provide training in records storage and control. Filing principles and procedures are made realistic by the use of miniature letters, file boxes, and guides. Alphabetic, geographic, subject, and numeric filing are emphasized. Prerequisite: None.

BUS 85 Typewriting	2	3	0	3

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of keyboard, centering, and simple tabulation. Prerequisite: None.

BUS 86 Typewriting	2	3	0	3

Instruction emphasizes the development of speed and accuracy 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 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

This 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 and 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. It also gives a basic introduction to automated data processing. Prerequisite: BUS 94.

BUS 99 Family Economics 5 0 0 5

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 102 Typewriting 2 3 0 3

A beginning course which introduces the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Prerequisite: None.

BUS 103 Typewriting 2 3 0 3

Instruction emphasizes the development of speed and accuracy with further master of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms with emphasis on specialized areas. Prerequisite: BUS 102 or equivalent.

BUS 104 Typewriting 2 3 0 3

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

BUS 105 Typewriting 2 3 0 3

Emphasis on production typing, problems and speed building. Attention is given to the development of the student's ability to function as an expert typist producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms with emphasis on specialized areas. 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.

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.

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

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 & Transcription 3 2 0 4

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 & 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. Prerequisite: BUS 107 and BUS 104.

BUS 110 Office Machines 2 3 0 3

A beginning course emphasizing the touch operation on ten-key electronic calculators. Students receive instructions in computing interest; calculating payroll records; calculating percent of increase or decrease; reconciling bank statements; calculating setting 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 50 words per minute for five minutes on new material. Prerequisite: BUS 106, or equivalent, and BUS 102, or equivalent.

BUS 112 Filing 3 0 0 3

Fundamentals of indexing and filing, combining theory and practice through the use of a practice set. Alphabetic, numeric, geographic, and subject filing are emphasized. Prerequisite: None.

BUS 115 Business Law I 3 2 0 4

An introductory course designed to acquaint the student with fundamentals and principles of business law including the Federal and the State court systems, contracts, legal forms of business, property rights, wills and inheritance. Prerequisite: None.

BUS 116 Business Law II 3 2 0 4

A continuation of BUS 115 including the study of negotiable instruments, agency, bailments, sales, and conclusion of contracts. Prerequisite: BUS 115.

BUS 120 Accounting Principles I 5 3 0 6

Principles, techniques and tools of accounting for understanding of mechanics of accounting, collecting, summarizing, analyzing, and reporting information about service and merchantile enterprises, to include practical application of the principals learned. Prerequisite: None.

BUS 121 Accounting Principles II 5 3 0 6

Partnership and corporation accounting including use of a voucher system, bank reconciliation, payroll and payroll taxes. Emphasis is placed on transactions including partners' capital, corporate stocks, bonds, retained earnings and investments. Prerequisite: BUS 120.

BUS 122 Management 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. Prerequisite: BUS 121.

BUS 123 Business Finance I 2 2 0 3

Basic financial management including the study of the nature of financial management, financial analysis, working capital management, and long-term investment decisions. Prerequisite: BUS 120.

BUS 124 Business Finance II 2 2 0 3

A continuation of BUS 123 including the study of long-term financing, valuation, and mergers and financial reorganization. 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 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 183 Terminology & Vocabulary 3 0 0 3

A course designed to increase and improve the student's vocabulary with meaningful learning experiences in the development of spelling ability and vocabulary enrichment. Special emphasis is placed on business and professional vocabularies. Prerequisite: BUS 108.

BUS 183B Terminology & Vocabulary 3 2 0 4

A course designed to increase and improve the student's vocabulary with meaningful learning experiences in the development of spelling ability and vocabulary enrichment. Special emphasis is placed on prefixes, suffixes, troublesome word endings, synonyms, honomyms and business vocabularies. Prerequisite: None. Corequisite: Bus 261.

BUS 184 Terminology & Vocabulary 3 0 0 3

A continuation of the study to increase and improve the student's vocabulary with meaningful learning experiences in the development of spelling ability and vocabulary enrichment. Special emphasis is placed on prefixes, suffixes, troublesome word endings, synonyms, antonyms, and business vocabularies. Prerequisite: BUS 183.

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

BUS 184B Terminology & Vocabulary 3 2 0 4

A continuation of the study to increase and improve the student's vocabulary with meaningful learning experiences in the development of spelling ability and vocabulary enrichment. Emphasis is placed on business and special vocabularies as well as a review of grammar, punctuation, and basic business information in preparation for employment tests. Prerequisite: BUS 183B.

BUS 185 Business Organization 3 0 0 3

A survey of the types, functions, and practices of modern business organizations designed to develop an appreciation of the place of business organizations and management in our economic society. Prerequisite: None.

BUS 203 Advanced Typewriting 2 3 0 3

Emphasis is placed on increasing individual production rates. The student applies techniques in planning and typing mailable office copy. A review of letter styles, manuscripts, and statistical reports is stressed. Prerequisite: BUS 105.

BUS 204 Advanced Typewriting 2 3 0 3

A continuation of individual production rates as stressed in BUS 203, with emphasis placed on legal documents, statistical tabulation, and business forms of mailable quality. Prerequisite: BUS 203.

BUS 205 Advanced Typewriting 2 3 0 3

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. Prerequisite: Secretarial Science students: BUS 105, or General Office students: BUS 204.

BUS 206 Dictation & Transcription 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy 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. Prerequisite: BUS 105 and BUS 108.

Bus 207 Dictation & Transcription 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy is 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 205.

BUS 208 Dictation & Transcription 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy is 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 211 Office Machines 2 3 0 3

The secretarial and general office student receives instruction in the manipulation of the proportional spacing and the magnetic tape typewriters. Extensive training is given in the preparation of materials for duplication and the use of various duplicating equipment is included. Prerequisite: BUS 105.

BUS 214 Secretarial Procedures 3 2 0 4

A course designed to help the secretary become a more efficient and valuable employee. Personality and efficient work habits are stressed. Semi-executive duties involving secretarial decision-making and planning are included to promote job enhancement. Prerequisite: BUS 205 and BUS 206.

BUS 221 Intermediate Accounting I 3 2 0 4

Thorough working knowledge of concepts used in preparation and interpretation of financial statements. Each item of the income statement and balance sheet is carefully analyzed. Review of the accounting process and a thorough understanding of the valuation procedures for balance sheet presentation at current assets. Prerequisite: BUS 121.

BUS 222 Intermediate Accounting II 3 2 0 4

Application of accounting principles to the proper allocation of costs upon acquisition and disposal of fixed assets, investments, and other assets. Prerequisite: BUS 221.

BUS 223 Intermediate Accounting III 3 2 0 4

The application of accounting principles to proper balance sheet, presentation of current and long-term liabilities and stockholders equity. Also covers preparation of changes in financial position statements. Prerequisite: BUS 222.

BUS 224 Accounting (Advanced) 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.

BUS 225 Cost Accounting 5 3 0 6

Nature and purposes of cost accounting; accounting for direct labor, materials, and factory burden; job cost, process cost, and standard cost procedures. Accumulation and recording of cost data. Prerequisite: BUS 122.

BUS 227 Managerial Accounting 5 3 0 6

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

BUS 228 Personal Income Taxes 2 2 0 3

Application of Federal taxes to individuals. Covers preparation of form 1040 and supporting schedules. Including schedule—C. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
BUS 229 Income Taxes	3	4	0	5

Application of federal taxes to individuals, partnerships and corporations. Includes procedures for filing form 1040 with supporting schedules, form 1065 Partnerships and form 1120 Corporations. Prerequisite: BUS 121.

BUS 234 Business Management	5	0	0	5

Emphasis is placed on the basic principles of management including planning, organizing, staffing, directing, and controlling. Also presented is the role of the manager in the changing environment. Prerequisite: None.

BUS 235 Small Business Management	3	0	0	3

A study of the functions of planning, organizing, directing, and controlling as they relate to the small business. Designed to help the owner and/or manager understand the various responsibilities a small businessman has to face. Prerequisite: None.

BUS 239 Marketing	5	0	0	5

An introductory course 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 decisions areas in marketing—production, distribution, promotion, and pricing—are covered as well as the interactions of marketing and society. Prerequisite: None.

BUS 243 Advertising	5	0	0	5

A presentation of the management, planning, creation, and use of advertising in a non-technical manner in order to provide the student with an understanding and background that will allow him/her to continue 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 also are discussed in the course. Prerequisite: None.

BUS 247 Business Insurance I	3	0	0	3

A presentation of the basic principles of life, health, property and automobile insurance. A consumer oriented approach is taken with particular emphasis being placed on needs, costs and types of coverage. 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 at 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 & Merchandising	2	2	0	3

A course dealing with the changes and opportunities apparent in retailing today. Many aspects of the business recession of the early 70's including inflation, curtailed buying by consumers, and uncertainty in fashion are discussed. Also emphasized are the new techniques and managerial measures required for successful retail operation in today's business environment. Prerequisite: None.

BUS 256 General Office Practice 2 3 0 3

A course designed to help the clerical worker develop proper attitudes and efficient work habits. Dress and grooming, telephone communication, and mail processing and services are given special emphasis. Attention is also focused on job placement and advancement. Prerequisite: BUS 203.

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 key man insurance, non-qualified deferred compensation plans and split-dollar plans are covered as well as corporate recapitalization, professional corporate and business use of property and liability insurance. Prerequisite: BUS 247.

BUS 260 Government and Business 2 2 0 3

An in-depth study of the influence that government regulation has on business, labor and consumers. Major emphasis is on Federal regulation. Prerequisite: None.

BUS 261 Machine Transcription 1 4 0 3

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 1 4 0 3

This course develops the skill of direct transcription from oral dictation to mailable typewritten form. Decisions in editing, punctuation, spelling, and formatting are emphasized. Prerequisite: BUS 105, ENG 110 for Secretarial Science students. BUS 105 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: BUS 120.

BUS 268 Marketing & Retailing 2 21 0 9

A study of on-the-job problems associated with marketing and retailing. An orientation to decision-making and techniques used in the management of a retail establishment. Practical experiences in actual work environment will be carried out and discussion with practical solutions being a main objective. Prerequisite: All Marketing & Retailing required courses.

BUS 269 Auditing 3 2 0 4

Introduction to standards of auditing procedures required for the expression of an opinion as to the fairness of financial statements. Prerequisite: BUS 223.

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.

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

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. Emphasis is placed on the role of the supervisor in obtaining and maintaining an effective force. 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 are found useful to all individuals regardless of their fields of specialization; however, the emphasis is oriented to business and industrial concepts. The course presents clear statements, pertinent definitions, theorems and principles, followed by problems drawn from actual business statistical situations. Prerequisite: One year high school algebra or equivalent.

BUS 283 Statistics II	3	2	0	4

An extension of BUS 282 involving more complex statistical concepts and an introduction to Bayseian probability. Computer solution to business problems associated with stochastic variables will be explored. Prerequisite: BUS 282.

BUS 285 Salesmanship	5	0	0	5

A course 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 that they must be acquainted with. Prerequisite: None.

BUS 286 Contemporary Business & Economic Problems	3	0	0	3

A course designed to identify and analyze significant national and local business economic problems. The student evaluates 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 Display and Design 2 4 0 3

To give the student a basic knowledge of display and design and some practical experience by building displays and observing the preparation of commercial displays. The student studies the principles of design and arrangement such as balance, emphasis, harmony, proportion, rhythm, color and lightings. Prerequisite: None.

BUS 288 Fashion in Retailing 2 2 0 3

A course 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 student 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: BUS 249.

BUS 289 Advanced Salesmanship 3 0 0 3

To give the student a basic understanding of the psychology of sales and the psychological interaction of salesmen, sales managers, and customers in such a way that when applied in the job situation, it can be a potent instrument of change and open new avenues to success. Use is made of video taping equipment for analysis of various role playing situations. Prerequisite: BUS 285.

BUS 290 General Office & Secretarial Internship 1 15 0 6

This course provides on-the-job secretarial work experience. 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—Internship Prerequisite: Consent of Advisor.

BUS 291 Distribution Management 5 0 0 5

This course divides the study of distribution management into two parts. Students are introduced to the major topics of both physical distribution management and traffic/transportation management. Case studies are included to develop seasoned judgement in these areas. Major areas of study are transportation warehousing, inventory control, material handling, order processing, location analysis and industrial packaging. 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 involves 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 include theoretical and practical applications involving materials and methods of construction, preparation of the building site, building layout, footings and foundation wall construction, and form construction and erection. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
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 is included. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction and post and beam construction. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as electrical, air conditioning, heating, and plumbing. Prerequisite: CAR 1101, DFT 1110.

CAR 1103 Millwork & Cabinetmaking	5	0	15	10

Cabinet making and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment is emphasized in learning methods of construction of millwork and cabinetry. Practical applications include measuring, layout, and construction of base and wall cabinets, built-in desk, door and window frames, stairs, and interior and exterior cornice and trim. Materials and finishes are also studied. Prerequisite: CAR 1102, DFT 1111.

CAR 1104 Carpentry: Finishing	5	0	15	10

Exterior and interior trim and finish carpentry complete the general carpentry program. Included are materials and application methods used in finish carpentry such as exterior siding, exterior cornice and moldings, finish flooring, paneling, door frames and trim, doors and their hardware, window trim, molding, interior trim, installation of hardware, installation of built-in equipment and cabinets. Prerequisite: CAR 1103. Corequisite: CAR 1114.

CAR 1113 Carpentry Estimating	3	0	3	4

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

CAR 1114 Building Codes	3	0	0	3

A study is made of building codes and the minimum requirements for local, county 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 1109 Composition	1	0	3	2

Problems relating to the art of combining parts to produce the harmonious whole. Studies in size, location, shape line and color relations. Prerequisite: None.

CAT 1110 Sketching & Drawing	1	0	3	2

An introduction to the basic techniques and materials of drawing. Emphasis is placed on the various drawing media surfaces, and encouragement of graphic expression. Prerequisite: None.

CAT 1111 Reproduction Processes I 3 0 6 5

The study of methods and techniques of reproduction including diazo, and black and white photographic processes. 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 4

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

CAT 1120 Creative Problem Solving 2 0 6 4

The study of the problem-solving process. Emphasis is placed on the development of one's creative potential and open-mindedness. 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 will be 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 1228.

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: None.

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.

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

CAT 1213 Graphic Arts III 1 0 3 2

Experience includes the introduction and practice of preparing art for multi-color 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 Resumé and Portfolio Production 3 2 3 5

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

Chemistry Courses

CHM 93 Chemistry, Physical Science II, Level II 3 2 0 4

Introduction of the physical and chemical properties of substances, chemical changes, elements, compounds, chemical bonds, the Periodic law, atomic structure, chemical formulas and equations, the gas laws and molecular composition of gases and the concentration of solutions. This course meets the various requirements for an introductory course in chemistry. Prerequisite: None. Corequisite: MAT 95 or equivalent.

CHM 96 Chemistry, Physical Science III, Level II 3 2 0 4

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 compounds and the nomenclature of the important compounds. Laboratory experiments selected correspond to the material covered during this course. Prerequisite: CHM 93.

CHM 101 Chemistry I 3 2 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.

CHM 102 Chemistry II 3 2 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 nomenclature of some of the important compounds. Laboratory work consists of various inorganic tests and experiments. Prerequisite: CHM 101 or equivalent.

CHM 103 Chemistry III 3 2 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.

CHM 1101 Chemistry 3 2 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, atomic theory with special emphasis on electronic configuration, periodic table, stoichometry, 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.

Civil Engineering Technology Courses

CIV 93 Introduction to Technology 2 2 0 3

A course designed to acquaint the student with various technologies. This survey course helps the student to understand the role of the technician in these fields of engineering. The instruction time is divided with class and lab time spent in the major subject areas of: Civil Engineering, Electronics, Engineering Technology, and Environmental Engineering Technology. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
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: MAT 101, DFT 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 102, DFT 102.

CIV 103 Surveying III, Route Surveying	2	6	0	4

Route surveys by ground and aerial methods; simple, compound, reverse, parabolic and spiral curves; highway surveys and plans, including mass diagrams. Prerequisite: CIV 102. Corequisite: MAT 103.

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 9100) 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, are visited to observe procedures and equipment. Prerequisite: None.

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. Prerequisite: MAT 102, PHY 101.

CIV 114 Statics	5	0	0	5

Forces, resultants, and types of force systems; moments, equilibrium of coplanar forces by analytical and graphic methods; stresses and reactions in simple structures; equilibrium of forces in space, static and kinetic friction; center of gravity, centroids, and moment of inertia. Prerequisite: PHY 102. Corequisite: MAT 102.

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; subsurface investigation. Prerequisite: CIV 219.

CIV 204 Surveying IV	2	6	0	4

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

CIV 217 Construction Planning Methods 3 2 0 4

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

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, introduction to statically indeterminate beams; columns and combined stresses. Testing of the properties of ferrous and nonferrous metals, timber, stone and clay products; load and strain measurements; behavior of materials under load; nondestructive tests. Prerequisite: CIV 114, PHY 102, MAT 103.

CIV 221 Reinforced Concrete 5 0 0 5

Analysis and design of reinforced concrete beams, floor systems, and columns by the working stress method. Use of CRSI Design Handbook and ACI Building Code. Introduction to ultimate strength design. Prerequisite: CIV 114, CIV 219.

CIV 223 Codes, Contracts, & Specifications 2 0 0 2

Basic principles and methods most significant in contract relationships; appreciation of the legal considerations in construction work; study of the North Carolina Building Code and local building codes; interrupting and outlining specifications. Prerequisite: None.

CIV 225 Construction Estimates 3 6 0 5

Interpretation of working drawings of timber, structural steel, and reinforced concrete structures, and from plans and specifications; approximate and detailed estimates of costs; bidding procedures and preparation of bids. Prerequisite: CIV 217. Corequisite: CIV 221.

CIV 228 Highway & Structural Drafting 1 6 0 3

Interpretation of field notes into formal drawings. Comprehensive study of State mapping laws, basic site planning, working plans for highways and airports, reinforced concrete structural details, structural steel detailing. Prerequisite: DFT 102, CIV 103, CIV 219.

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 to the organization of municipal services, and air pollution standards and control. Prerequisite: CIV 108, CIV 202, and CIV 228.

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, N. C. Highway Commission, and AREA; 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. Railroad civil engineering problems are studied as time permits. Prerequisite: CIV 101, CIV 103, CIV 202, CIV 221, CIV 231.

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

CIV 231 Portland Cement & Asphalt 3 3 0 4

Study and tests 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: CIV 114, CIV 217. Corequisite: CIV 219, CIV 202.

CIV 240 Elements of Cartography 2 4 0 3

The course initially deals with concepts of scale and coordinate systems as the fundamentals to mapping, followed by map projection, methods of compilation and symbolization. Instruction includes elements of design, typography and lettering and map reproduction and construction. Air photographs are treated from the interpretation angle as well as for compilation and control. Prerequisite DFT 101 of Practical Work in Drafting Office. Corequisite: MAT 95-96 or MAT 101.

CIV 271 City & Regional Planning 3 0 0 3

A basic study of urban planning with emphasis on residential land planning, commercial land planning industrial land planning, community facilities planning, transportation planning; study of capital improvement programs and financing. Prerequisite: None.

Cosmetology Courses

COS 1101 Cosmetology Law & Ethics 5 0 8 7

Designed as a study of the law as pertains to the practice of Cosmetology in the State of North Carolina, with accent on requirements, examinations, licensing, apprenticeships, sanitation. Emphasis is also placed on the proper conduct and business dealings of cosmetologists in relation to their employer, patrons, and co-workers. A course in personal hygiene is also included. Prerequisite: None.

COS 1102 Hairstyling I 5 0 8 7

The theory and practical application on manikins of basic hairstyling, including use of tools, materials waving, and the proper structure of sculpture curls. Basic roller patterns and correct pin placement are stressed. Also a study of bacteriology, sterilization, and sanitation is covered. Prerequisite: COS 1101.

COS 1103 Permanent Waving 5 0 9 8

An introduction to the various methods of permanent waving, including its history as compared with modern technique. Course covers an in-depth study of chemicals used and their ultimate effect on the hair. Safety precautions, basic cutting, sectioning, wrapping and processing of permanent waves is stressed. Chemical hair relaxing, thermal pressing and curling are also covered. Prerequisite: COS 1102.

COS 1104 Basic Clinical Experience 3 12 0 7

The practical application of permanent waving and hair relaxing on live models, including supervised haircutting, wrapping, processing, hair coloring and the ultimate styling of the hair. Prerequisite: COS 1103.

COS 1105 Hairstyling II 2 12 0 6

The cuttings, styling and combing of Unique hairstyle effects, using various combinations of sculpture curls and roller placements. Included are the studies of facial shapes, special haircuts, various combing techniques, and the care and styling of wigs. Prerequisite: COS 1104.

COS 1106 Anatomy: Skin, Hair, and Nails 4 7 0 6

A basic study of the anatomy of the human body, with special emphasis on the structure, diseases, and care of the skin, hair and nails. Course includes technique in facials, scalp and hair treatments, and manicuring. Superfluous hair removal and facial makeup are covered. Prerequisite: COS 1105.

COS 1107 Advanced Clinical Experience: Permanent Waving 4 7 0 6

The advanced practical application of permanent waving on live models with strong accent on special haircuttings, choice of appropriate chemical products, advanced wrapping techniques, individual processing, and special effects in finished styling. Prerequisite: COS 1106.

COS 1108 Hair Coloring 4 0 9 7

An in-depth study of hair structure and the ultimate effect on it of hair-coloring chemicals. Course includes hair lightening materials and methods, hair coloring materials and methods, individual allergy and other safety precautions, as well as the semi-permanent and permanent colors. Prerequisite: None.

COS 1109 Shop Management Salesmanship 5 0 8 7

A study of beauty shop management and salesmanship. Course covers dealing with day-to-day problems of the salon, location of the salon, lease, physical layout, check list for structural limitations, color scheme, insurance, business laws, health regulations, customer reception, management, operator relationships, financial control, record keeping, salesmanship and merchandising, advertising, budget and professional ethics. Prerequisite: None.

Dental Courses

DEN 101 Dental Anatomy and Physiology 5 2 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. The laboratory portion includes 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, 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.

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

DEN 104 Dental Materials 2 2 0 3

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 I 2 0 0 2

A study of the basic techniques for complete denture construction. Laboratory phase includes construction of base plates and occlusion rims and mounting complete denture casts as an adjustable articulator. Prerequisite: None.

DEN 107 Complete Denture Techniques II 3 2 0 4

A continuing study of the fabrication of complete dentures using anatomic teeth on an adjustable articulator. Emphasis is placed on balanced articulation. Prerequisite: DEN 101, DEN 104, and DEN 106.

DEN 108 Partial Denture Techniques I 3 4 0 5

A study of basic techniques used in fabrication of cast removable partial dentures frameworks. Laboratory phases include fundamentals of survey and design, constructing refractory casts, forming the wax pattern, investing and casting the frameworks utilizing chrome-nickel alloy. Prerequisite: DEN 101, DEN 104, DEN 110.

DEN 109 Partial Denture Techniques II 3 2 0 4

A continuing study of the fabrication of various types of temporary removable appliances including wrought-metal. Laboratory procedures including bending and assembling wrought clasps, and the fabrication of combination wrought and cast metal frame-works. Prerequisite: DEN 108.

DEN 110 Dental Metallurgy 2 2 0 3

A study of gold and base metal alloys and their application to dentistry. Course content will include physical and mechanical properties, crystalline and wrought structures, solidification process, investments, methods of casting, soldering, heat treatment, metallurgical testing and specific brands of alloys used in dentistry. Prerequisite: DEN 104.

DEN 111 Clinical Dental Hygiene I 6 3 0 7

An orientation to dental terminology and history and organization of the profession of Hygiene. Introduction to the roles and relationships of the members of the dental health team. Study of professionalism as it relates to personal appearance, attire, and attitude. A comprehensive study of the care and maintenance of the dental equipment and operatory; sterilization techniques; reception, positioning & dismissal of patients, obtaining a complete and accurate medical/dental history; obtaining and recording vital signs; rationale for and technique of performing a thorough extra and intra-oral inspection; importance of occlusion; the definitions, etiology & appearance of all stains, soft and hard deposits in the mouth; and the necessity and value of patient education. During

laboratory hours the student studies and demonstrates the ability to chart oral conditions; perform an oral inspection; classify occlusion & list deviations from normal; complete all personal, dental and medical records; demonstrate proper care of equipment and sterilization techniques; and teach toothbrushing techniques and adequate home care procedures. Prerequisite: None.

DEN 112 Dental Anatomy & Physiology 4 0 0 4

Study of the anatomy of the teeth and their supporting tissues. Lectures on nomenclature, morphology, structure, function and occlusion of the teeth. Identifying extracted teeth as well as carving and drawing some of both the primary and the permanent teeth. Prerequisite: None.

DEN 113 Histology and Embryology 2 0 0 2

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 considerations as related to dental hygiene practice. Prerequisite: High School Biology and Chemistry.

DEN 114 Cast Inlay and Crown Techniques 4 4 0 6

A study of 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. Prerequisite: DEN 101, DEN 104.

DEN 115 Pathology for the Hygienist 3 0 0 3

A study of differentiation between normal and abnormal tissues. Basic pathological processes and physical manifestations of selected diseases are discussed. Prerequisite: BIO 108.

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

DEN 116 Dental Office Emergencies 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 management kit are discussed and student learns when and how each item in the kit is used. Students demonstrate the use of the oxygen and CPR. Prerequisite: DEN 131.

DEN 117 Crown and Bridge Techniques I 1 6 0 4

A study of techniques for the construction of acrylic jacket crowns, acrylic veneer crowns, and fixed bridges of various designs utilizing metal with veneer facings. Prerequisite: DEN 114.

DEN 118 Crown and Bridge Techniques II 1 6 0 4

A continuing study of the physical properties ot veneering materials including techniques for construction of fixed bridges in the anterior and posterior regions utilizing flatback facings. Prerequisite: DEN 117.

DEN 121 Dental Hygiene II 2 4 0 3

A continuation of DEN 111. Students study flourides and the various techniques for the topical application of fluoride; the technique for and the effectiveness of pit and fissure sealants; the classifications and usage of basic scaling instruments; procedure for sharpening instruments; the rationale for and the procedure for applying topical anesthesia; the care of hypersensitive teeth; and polishing techniques. During laboratory hours the students demonstrate the ability to combine all techniques learned in DEN 111 & DEN 121 as they perform a complete oral prophylaxis on a manikin, a student/patient, and a patient. Prerequisite: DEN 111.

DEN 122 Head and Neck Anatomy 2 0 0 2

A detailed study of the musculature, blood and nerve supply of the head and neck, reviewing the bones, landmarks, sinuses and foramina of the skull. Prerequisite: BIO 106, 107.

DEN 131 Dental Hygiene III 2 0 12 6

A continuation of DEN 121. Students study the variations in technique with special needs such as gerodontic patient, epileptic, cardiac, mentally and physically handicapped, etc. Students learn to use the phase/contrast microscope as they teach plaque control. Table clinics are prepared and presented by each student. Clinic hours are utilized as students perform a complete and thorough oral prophylaxis on a number of patients. Prerequisite: DEN 121, 133.

DEN 133 Radiology 2 3 0 3

A study of the nature, properties and use of x-rays. Film placement, tube angulation, processing and mounting of films is practiced during laboratory sessions. The interpretation and recognition of oral anatomy landmarks and abnormalities on x-ray films is part of the training. Prerequisite: DEN 112.

DEN 141 Dental Hygiene-Summer 1 6 0 3

A continuation of DEN 111, DEN 121, and DEN 131. All previously learned skills are applied in this course. Prerequisite: DEN 111, 121, 131.

DEN 201 Advanced Complete Denture Techniques 2 6 0 5

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 3 4 0 5

A study of the physical properties and manipulation of porcelain for jacket crowns. Laboratory phase includes the preparation of dies, adoption of platinum matrix, firing, glazing,and personalization. Prerequisite: DEN 101, 104, 110, and 207.

DEN 203 Dental Laboratory Practice 0 4 0 2

The fabrication of appliances from casts and prescriptions supplied by affiliated dentists and Schools of Dentistry. The dentist-laboratory technician relationship is fostered. Prerequisite: DEN 201, 204, and 207.

DEN 204 Partial Denture Techniques III 1 4 0 3

A continuing study of partial denture techniques that include construction of all metal removable partial dentures using tube teeth and flatback facings. Tooth selection, set-up flasking, processing, and finishing and polishing are included. Prerequisite: DEN 109.

DEN 205 Advanced Partial Denture Techniques 2 6 0 5

A study of advanced techniques in removable partial denture design. Laboratory exercises include the use of precision attachments, and advanced clasping techniques. Prerequisite: DEN 204.

DEN 206 Advanced Ceramic Techniques 2 8 0 6

The study of advanced techniques for bonding porcelain to precious metal and various methods of personalizing porcelain used in bridge construction. Prerequisite: DEN 202.

DEN 207 Advanced Crown & Bridge Techniques 1 4 0 3

A study of techniques for the construction of bridges combining resins and gold framework using the plastic build-up veneering material. Prerequisite: DEN 118.

DEN 208 Advanced Dental Laboratory Practice 1 4 0 3

Further practice in fabrication of advanced appliances from casts and prescriptions supplied by affiliated dentists and Schools of Dentistry. Continued emphasis on ethical dentist-laboratory relations. Prerequisite: DEN 203.

DEN 209 Jurisprudence and Ethics Seminar 3 0 0 3

A study of the legal and ethical aspects of dental laboratory practice, dentist-laboratory relationship, and business aspects of operating and managing a dental laboratory. Guest speakers and field trips are utilized. Prerequisite: None.

DEN 210 Periodontology 3 0 0 3

A brief review of basic histology, then the classification of periodontal diseases, etiology, periodontal therapy, and preventive periodontics. Prerequisite: DEN 113, 115, 116, 121, 122, 133, 141, 211, 212, 213, 216, 221, 222.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
DEN 211 Dental Hygiene IV	1	16	0	6

A complete and thorough oral prophylaxis is performed on each patient. Proper use of the ultrasonic scaling device is expected in this course. Prerequisite: DEN 131.

DEN 212 Community Dental Health	4	0	0	4

Study of the factual information and methods of instruction employed in the teaching of oral hygiene in the dental office, community and school. A survey of methods used to determine the dental health status of the community and of preventive measures used to improve the dental health of the population. Topics include epidermiological indices, and studies; evaluation of scientific reports and fluoridation. Prerequisite: DEN 111, 121, 131.

DEN 213 Oral Pathology & Cariology	3	0	0	3

Study of the basic pathological processes, physical manifestations of selected disease, their association with the oral cavity, and common pathological conditions of the teeth and oral cavity. Vital differentiation between normal and abnormal tissues. Prerequisite: BIO 107, BIO 108.

DEN 216 Community Central Health Seminar	0	3	0	1

This course provides students the opportunity to relate public health dentistry to their community. Students gain experience in talking to a wide variety of groups ranging from pre-school to the elderly. Several field trips are taken during this course. Prerequisite: DEN 212.

DEN 221 Dental Hygiene V	1	16	0	6

A complete and thorough oral prophylaxis is performed on each patient. All procedures previously learned must be demonstrated. Prerequisite: DEN 211.

DEN 222 Dental Materials in Dental Hygiene Practice	3	0	2	4

Physical properties and sources of various materials used in dentistry. The dental hygiene student learns to manipulate these materials for any of the routine procedures performed in the dental office. Prerequisite: DEN 112 & DEN 122.

DEN 223 Dental Pharmacology & Anesthesiology	2	0	0	2

Lecture coverage of the properties, dosage and effects of therapeutic drugs, palliative preparations and anesthetics. Emphasis is placed on pharmacological agents used in dentistry. Prerequisite: BIO 108.

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 Assisting	0	3	0	1

This course teaches the hygienist the rudiments of chairside assisting to include such things as instruments, instrument transfer, tray set-ups, and oral evacuation procedures. It is not designed to make the hygienist an assistant, but to increase the hygienist's usefulness in the dental office. Prerequisite: DEN 222.

DEN 231 Dental Hygiene VI 1 16 0 6

This course is a continuation of DEN 221 concentrating on the refinement of dental hygiene skills. A complete and thorough oral prophylaxis is performed on two patients per clinic session with allotted time approaching that allocated in private practice. Prerequisite: DEN 221.

DEN 232 Ethics & Jurisprudence 1 0 0 1

Lecture coverage of professional ethics and laws and regulations related to the practice of dentistry and dental hygiene. Topics include code of ethics, applying for employment, and professional liability. Prerequisite: DEN 221.

DEN 233 Dental Specialties 3 0 0 3

In-depth study of the special fields of dentistry. Lectures by dental specialists concerning endodontics, periodontics, prosthedontics and surgery enable students to relate dental hygiene to all phases of dentistry. Prerequisite: DEN 221.

DEN 298 Dental Hygiene Seminar 2 0 0 2

This course helps prepare Dental Hygiene students to take their National Board Examination. Each course the students have taken is reviewed. Prerequisite: DEN 211.

DEN 1001 Introduction to Dental Assisting 2 0 0 2

An introduction to the history of dental assisting, the role of the dental assistant in practice and its relationship to other members of the dental health team, dental terminology, and the personal and ethical requirements for safe and effective practice. Prerequisite: None.

DEN 1002 Dental Materials 3 4 5 6

Identification of dental materials, characteristics of each, evaluation of quality, principles and procedures related to manipulation and storage of various dental materials. Prerequisite: None.

DEN 1003 Preclinical Science I 4 0 0 4

Basic information from bacteriology, anatomy and physiology, and oral and dental anatomy as related to dental science and the practice of dental assisting. Designed as three units which may be scheduled for either concurrent or sequential teaching. Prerequisite: None.

DEN 1004 Preclinical Sciences II 4 0 0 4

Fundamental information from oral pathology, pharmacology, nutrition, and common emergencies as related to the role of the dental assistant. Designed in four units to permit flexibility in scheduling. Prerequisite: DEN 1003.

DEN 1005 Dental Accounting 3 0 0 3

Fundamentals of Accounting. Practice in application of principles to various forms commonly used in the dental office. Prerequisite: None.

DEN 1006 Clinical Procedures I 3 0 6 5

Principles and procedures related to dental instruments and equipment, and chairside techniques of dental assisting with emphasis on four-handed dentistry. Prerequisite: DEN 1002.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
DEN 1007 Clinical Procedures II	4	2	0	5

Role of the dental assistant in various dental specialties, such as endodontics, periodontics, orthodontics, prosthodontics, and oral surgery. Prerequisite: DEN 1006.

DEN 1008 Dental Office Management II	2	0	3	3

Principles and procedures related to management of the dental office, includes maintaining inventories and financial records, ordering supplies, making appointments, and establishing patient rapport. Prerequisite: DEN 1005.

DEN 1009 Dental Office Practice I	0	2	12	5

Introduction to practice in the dental office or clinic. Emphasis is on the dental assistant's role in chairside procedures. Prerequisite: DEN 1006. Corequisite: DEN 1007 and DEN 1008.

DEN 1010 Dental Office Practice II	0	0	24	8

Practice in the dental office or clinic; rotation of assignments to encompass experience in office management, the dental laboratory, and the operatory. Emphasis on chairside assisting in a variety of clinical procedures. Prerequisite: DEN 1009.

DEN 1011 Dental Assistant Seminar	2	0	0	2

Study of personal responsibilities as a member of the dental health team, including employee-employer relations, opportunities for continued personal and professional development. Prerequisite: DEN 1011.

DEN 1012 Dental Roentgenology	2	0	3	3

Study of principles related to exposing, processing, and mounting dental radiographs. Radiation hazards and safety measures employed for protection of patient and self are stressed. Prerequisite: None.

DEN 1013 Oral Health Education	1	2	0	2

Study of the etiology, prevention, and control of dental caries and periodontal disease with emphasis on the dental assistant's role in oral health education. Prerequisite: DEN 1007.

DEN 1022 Dental Anatomy & Physiology	4	0	0	4

Study of the structure and functions of the permanent dentition, primary dentition and supporting structures. Laboratory experiences consist of studying and identifying models and extracted natural teeth. Prerequisite: None.

DEN 1025 Nutrition	2	0	0	2

Study of the 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 is stressed. Prerequisite: None.

Drafting Courses

DFT 90 Mechanical Drawing I 2 2 0 3

Fundamental principles of orthographic projection, working drawings and sections, with emphasis on visualizing. This course includes study in orthographic projection, dimensioning, and various other phases of working drawings. Also included is an introduction to osometric drawings, oblique projection, and blueprinting. Prerequisite: None.

DFT 92 Mechanical Drawing II 2 2 0 3

This course includes further study in orthographic projection, sectioning, and various other phases of working drawings. Also included is an introduction to isometric drawings, oblique projection, and blueprinting. Prerequisite: DFT 90 or DFT 93.

DFT 93 Elementary Drawing 2 2 0 3

This is an introductory course in drawing and sketching for student needing a knowledge of drawing principles for reading blueprints and schematics, and for 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 freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced. 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 are studied. More 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 is studied. Dimensioning practices for details and working drawings, approved by the American Standards Association is also included. Introduction is given to intersection and developments of various types of geometrical objects. Prerequisite: DFT 101.

DFT 104 Technical and Industrial Drafting I 2 2 0 3

Introduction to drafting, use of instruments, lettering, geometric construction, orthographic projection, sections and conventions. Emphasis is placed on theory of drafting in the preparation of working drawings. Selected Manufacturing Processes are introduced and shop notation and industrial procedures stressed. Prerequisite: None.

DFT 105 Technical and Industrial Drafting II 2 2 0 3

Continuation of topics introduced in DFT 104, plus problems in descriptive geometry, auxiliary views, screw threads and fasteners, and assembly drawings. Also included is an introduction to the drawing of plans for plant layout applications. The student is introduced to selected manufacturing processes. Prerequisite: DFT 104 or equivalent.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
DFT 1104 Blueprint Reading	1	2	0	2

Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures, and pictorial sketches. Prerequisite: None.

DFT 1110 Blueprint Reading: Building Trades	1	2	0	2

Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.

DFT 1111 Blueprint Reading & Sketching	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.

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 & Sketching	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 Trades	1	2	0	2

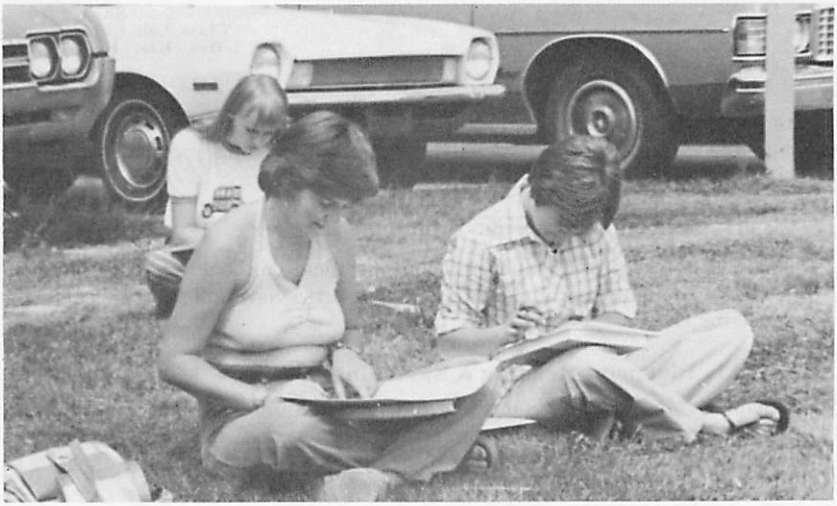
Sketching diagrams and schematics and interpretation of blueprints applicable to the plumbing trades. Emphasis is on plumbing plans for domestic and commercial buildings. Piping symbols, diagrams and notes are studied in detail. Applicable building and plumbing codes are used for reference. Prerequisite: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

DFT 1116 Blueprint Reading: Air Conditioning	1	0	3	2

A specialized course in drafting for the Heating, Air Conditioning and Refrigeration student. Emphasis is placed on reading blueprints that are common to the trade: blueprints of mechanical components, assembly drawings, wiring diagrams and schematics, and floor plans and shop sketches. The student makes tracings of floor plans and lays out air conditioning systems. Prerequisite: DFT 1180 and AHR 1145.

DFT 1117 Blueprint Reading: Welding	1	2	0	2

A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications. Prerequisite: DFT 1104.



DFT 1118 Pattern Development and Sketching 3 0 0 3

Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates. Prerequisite: DFT 1117.

DFT 1125 Descriptive Geometry 2 3 0 3

Graphic 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 is accompanied by the analytical solution. Prerequisite: DFT 1170.

DFT 1169 Drafting Fundamentals 1 0 3 2

A study of projection systems, including: orthographic, isometric, oblique and the preparation of drawings of the same. Dimensioning practices are studied with reference to the American Standards Association practices. Methods of reproducing drawings is included at the appropriate time. Prerequisite: None.

DFT 1170 Basic Drafting 1 0 3 2

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, and freehand sketching consisting of both orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views. Prerequisite: None.

DFT 1171 Basic Industrial Drafting 1 0 3 2

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 wherever possible. Prerequisite: None.

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

DFT 1172 Technical Sketching 2 0 3 3

Study and practice in freehand sketching of machine parts with pencil. Sketchings 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 Mechanical Drafting I 1 0 6 3

The trainee studies simple and successive resolutions 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 materials as a proof of the solution to the problems drawn. Basic pipe drafting is introduced. Prerequisite: DFT 1170.

DFT 1180 Trade Drafting I 2 4 0 4

Fundamental drafting principles with instruction and practice in lettering, orthographic projection, working drawings; introduction of the principles of 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 3 0 3

Continuation of the study of projection theory with assembly drawings, sections, auxiliaries, and screw threads are introduced. The major portion of the student's time is spent in the preparation of working drawings for use in the shop. Included are working drawings of gears, cams, pulleys, sprockets and other machine elements. Commercial standards are introduced as well as the drawing of elementary jigs, fixtures, and other tool design drawings. Prerequisite: DFT 1180.

DFT 1190 Mechanical 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 are studied and drawings are made involving these items. Principles of design are introduced with the study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions are studied. Drawings are made involving these mechanisms. The plant layout drawing is introduced. Prerequisite: DFT 1173.

DFT 1191 Machine and Tool Drafting 1 0 6 3

Introduction to tool drafting as it relates to manufacturing processes and machine tools. Basic drafting and design problems involving jigs and fixtures. Also covered are standard parts, and an introduction to the construction and function of punches and dies. Prerequisite: DFT 1173.

DFT 1192 Manufacturing Processes and Tolerancing 2 0 3 3

Advanced machine operations involving production operations such as staddle milling, indexing, special fixtures, grinders, grinding, automation, transfer and special machines; demonstrations on 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 an assembly. Standards are studied and explained. Applications are in the form of drawings of components or assembly. Standards are studied and explained, as are applications, in the form of drawings of components and gages. Application of metric units is included. Prerequisite: MEC 1113 and DFT 1170.

DFT 1193 Mechanical Drafting III 1 0 6 3

Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices are areas of study. Forging and casting drawings are made from layouts. Specifications, parts lists, and bills of materials are emphasized in this course. The student develops a complete set of working drawings of a tool, jig fixture or simple machine and learns principles or design, and handbook and manual usage. Prerequisite: DFT 1173.

DFT 1194 Design Drafting 1 0 6 3

A drawing board approach is used to develop and strengthen design skills that distinguish an engineering draftsman from a basic scientist. Emphasis include not only the creative and economic considerations, but involves practical drawing-board solutions similar to those found in industry. Every effort is made to make all drafting work conform to industrial practices and procedures. Steel fabrication drafting and drawings of welded parts is introduced. Prerequisite: DFT 1190 and DFT 1191.

DFT 1195 Steel Fabrication Drafting 1 3 0 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 purpose. 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 are included. Prerequisite: DFT 1181.

Economics Courses

ECO 102 Macroeconomics 2 2 0 3

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ECO 104 Microeconomics	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: None.

ECO 201 Labor Economics	3	2	0	4

An advanced course stressing basic economic principles and their application to the field of labor. Emphasis is placed on the structure of American labor unions and the role they play in the economy, income distribution, and collective bargaining. Prerequisite: ECO 102 and 104.

Eco 205 Applied Economics	3	0	0	3

Practical applications of economics as it relates to man in his quest for economic security. The roles of land, labor, capital, and government are emphasized along with free enterprise and its place among world economic systems. Prerequisite: None.

ECO 1105 Applied Economics	3	0	0	3

A course designed to help the student better understand present-day economic problems. Topics include production, consumption, exchange and distribution, money and credit, business fluctuations, labor and management relation, and challenges to our system of free enterprise. Prerequisite: None

Electronic Data Processing Courses

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 and Decision Tables used in the solution of commercial problems will be studied extensively. Prerequisite: None

EDP 104 Introduction to Electronic Data Processing	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 I	4	3	0	5

An introductory course in computer programming with the Fortran language. Flowcharting, language structure, statements and programming techniques are presented for a logical approach to computer programming. The students develops program logic and codes several Fortran programs for solving problems typical of everyday business and industry. Prerequisite: EDP 103 and 104 or EDP 112

EDP 107 Fortran II	3	4	0	5

An extension of EDP 105. The student develops additional programming skills in writing Fortran programs using more complex logic techniques and methods. Use of Fortran in solving problems which requires more advanced mathematical concepts is explored. Prerequisite: EDP 105 or 117.

EDP 109 Cobol I 4 3 0 5

A fundamental course in COBOL programming. The COBOL language fundamentals, programming methods and techniques are studied. The student will develop program logic and write COBOL programs solving sample problems. Prerequisite: EDP 112 or EDP 103/104 or equivalent.

EDP 110 Cobol II 3 4 0 5

An extension of EDP 109, the student develops additional programming skills in writing COBOL programs on more complex business problems. Prerequisite: EDP 109.

EDP 112 Introduction to Computer Systems 3 3 0 4

An introductory course in computer systems for the student who plans to pursue the degree in accounting. The course covers the general area of computer terminology, management information systems, introduction to hardware, key punching, flowcharting, progress preparation, file concepts, and three languages, Cobol, Fortran, RPG. Prerequisite: None.

EDP 114 Operating Systems 3 0 0 3

An introductory course on computer supervisory and executive routines provided by the manufacturer. This course devotes attention to the IBM 360/370 series and NCR century series job control language, linkage editor, data sets, etc. Prerequisite: EDP 104 or equivalent and one programming language.

EDP 117 Fortran Engineering 2 4 0 4

An introductory course in the Intermediate Fortran programming language as it specifically applies to problems occurring in the various engineering technology curricula. This course is also an elective for EDP students interested in mathematically oriented computer programming concepts. It provides a study of the language structure, statements, logic, and programming methods which permit a student to develop and code several programs in his particular discipline. Prerequisite: MAT 106 or equivalent.

EDP 198 Keypunch I 1 6 0 3

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, to the fact that keypunch is the initial and very important step in the data processing job. Prerequisite: None

EDP 199 Computer Operator 3 4 0 5

A skills course in the operation of a disc-oriented (DOS) computer system including manipulation of hardware as well as operating system software routines, utilities, and computers. A basic study of the assembler language is included. Prerequisite: EDP 103 and 104 or EDP 112 or equivalent.

EDP 204 Cobol III 3 4 0 5

A group project programming course organized under the data processing organizational environment of a business; a simulation of a business Data Processing Department and how it operates within the company. Prerequisite: EDP 110.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
EDP 205 New Areas in EDP	3	0	0	3

A research course in the new areas of computer science, from new technological advances in hardware to the new advances in software and languages, and the new applications of computers in business and industry. Prerequisite: MAT 106/107, EDP 105 or equivalent.

EDP 207 Assembler Language 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. Prerequisite: EDP 109, 110, 204 or 2 languages.

EDP 208 Assembler Language II	3	4	0	5

An extension of EDP 207. The student develops more complex program logic and write programs using more complex and sophisticated data files and input/output devices. Prerequisite: EDP 207.

EDP 216 Data Processing Project	3	12	0	7

During the last quarter, the student develops a simulated field project using materials from texts, supplemented by actual industrial problems. Students interview local firms, construct proposed systems and progress through the actual proposal with samples of work to be done. Prerequisite: EDP 204 and EDP 207 or permission of instructor.

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, inter-computer communications, etc., are studied and examined during laboratory periods. Prerequisite: EDP 104 or similar course.

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 229 Keypunch II	2	2	0	3

An extension of EDP 198, this course is presented to develop speed and accuracy in keypunch ability. Typical business data are presented for practice. Prerequisite: EDP 198 or consent of instructor.

EDP 230 RPG II-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 112 or EDP 103/104 or equivalent.

EDP 231 RPG II-II 3 4 0 5

An 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.

EDP 298 Individual Study — EDP No Credit

This is a self-study general course by which a student may register to use EDP equipment, keypunches and computer time. The purpose is chiefly to permit more accurate computer usage determination. Prerequisite: consent of EDP instructor.

EDP 299 EDP Cooperative Training 0 15 0 5

Provides the student with an opportunity to pursue, under staff supervisor, work experience in a specialized field. Periodic conferences are held with each student and employer while the student is receiving training. This course offers valuable experience and training in on-the-job experience and gives realism and motivation to the student's academic and technical study program. Prerequisite: consent of instructor.

Education Courses

EDU 80 Basic Study Skills 3 2 0 4

The objective of Education 80 is to develop or enhance the ability of students in using successful study skills, thereby improving performance in mastering academic work. How to study textbooks, how to take notes from lectures, how to write a term paper and the components of study itself are some of the topics taught in Basic Study Skills. Prerequisite: None.

EDU 87 Language Skills 3 2 0 4

This course is a language skills course which combines reading, grammar, and composition and is arranged in such a way that a student is free to work at his own level. Much individual contact between instructor and student is required in this effort. While the course is not directed primarily at any particular facet of language, it does include work attack skills, dictionary skills, reading comprehension, direction following, sentence and paragraph writing, plus capitalization and punctuation. Prerequisite: None.

EDU 88 Learning Skills 0 5 0 2

This course is designed to combine input from several disciplines to prepare students with the knowledge of and skills in learning necessary for academic success in regular curricula. The course is devoted primarily to developing good study skills drawing from English and mathematics as generally applicable to all disciplines. Incorporated with the material and the student activities are dictionary skills, spelling, composition, and such number concepts as addition, subtraction, division, and multiplication plus other efforts to correct individual deficiencies. Prerequisite: None.

EDU 89 General Science I 3 2 0 4

This course is designed to serve the special needs of those students who need to learn or review the basic scientific facts and ideas that are normally covered in an ordinary general science class. The course is arranged into two phases. Prerequisite: EDU 88.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
EDU 90 Career Planning	3	2	0	4

This course provides the student an opportunity to understand the basic steps required for preparation and entrance into a career. Concepts are stressed which are valuable in identifying and eliminating barriers which inhibit selection of and progress in chosen careers. Prerequisite: None.

EDU 100 Principles of Learning	3	0	0	3

This course is a study of techniques of teaching which will be of assistance to students who plan to become teachers, teacher's aides, or day-care aides. Some of the major topics studied are the socialization of the young child, development through the early school years, principles of learning and teaching (as they apply to the classroom), uses and methods of evaluation and introduction to standardized ability and achievement tests. Successful practices in teaching are stressed. Prerequisite: None.

EDU 102 Introduction to Library Science	0	2	0	1

This course is designed to introduce the General Education student to the various aspects of the library. The student is required to spend two periods per week in practical work, hands-on work in the main library, under the supervision of a General Education instructor and/or a member of the library staff. Prerequisite: None.

EDU 103 Foundations of American Education	3	0	0	3

This course is a study of the historical development of Western education from early Greece, through Rome, the Dark Ages, and the reformation to the Twentieth Century. The course is designed to introduce the student to the historical development of the education systems which exist today in the United States. The role of private and public institutions at the elementary and secondary levels are considered. Prerequisite: None.

EDU 104 Teacher's Aide Methods	3	0	0	3

This course deals with the individual differences of the learner. It exposes the paraprofessional to the great variety of methods and approaches a teacher may select in best meeting the needs of the pupil and focuses on the duties that the aide may assume which detract from a teacher's instruction time. Prerequisite: None.

EDU 105 Teacher's Aide Role in the Classroom	3	0	0	3

A study of the total role of the paraprofessional in the classroom. This course covers topics such as the responsibilities of the aide as a working member of the school-community team, the nature of and the factors involved in teaching the fabrication and use of materials, the operation of equipment, the fundamentals of reading, classroom organization, and clerical tasks. Prerequisite: None.

EDU 204 Adult Growth and Parent Education	3	0	0	3

The study of ways to involve parents in a preschool center. Topics discussed include the purposes and value of home visitation, and programs for parents including techniques of working with parents for the total development of the child. Prerequisite: None.

EDU 205 Teacher's Aide of Reading 3 0 0 3

A study of current practices, materials, and philosophy of teaching reading on all levels. Prerequisite: None.

EDU 206 Basic Reading Skills 3 0 0 3

This course deals with the nature of the reading process, knowledge and application of basic skills. Required of majors in elementary education. Prerequisite: None.

EDU 207 Reading Readiness and Development 3 0 0 3

Methods of teaching of reading on the primary level. Prerequisite: None.

EDU 208 Creative Writing and Speaking 3 0 0 3

A study of the communication skills: listening, speaking, reading, writing, spelling; a comparison of current methods and materials; special emphasis on the language arts as the core of the elementary curriculum. Prerequisite: None.

EDU 210 Art in Early Childhood Programs 3 0 0 3

This course presents cultural arts as an integral part of a well-balanced recreation program. Singing, rhythms, and appreciation of music are included with emphasis on developing appreciation and promotion of music and art rather than mastering of performance skills. This course also focuses on drama and dance in the recreational setting and the fundamentals of locomotor movement before attempting to master individual dances. Prerequisite: None.

EDU 211 Social Studies and Primary Children 3 0 0 3

This course emphasizes the study of experiences used to meet goals of early education in areas of socialization, intellectual competency, language, creativity, and aesthetic appreciation. Prerequisite: None.

EDU 215 The Exceptional Child 3 0 0 3

The study of children with developmental variations. Consideration is given to recognition of problems, community resources, and selection of appropriate activities for the child with exceptional mental or physical development. Prerequisite: None.

EDU 216 Working with the Problem Child & Family 3 0 0 3

An analysis of the characteristics, ramifications, and appropriate teaching methods for the problem child and the establishment and maintenance of rapport between the student, his/her family, and the school. Prerequisite: None.

EDU 222 Teacher's Aide Seminar/Practicum 1 6 0 3

The seminar practicum experience involves the student with learning processes in a variety of work settings. These experiences enable the student to gain exposure to different facets in a career field and to do specialized study in a given area. Through "learning by doing" the student may correlate his knowledge and skills to work situations. Prerequisite: None.

		Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
EDU 223	**Teacher's Aide Seminar/Practicum**	**1**	**6**	**0**	**3**

A continuation of EDU 222. Prerequisite: EDU 222.

EDU 224	**Teacher's Aide Seminary/Practicum**	**1**	**6**	**0**	**3**

A continuation of EDU 223. Prerequisite: EDU 223.

EDU 225	**Teacher's Aide Seminar/Practicum**	**3**	**2**	**0**	**4**

The seminar/practicum experience involves the student with learning processes in a variety of work settings. These experiences enable the student to gain exposure to different facets in a career field and to do specialized study in a given area. Through "learning by doing," the student may correlate his/her knowledge and skills to work situations. Prerequisite: Must be employed as a Teacher's Aide full-time.

EDU 226	**Teacher's Aide Seminar/Practicum**	**3**	**2**	**0**	**4**

A continuation of EDU 225. Prerequisite: EDU 225.

EDU 227	**Teacher's Aide Seminar Practicum**	**3**	**2**	**0**	**4**

A continuation of EDU 226. Prerequisite: EDU 226.

EDU 234	**Methods and Materials in Early Childhood**	**3**	**0**	**0**	**3**

Development and organization of the curriculum with emphasis placed on communicative skills, science, and social learnings; selecting, planning, and utilizing the materials, methods, activities, and facilities for programs suited to the young child. Prerequisite: None.

Electrical Technology and Trades Courses

ELC 101	**Fundamentals of Electricity I**	**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 101A	**Fundamentals of Electricity I**	**2**	**3**	**0**	**3**

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 weries-parallel networks. Prerequisite: None.

ELC 101B Fundamentals of Electricity I 2 3 0 3

A continuation of ELC 101A. Prerequisite: ELC 101A.

ELC 103 Fundamentals of Electricity II 2 3 0 3

Elementary principles of electricity including the applications of network theorems to inductive and capacitive elements with emphasis on alternating current systems, power and power factor, transformers and resonance. Prerequisite: ELC 101.

ELC 205 Applied Electricity 2 4 0 4

A course designed to apply fundamental electric and magnetic concepts to circuits used in single and three phase distribution and utilization of electric energy as applied with transformers and motors. Prerequisite: PHY 102.

ELC 1112 Direct & Alternating Current 5 0 15 10

A study of the electrical structure of matter and electron-theory, the relationship between voltage, current and resistance in series, parallel, and series-parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchhoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits. Prerequisite: None.

ELC 1113 Alternating Current & Direct Current 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, times, or sequencing switches. Prerequisite: MAT 1110 & ELC 1112.

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, conduits, National Electrical Code regulations in actual building mock-ups. Prerequisite: ELC 1113 & 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. Prerequisite: ELC 1124.

ELN 103 Introduction to 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 more descriptive than 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.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ELN 106 Passive Networks Analysis I	2	2	0	3

Analysis of passive networks under conditions of varying frequency of transient conditions. Prerequisite: ELC 103; MAT 101.

ELN 206A Application of Active Devices 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 206B Application of Active Devices II	2	3	0	3

A continuation of ELN 206A with emphasis applied to the circuitry of integrated operational amplifiers and discrete component audio oscillators. The interface of integrated operational amplifiers for general applications, are studied in depth. Prerequisite: ELN 206A.

ELN 209 Passive Network Analysis 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 Application of Active Devices III	4	5	0	6

A philosophical study of transistor applications to radio-frequency amplification of radio-frequency oscillators, and radio-frequency detectors. Discrete component and integrated circuits are studied in depth. Prerequisite: ELN 206B.

ELN 214 Waveshaping & Pulse Circuits I	2	4	0	4

Transistor logic gages 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.S. operational amplifier, as applied to wave shaping and pulse circuits. Prerequisite: ELN 106, ELN 206A.

ELN 215 Waveshaping and Pulse Circuits II	2	3	0	3

The study of integrated logic circuits 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 is studied along with various coupling devices such as L-C network transmission lines and filters. AM, FM, PM and SSB transmitters and receivers along with application of these to various systems. Prerequisite: ELN 215.

ELN 235 Industrial Mechanisms and Instrumentation	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 106.

ELN 240 Computers 3 2 0 4

An exploration into the methodology of digital and analog computering systems. Functional block analysis is used to explain various systems. Input and output devices are explored. Prerequisite: ELN 214.

ELN 245 Electronic Design Project 0 4 0 2

Individual assignment of electronic design project of special interest to the student with the approval of the instructor. Design, analysis, construction, and evaluation are required. A written report of the work is made. Frequent conferences between student and the advisor guide the student and his/her progress. Prerequisite: ELN 211.

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 1112 & MAT 1110.

ELN 1119 Industrial Electronics 3 0 6 5

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

English Courses

ENG 50 Usage & Reading 3 2 0 4

This English course is designed for high school graduates who possess deficiencies in usage and reading. Practical usage at a basic level is emphasized. Vocabulary development and reading are combined with grammar to give the student a better understanding of the structure of the language. Students are taught to use various resource material such as the library and reference books. Prerequisite: None.

ENG 60 Language & Reading 3 2 0 4

This course is designed for high school graduates to improve and expand their English language skills, both verbal and written. It includes techniques and practical exercises for increasing reading rate and comprehension. The development of vocabulary and application of grammatical principles in written assignments is also stressed. Emphasis is placed on refining and supplementing language skills already mastered in English 50. Prerequisite: ENG 50.

ENG 70 Functional English 3 2 0 4

This course is designed to enable high school graduates to develop new English skills and refine previously learned ones. It is the study of English principles and their uses. It includes the parts of speech, usage, composition, vocabulary building, sentence structure and reading skills. Prerequisite: ENG 60.

ENG 91 Vocabulary & Reading 3 2 0 4

This course is a remedial reading and vocabulary development course which is devoted primarily to developing good reading skills and habits. It includes dictionary skills, word attacks, reading speed and comprehension, all directed toward reading ability. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ENG 92 Grammar & Composition	3	2	0	4

This course is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Emphasis is placed on grammar, sentence structure, punctuation and spelling. Proper use of the library for reference work is stressed. Prerequisite: None.

ENG 93 Vocabulary & 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 investigation of the principles of rhetoric through the reading of selected essays and the application of these 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 95 Vocabulary Spelling I	3	2	0	4

Designed to teach the student the fundamentals of vocabulary improvement and the essentials of good spelling. Prerequisite: None.

ENG 96 Vocabulary Spelling II	3	2	0	4

This course is designed to enlarge the students spelling abilities through the application of principles of good spelling, and to improve the students abilities to punctuate properly. Prerequisite: English 95.

ENG 97 Vocabulary Spelling III	3	2	0	4

This course is designed to eliminate gross spelling errors in the students writing, to develop a mastery of the basic rules of rhetoric, and to increase the student's awareness of words and develop in him a mastery of words. Prerequisite: English 96.

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 and in using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the course. This report must relate to the students specific curriculum. Prerequisite: ENG 101 and 102 or 104.

ENG 104 English Usage & Comp. 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 English Usage & Comp. 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.

ENG 106 World Literature I 3 0 0 3

English 106 is a study of the literary movements and masterpieces of the Hebrew, Greek and Roman civilizations. Prerequisite: English 101, 102 or 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 Middle Ages and the Renaissance. Prerequisite: English 101, 102, or 104, 105 and 108.

ENG 108 Usage & Comp. III 3 0 0 3

This course continues the study of the forms of the literature begun in ENG 105. Poetry and drama are studied for the purpose of refining the students critical and analytical skills. Emphasis is placed on evaluative reading of and writing about poetry and drama. Prerequisite: English 105.

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. Prerequisite: BUS 107 Secretarial Science students; BUS 261 General Office students.

ENG 115 Medical Terminology 3 0 0 3

This course 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. 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 orally. 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.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ENG 206 Business Communications	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. Prerequisite: BUS 102 or equivalent.

ENG 209 World Literature III	3	0	0	3

The student examines the parallel developments of literary movements and masterpieces from the Eighteenth Century to the present. Prerequisite: English 102 or 108.

ENG 210 American Literature I	3	0	0	3

The student explores the American cultural atmosphere from Colonial times to *ca.* 1860 through cultural analysis of its literature and history. Prerequisite: English 102 or 108.

ENG 211 American Literature II	3	0	0	3

Students study the American literary and cultural milieu from 1860 to the present. Prerequisite: ENG 102 or 108.

ENG 212 Creative Writing	3	0	0	3

This course is designed to provide students wishing to write verse or short fiction with an understanding of literary discipline and criticism. Prerequisite: ENG 102 or 108.

ENG 214 Mythology	3	0	0	3

English 214 is a chronological and genealogical study of the myths of ancient Greece and Rome. Prerequisite: ENG 102 or 105.

ENG 216 Modern Drama	3	0	0	3

This course involves the study of the development of twentieth century American and European drama. Prerequisite: ENG 102 or 108.

ENG 217 Children's Literature	3	0	0	3

This course examines literature for children from early childhood through the junior high level. Emphasis is placed on the reading and the writing about literature for young children. Prerequisite: ENG 108 or permission of the instructor.

ENG 1101 Communication Skills	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 their social lives. Prerequisite: None.

ENG 1102 Composition 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 includes a brief review of English grammar, spelling, and punctuation followed by a concentrated effort in the application of the fundamentals of good writing, sentence structure, proper development of descriptive reporting, and the mechanics of report construction. Practice in writing letters and various report forms is given and some time is devoted to oral speech and note taking. Prerequisite: ENG 1102.

Environmental Courses

ENV 101 Environmental Resource Management 2 3 0 3

An introductory course concerning the many phases of the environment that have pleasant, chronic, or acute effects upon man. The phases of interest discussed in this study are as follows: population and tends, epidemiological observation, water resources, wastewater treatment, air environment, management of solid wastes, vector control, food sanitation, radiology, and light, sound, and heat. Prerequisite: None.

ENV 102 Applied Microbiology 2 3 0 3

Scope and history of microbiology, classification of microorganisms: protozoa, fungi, viruses; microscopy, bacterial physiology, saprophytic bacteria, culture media and methods, sterilization and disinfection, germicides, sources of infection, microbes and disease, skin infections. The study of several pathogenic bacteria associated with water and food; natural and acquired resistance to bacteria, and respiratory disease-producing microbes. Prerequisite: None.

ENV 104 Environmental Biology 2 3 0 3

A basic course in biology with emphasis on microorganisms and laboratory procedures for the identification and differentiation of organisms peculiar to the water and liquid waste treatment processes and stream sanitation, air-borne infections of man. Prerequisite: None.

ENV 105 Environmental Chemistry 3 2 0 4

A beginning course in the utilization of chemical concepts as applied to the measurement and abatement of pollutants in the environment. Topics covered are formulas, solutions, stoichemometric equations, equilibrium, oxidation-reduction, electro-chemistry, organic chemistry and chemical instrumentation. Laboratory problems include gravimetric, colormeters, and electro-metric analysis. The principle purpose of the course is to better prepare the student for the ENV 204, ENV 205, ENV 206 series of courses. Prerequisite: None.

ENV 108 Basic Hydraulics 2 4 0 4

A beginning course in pressure, capacities, flow parameters, and energy loss in open and closed conduits. Emperical equation for flow are substantiated by laboratory experiments. Mechanical and electrical energy for water transportation are illustrated by a simulated water supply system. Prerequisite: MAT 102.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ENV 109 Hydrology	3	2	0	4

A study of the hydrologic cycle to include precipitation, evaporation, and transportation of water. Interpretation of rainfall record and run-off calculations as pertaining to adequate surface supplies are included. Ground water systems are covered to complete all phases of domestic water supplies. Prerequisite: MAT 102.

ENV 112 Atmosphere Air Sampling	2	3	0	3

A basic course defining the air pollution problem, types and characteristics of pollutants, effects of air pollutants, sampling methods, control equipment and guidelines for the development of air quality standards and implementation plans. Prerequisite: MAT 102 and PHY 102.

ENV 204 Sanitary Chemistry & Biology I	2	6	0	5

Theory and laboratory technique for all control tests of water purification including: bacteriology, color, turbidity, pH alkalinity, hardness, coagulation, chlorides, fluorides, iron, manganese, detergents, bactericides, and nitrates. Basic in plant studied at nearby plants. Prerequisite: ENV 101, 102, 104 and 105.

ENV 205 Sanitary Chemistry & Biology II	2	6	0	5

Theory and laboratory technique for the determination of solids, dissolved oxygen, oxygen consumed, relative stability, water and sewage bacteria. Prerequisite: ENV 204.

ENV 206 Sanitary Chemistry & Biology III	2	6	0	5

Theory and laboratory technique on biochemical oxygen demand, organic nitrogen, volatile acids, toxic metals, stream studies, in plant studies at nearby plants. Prerequisite: ENV 205.

ENV 216 Water Purification	3	2	0	4

Basic principles of water purification including aeration, sedimentation, rapid sand filtration, chlorination, treatment chemicals, taste and odor control, bacteriological control, mineral control, design criteria and operational problems. New processes and recent development. Rules, regulations, forms and records. Prerequisite: ENV 108.

ENV 217 Liquid Waste Treatment	3	2	0	4

Composition of sewage, nitrogen cycle, carbon cycle, sulphur cycle, aerobic and anaerobic decomposition, dilution, screening, degritting, measuring, sedimentation, aeration, digestion, filtration, air drying, biological purification, grease and oil removal, disinfection, chemical precipitation sand filters, filter flies, field studies, in-plant studies, industrial waste. Prerequisite: ENV 204; CIV 108.

ENV 218 Liquid Waste Treatment	3	2	0	4

Methods of treatment, detailed study of at least two types of plants, basic design parameters of all units, quantity expected from population, application of package plants and application of septic tanks. Rules, regulations, forms and records. Prerequisite: ENV 217.

ENV 226 Atmospheric Air Analysis 2 3 0 3

A laboratory course in the analysis of various air pollutants by gravimetric, calormetric and electrometric methods, utilizing laboratory prepared atmospheres for control and testing. Prerequisite: ENV 112 and 204.

ENV 236 Codes, Contracts, Specifications & Estimates 2 3 0 3

Basic principles and methods most significant in contract relationships; appreciation of the legal considerations in construction work; study of the National Building Codes and local building codes, interpreting and outlining specifications. Prerequisite: None.

ENV 299 Cooperative Training 40/week 5

Provides the student with an opportunity to pursue, under staff supervision, work experience in a specialized field. Periodic conferences are 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. Prerequisite: Completion of first and second quarter academics.

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 0 6 4

Theory and laboratory technique for control tests of waste purification plant 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 Operation 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 wastewater treatment plant operation as follows: solid, dissolved oxygen, oxygen consumed, hydrogen-ion concentration, physical tests and bacterical enumeration. Interpretation and application of test results are stressed. Prerequisite: None.

ENV 1104 Waste Plant Operation 3 2 0 4

Construction features and operational techniques of purification processes and equipment. Emphasis is placed on operator responsibility in the successful operation of wastewater treatment plants. Classroom instruction is given on campus and at several laboratories at local plants. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ENV 1105 Maintenance	**2**	**3**	**0**	**3**

Preventive maintenance procedures and records for basic and specialized equipment in water and wastewater plants. Equipment nomenclature is covered in classroom with actual experience in local plants. Prerequisite: None.

ENV 1107 Stream Studies	**2**	**0**	**3**	**3**

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 a stream. 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 wastewater 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 wastewater 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 Wastes	**2**	**0**	**3**	**3**

Sources and effects of industrial waste on streams and on waste plants. Methods to reduce problems with particular wastes at industry treatment plants. Prerequisite: None.

Funeral Service Education Courses

FSE 101 Introduction to Funeral Services	**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**

A study of mortuary case law with special emphasis on State statutes and regulations as well as applicable Federal statutes, ie., Truth in Lending, OSHA, and the Fair Labor Standards Act. Prerequisite: None.

FSE 121 Funeral Service Practices 2 2 0 3

The student is helped to develop a knowledge of the funeral service procedures of various religions. 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. 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 fluids. Prerequisite: None.

FSE 209 Introduction to Embalming 0 3 0 1

The student learns basic procedures and skills utilized in the embalming of human remains with special emphasis on laboratory equipment, procedures, and techniques. Prerequisite: None.

FSE 210 Embalming Theory & Practice I 3 0 0 3

A study of the purpose and need for embalming, the history of embalming from 4000 B.C., types of death, signs of death, tests for death, post-mortem change, ethics of embalming, laws of decomposition, anatomical limits, and linear guides. Prerequisite: None.

FSE 211 Embalming Theory & Practice II 3 0 0 3

The topics for study are case analysis in lecture with special problems encountered in the embalming process. This is a continuation of FSE 210, Embalming Theory I, with special emphasis on the complete preparation of the body for burial. Prerequisite: None.

FSE 212 Embalming Practice I 0 3 0 1

The student participates in the embalming of human remains demonstrating proficiency in each procedure and skill of embalming. Prerequisite: None.

FSE 213 Embalming Practice II 0 3 0 1

The student analyzes each case with which he 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: None.

FSE 214 Restorative Arts I 2 4 0 4

Aspects of general art as applied to funeral services. Anatomical modeling; expression; familiarity with tools, materials, and techniques of rebuilding human features. Development of special laboratory skills. Prerequisite: None.

FSE 215 Restorative Art II 2 4 0 4

Terminology used in the normalization of traumatic and pathological distortions, recommended sequences for most restorations, legal aspects, the use of photographs, stains and their solvents, materials and techniques used in most restorations. Prerequisite: None.

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

FSE 224 Funeral Home Operations 3 2 0 4

Outlines all phases of funeral home operations, including but not limited to: Choosing and financing a location; building, remodeling or purchasing a funeral home; recruitment and training of personnel; establishment of management policies; selection room planning; methods of merchandising; and general business procedures of a funeral home. Role of the director in communicating funeral values to the public. Prerequisite: None.

FSE 225 Research in Funeral Service 1 3 0 2

Research in a 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

To provide the student with a general knowledge of disease processes with particular emphasis on those diseases that are the major causes of death so the student will recognize the embalming problems which they present. To provide an understanding of pathological terminology so the graduate is 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

A study of the role of the funeral director as a counselor, with special emphasis on counseling techniques. The student learns both direct and indirect counseling, special problems encountered in counseling. 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 Funeral Service Seminar 0 2 0 1

A comprehensive review of all areas relating to funeral service in preparation for State and national board examinations. Prerequisite: Permission of Department Chairperson.

Food Service and Preparation Courses

FSO 101 Orientation 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.

FSO 102 Food Preparation I 3 6 0 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. 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 and Menu Planning 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 2 6 0 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 Controlled Work Experience 0 36 0 4

Provides a practical introduction to the broad field of food service. Students are evaluated by the instructor as to their performance and abilities with the cooperation of the dietitian, manager, and/or the owner of the food service establishment in their area of specialty. Prerequisite: None.

FSO 111 Seminar 3 0 0 3

The purpose of this seminar is two-fold: job orientation and evaluation of job experience. Prerequisite: None.

FSO 112 Food Preparation II 2 9 0 5

Emphasis placed on meat analysis and cutting, and on meat, poultry, fish, and shellfish cookery. Prerequisite: FSO 102.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
FSO 117 Baking and Cooking (Advanced)	0	12	0	4

The development of artistic skills related to cooking and baking. Prerequisite: FSO 107.

FSO 122 Food Preparation III	0	9	0	3

Emphasis is on whole meal preparation; included are vegetable cookery, preparation of breakfast dishes, and appetizers. Prerequisite: FSO 112.

FSO 202 Food Preparation IV	3	6	0	5

Emphasis on experimental cookery as related to quality control; study of food standards and specifications. Prerequisite: FSO 122.

FSO 203 Organization and Management	3	0	0	3

A study of the organization structure, the application of the principles of scientific management and the effectiveness of personnel as related to successful food service operation. Prerequisite: FSO 108 and 109.

FSO 204 Food Purchasing and Cost Control	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 and Menu Planning	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	6	0	4

Emphasis on the art of food preparation and service. Prerequisite: None.

FSO 210 Controlled Work Experience	0	36	0	4

Students enter paid work experience in their choice of food services under the direction of the instructor and with the cooperation of the employer. Prerequisite: None.

FSO 211 Seminar	3	0	0	3

Job orientation and overall evaluation of work experience. Prerequisite: None.

FSO 212 Food Preparation V	0	6	0	3

Planning and preparation of modified diets; 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 feudal and Christian institutions of the Middle Ages and the development of national monarchies in Western Europe. Prerequisite: None.

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. Emphasis is also placed upon the rise of absolutism in Europe, the period of the 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

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
HOR 150 General Plant Horticulture	3	2	0	4

A course dealing with horticultural principles and application of plant science fundamentals to horticultural practices. Prerequisite: None.

HOR 151 Plant Materials	3	2	0	4

A study of horticultural plants normally produced in greenhouse and nursery operations with emphasis upon the identification of plants by their name and characteristics. Prerequisite: None.

HOR 153 Greenhouse Management	3	2	0	4

A study of the principles involved in the operation of a greenhouse on a commercial basis. Class instruction is supplemented by student assignment in greenhouse operations and by field trips to observe successful greenhouse operations. Prerequisite: BUS 185.

HOR 190 Greenhouse Production of Plants & 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. Emphasis is placed upon the methods of plant requirements, scheduling production operation, and the application of marketing principles and practices. Prerequisite: HOR 150, AGR 170, or by permission.

HOR 200 Ornamental Horticulture	3	2	0	4

A study of the basic principles utilized in the propagation, growing transplanting ornamental plants and the procedures utilized in landscaping the home grounds. Prerequisite: HOR 150, AGR 170, or by permission.

HOR 204 Plant Management Practices	4	2	0	5

A course designed to identify the general principles and practices involved in turf, lawn, and nursery establishment and management. Emphasis is given to appropriate types and kinds of equipment available and their use in each type of operation. Prerequisite: AGR 170 or equivalent.

HOR 205 Horticulture 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: HOR 258.

HOR 228 Plant Diseases & Parasites	3	2	0	4

A study of the diseases and parasites which horticulturalist must be able to identify and control. Laboratory examination of diseases and parasites accompany the class instruction. Prerequisite: None.

HOR 254 Plant Propagation	3	2	0	4

A study of the fundamental principles involved in the production of plants from seed, leaves and stems, including the various techniques that are useful in the propagation of plants. Prerequisite: AGR 170 or equivalent.

HOR 258 Horticulture Enterprises 5 2 0 6

Types of production enterprises as a specialty, such as greenhouse production of vegetable plants or other crops, bedding or pot plants and ornamental plants. The student is provided experience in analyzing one to five production enterprises to determine the requisites for a successful operation. Prerequisite: None.

HOR 299 Cooperative Training 3 2 0 4

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 a combination of production, processing, manufacturing, distributing, marketing, or inspecting horticultural products, or the provision of a type of horticultural service. Conferences are held with each student and employer to plan a realistic training program and to evaluate the progress the student is making. An objective is to incorporate the student's education of curriculum courses. Prerequisite: Minimum of 35 hours.

Insurance Courses

INS 201 Economic Security & Individual Life Insurance 3 0 0 3

Economic security needs, human behavior, professionalism and ethics in life and health insurance. Individual life, health and annuity contracts. Life insurance programming. Types of insurers, investments, financial statements, risk selection, taxation, and regulation of companies. Prerequisite: BUS 247.

INS 202 Life Insurance Law & Mathematics 3 0 0 3

Legal aspects of contract formulation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, and disposition of life insurance proceeds. Also covered are the mathematics of life insurance as related to premiums, reserves, nonforfeiture values, surplus, and dividends. Prerequisite: BUS 237.

INS 203 Group Insurance & Social Insurance 3 0 0 3

Analysis of group life and health insurance including products, marketing, underwriting, reinsurance, premiums, and reserves. Also, various governmental programs related to the economic problems of death, old age, unemployment, and disability. Prerequisite: BUS 247.

INS 204 Economics 3 0 0 3

Economic principles, the governmental and banking institutions which have an effect on the national economy, national income, theory and application of price determination, business cycles, money and banking, monetary and fiscal policy, and international trade and finance. Prerequisite: BUS 247.

INS 205 Accounting & Finance 3 0 0 3

Basic accounting principles, including data accumulation systems, income measurement, valuation of assets and liabilities, and financial statement analysis. The accounting process from the recording of a business transaction in the books of account to the final preparation of financial statements. Various sources of short-term, intermediate-term and long-term funds available to business enterprise. Prerequisite: BUS 247.

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

INS 206 Investments & Family Finance Management 3 0 0 3

Various aspects of investment principles and their application to family finance. Yields, limited income securities, investment markets, and valuation of common stock. Also family budgeting, property and liability insurance, mutual funds, variable annuities, and aspects of other investment media. Prerequisite: BUS 247.

INS 207 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. Prerequisite: BUS 247.

INS 208 Pension Planning 3 0 0 3

Basic features of pension plans. Cost factors, funding instruments, and tax considerations involved in private pensions, profit-sharing plans, and tax-deferred annuities. Also, thrift and savings plans and plans for the self-employed. Effect on Employees Retirement Income Security Act of 1974 on covered areas. Prerequisite: BUS 247.

INS 209 Business Insurance 3 0 0 3

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 key man insurance, non-qualified deferred compensation plans, and spit-dollar plans. Also covered are corporate recapitalizations, professional corporations, and business uses of property and liability insurance. Prerequisite: BUS 247.

INS 210 Estate Planning and Taxation 3 0 0 3

Estate and tax planning emphasizing the nature, valuation, disposition, administration, and taxation of property. The use of revocable and irrevocable trusts, testamentary trusts, life insurance, powers of appointment, wills, lifetime gifts, and the marital deduction. Also the role of life insurance in minimizing the financial problems of the estate owner. Prerequisite: BUS 247; INS 201, 202, 203, 204, 205, 206, 207, 208, 209.

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; workmen's compensation; and advertising and promoting a good safety and fire prevention program. Special topics of current interest relating to safety legislation are 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, responsibilities, 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 provides 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 210 Job Analysis & Evaluation 2 2 0 3

This study is based on product studies as well as personnel and wage program. The course utilizes the study of product design, value analysis, materials and processes as an intricate part of productive procedures. Prerequisite: None.

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: None.

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

Purchasing and distribution costs; consumption patterns, channels of distribution; marketing of consumer goods, shopping, speciality, agricultural and industrial goods; service marketing; functional middlement; speculation and hedging; wholesaling; shipping and warehousing; exporting and trade movements; standardizing and grading; pricing, government regulation of competition; sales promotional activities; merchandising practices. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ISC 232 Industrial Dynamics	5	0	0	5

Management decision-making examined from the overall systems point of view.Emphasis on identification of decision variables in the dynamic state, their effect on the entire system, and selection of optimal alternates within the contexted environment. Prerequisite: None.

ISC 235 Industrial Management Practicum	1	9	0	4

A study of the problems facing local industry with plant visitations and interviews. The student summarizes his/her findings in written reports to include both problem areas and proposed solutions. Prerequisite: None.

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: None.

Law Enforcement-Criminal Justice Courses

LCJ 101 Introduction to Law Enforcement	5	0	0	5

A general course designed to familiarize the student with a philosophy and history of law enforcement-criminal justice, including its legal limitations in a democratic republic, a survey of the primary duties and responsibilities of the various law enforcement-criminal justice agencies, a delineation of the basic processes of justice, and evaluation of law enforcement's current position, and an orientation relative to law enforcement-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 life, liberty, and property, and protection of civil and political rights and their relationship to the criminal justice system. Prerequisite: None.

LCJ 103 Introduction to Criminology	5	0	0	5

A survey of the different crimes; theories and factors attributing to criminal behavior. The student studies some of the penal and correctional procedures which have been used in the past as well as some of the contemporary methods. Prerequisite: SOC 101 and LCJ 101 or permission of the instructor.

LCJ 104 Police Organization & Administration	5	0	0	5

An introduction to the principles of organization and administration, including their application to field services such as vice control, traffic patrol, criminal investigation, and juvenile division. A discussion of the service functions, *e.g.*, training communications, records, property maintenance and miscellaneous services. Prerequisite: LCJ 101 or consent of instructor.

LCJ 108 Police Patrol & Field Interrogation 3 0 0 3

The responsibilities, powers and duties of uniformed policemen; patrol procedure, field interrogation; mechanics of arrest; transportation of prisoners; crime prevention functions, *e.g.*, training, communications, records, property maintenance and miscellaneous services. Prerequisite: LCJ 101 or consent of instructor.

LCJ 201 Traffic Planning Management & Supervision 4 2 0 5

A study which covers the history of the traffic enforcement problems and an overview of the problem as it exists today. Attention is given to the three 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 203 Criminal Law I 3 0 0 3

Designed to present a basic concept of criminal law and create an appreciation of the rules under which one lives in our system of government. Primary emphasis is placed on North Carolina Law. Prerequisite: LCJ 102 or consent of instructor.

LCJ 204 Criminal Law II 3 0 0 3

A continuation of Criminal Law I which presents a basic concept of criminal law and creates an appreciation of the rules under which one lives in our system of government. Primary emphasis is placed on North Carolina law. Prerequisite: LCJ 203 or permission of instructor.

LCJ 205 Criminal Evidence & Procedures 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 also is given in the care, collection, preservation and control of evidence. Prerequisite: LCJ 102 or permission of instructor.

LCJ 206 Special Problems in Law Enforcement 3 0 0 3

An analysis of contemporary problems that affect the police in America today. Since the police are only a part of the criminal justice system, problems effecting the courts and corrections are also analyzed. Topics include the police role in a democracy, ethnic tensions and the police, police unionization, police professionalization, police corruption, civil disturbances, organized crime, civil disobedience, police misconduct, plea bargaining, inefficiency in the criminal courts, capital punishment, community-based corrections, and the effectiveness of the correction's system in America today. Prerequisite: LCJ 211 or permission of instructor.

LCJ 207 Interviews & Interrogation, Confessions & Admissions 3 0 0 3

Instruction is 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 permission of instructor.

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

LCJ 208 Identification Techniques 4 2 0 5

The student studies various identification methods and how they evolved into the present day systems. Techniques for lifting latent prints and taking rolled impressions are developed through lab practice. Instruction is given in the more popular ten finger and single print classification systems. An introduction is given to the process of comparing latent lifts and rolled impressions and in preparing them for courtroom presentation. Instruction also is given in other methods of identification such as dental, voice, personal habits, physical characteristics, modus operandi, etc. Prerequisite: LCJ 210 or permission of instructor.

LCJ 209 Juvenile Justice Planning & 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 is given to forms of family, church and community resources bearing on juvenile adjustment and preventative 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; scene search; 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 permission of instructor.

LCJ 211 Police Community Relations 2 4 0 4

A course designed to create an awareness of the need for good police and community relationship; 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 goal. A community related project is initiated and completed during the period of this course. Prerequisite: LCJ 101 or permission of instructor.

LCJ 212 Corrections & Rehabilitations 3 0 0 3

Corrections and rehabilitation as a functional aspect of the Criminal Justice System. Historical perspectives, contemporary philosophies and the treatment of offenders in all elements of a modern correctional system. Prerequisite: LCJ 103 or permission of instructor.

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 on the practical use of these methods by the students. Laboratory techniques demonstrated and the student participates in actual use of the scientific equipment. Prerequisite: LCJ 210.

LCJ 215 Law Enforcement Photography 3 2 0 4

A study of photographic equipment and its applications to the field of law enforcement. Instruction is given in all phases of the photographic process including crime scene, surveillance, macro and micro photography, including the development of negative and prints. The student develops techniques in the use of different kinds of cameras and other photographic equipment through lab practice. Prerequisite: LCJ 210.

LCJ 216 Police Supervision 3 0 0 3

A continuation of LCJ 104 with emphasis on developing supervisory and management techniques employed at the various levels of police work. Prerequisite: LCJ 104 or permission of instructor.

LCJ 217 Current Law Studies 3 0 0 3

An advanced study of criminal law with primary emphasis placed on those laws currently being used most frequently by law enforcement and criminal justice officials. The content of the course is flexible and is determined by the current needs. Prerequisite: LCJ 204.

LCJ 218 Vice Control & Investigation 3 0 0 3

Code and case law dealing with vice; detection and suppression; apprehension and prosecution of violators; special gambling, prostitution, liquor, narcotics and sex crimes. Prerequisite: LCJ 102 and LCJ 210.

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 test, etc. Prerequisite: LCJ 214.

LCJ 220 Crime Prevention & 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 adult and juvenile circles are analyzed in-depth to evaluating their success in minimizing police intervention. Prerequisite: LCJ 209 or permission 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; licensure, certification, and accreditation in the profession; and professional organizations. The course requires one hour per week be spent observing at court. Prerequisite: None.

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

LEG 105 Partnership and Corporate Law 2 0 0 2

This course introduces the student to legal considerations relevant to the creation, organization, operation, and termination of the proprietary, partnership, and corporate forms of business enterprises; coverage of management's powers, duties and liabilities under each respective organization. Prerequisite: None.

LEG 108 Seminar in Administrative and Governmental Law 3 0 0 3

The law governing the operation of administrative officers, boards, bureaus and commissions; their procedure; their exercise of powers which are legislative and judicial in nature; their place in the legal system. 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 bastardy 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 is taught and then applied in the laboratory portion of the course. Prerequisite: None.

LEG 115 Poverty Law 3 0 0 3

A study of welfare regulations, social security eligibility and regulations, unemployment compensation, housing and the poor, racial discrimination in employment and consumerism and the poor. Prerequisite: None.

LEG 117 Seminar in Tort Law 3 0 0 3

This course considers the broad problem of personal injury and disability and the legal response to that law. Negligence, strict liability, intentional torts, etc., are covered in great detail. Prerequisite: None.

LEG 132 Legal Bibliography & 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. The study of organizing and maintaining a current law library, including selecting, ordering, cataloging, filing and locating current literature and publications. Prerequisite: None.

LEG 135 Legal Systems 3 0 0 3

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, including real party in interest; splitting actions; joinder of parties and causes of action; special joinder devices; forms of pleadings and motions. Prerequisite: None.

LEG 140 Bankruptcy and Collections 2 0 0 2

A study of the current laws and procedures governing bankruptcy (voluntary and involuntary) with attention to creditor's rights and to trustee's duties and powers. Chapters X, XI, and XIII bankruptcies are discussed and all appropriate forms completed. Other collection procedures are mentioned briefly. Prerequisite: None.

LEG 204 Investigation: Criminal 3 2 0 4

In-depth study of investigating criminal cases, interviews, taking statements, collecting data, and the orderly assemblage for the attorney's use. This course includes a study of motions, bail and Pre-Trial Release, locating and interviewing witnesses, including expert witnesses, investigating, crime scene sketching, evaluating evidence and determining its sufficiency and admissibility with regard to the 4th, 5th, and 6th Amendments. N.C.G.S. Chapter 15A on Criminal Procedure is discussed. Prerequisite: None.

LEG 212 Investigation: Civil 3 2 0 4

This course is clinical training in interviewing, interrogating, counselling, and negotiating. The paralegal is trained to be aware of physical and psychological factors affecting a client's honesty, recollection, and perception. Special attention is given to some types interviewers, such as juveniles, business clients, and minorities. 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 ownership; and of the documents and procedures necessary to establish 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 title search; examination of title and preparing simple titles; ordering title insurance; preparation of deeds, bonds, notes, mortgages, and affidavits of title; preparation of settlements 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 and 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: None.

LEG 217 Elements of Criminal Law/Evidence 3 0 0 3

A study of the elements of crimes in North Carolina, of criminalization and punishment, of parties to crimes, and of defenses to crimes. Criminal procedure is studied and a case's progress through the courts traced. Prerequisite: None.

LEG 224 Wills 3 2 0 4

A study of topics including probate and administration of wills; 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. Prerequisite: None.

LEG 225 Law Office Management 3 2 0 4

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 ex-

periences include setting up a tickler reminder system; surveying the distribution of types of law practice in this area, and equipment in typical law offices; 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. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
LEG 226 Consumer Protection	3	0	0	3

Government regulations of dangerous products; the consumer and experimentation, advertising and directions for use; economic pressures in regulation; civil action for harm from defective or dangerous products; burden of risk; injury and remedy. Prerequisite: None.

LEG 228 Seminar in Constitutional Law	3	0	0	3

Judicial review of constitutional issues; their evolution and impact upon society. A study of the limitations placed upon State and Federal governments imposed by specific prohibitions, such as the First and Fourteenth Amendments. Prerequisite: None.

LEG 230 The 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, oral, active, 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 235 Litigation Preparation	3	0	0	3

The mechanics of preparation of a lawsuit for trial, from the drafting and filing of the initial pleading to final judgment and appeal. Each step in the course of a civil and a criminal action is discussed. Special emphasis is placed on personal injury litigation. Prerequisite: None.

LEG 290 Internship & 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" (gratis) under close attorney supervision; they keep a log of activities attempted and of successes. The supervising teacher confers weekly 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: None.

Masonry Courses

MAS 1101 Bricklaying I	5	0	15	10

The history of the bricklaying industry. Clay and shell brick, mortar, laying foundations, laying bricks to a line, bonding, and tools and their uses. Laboratory work provides training in the basic manipulative skills. Prerequisite: None.

MAS 1101A Bricklaying I	3	0	3	4

The basic principles as set forth in MAS 1101 is applied in MAS 1101A. Prerequisite: None.

MAS 1101B Bricklaying I 1 0 6 3

MAS 1101B is a continuation of MAS 1101A. Prerequisite: MAS 1101A.

MAS 1101C Bricklaying 1 0 6 3

A continuation of MAS 1101B. Prerequisite: MAS 1101B.

MAS 1102 Bricklaying II 5 0 15 10

Designed to give the student practice in selecting the proper mortars, layout, and construction of various building elements such as foundations, walls, chimneys, arches and cavity walls. The proper use of bonds, expansion strips, wall ties and caulking methods are stressed. Prerequisite: MAS 1101.

MAS 1103 General Masonry I 5 0 15 10

Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta and modular masonry construction theory and techniques. Prerequisite: MAS 1102.

MAS 1104 General Masonry II 3 0 18 9

This is a practical course designed to tie together all the facts and techniques that are used in various types of general masonry work. The student is involved in building some major structure with residential or commercial utility. Prerequisite: MAS 1103.

MAS 1105 Introduction to Concrete Masonry 1 0 3 2

This course is designed to teach students the basic knowledge of grading, forming, mixing by proportions, laying, finishing, and curing concrete. Prerequisite: None.

MAS 1113 Masonry Estimating 3 0 3 4

This is a practical course in quantity "take-off" from prints of the more common type jobs for bricklayers and masons. Figuring the quantities of materials needed and costs of building various components and structures. Prerequisite: MAS 1103.

Mathematics Courses

MAT 50 General Mathematics 3 2 0 4

This course is designed to improve 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 the practical application and use of mathematical principles. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
MAT 60 Intermediate Mathematics & Introductory Geometry	3	2	0	4

This course is designed for the high school graduate who has learned the basic facts, principles, and techniques of general mathematics, and who desires to learn or review the use of his skills in a higher level of mathematics. The course teaches an understanding of percent and its practical use. Also included are the fundamentals of standard measurements, using simple formulas and calculations of areas and volumes. By including the principles of techniques of solving simple equations, the student is provided a basis for later study of geometry and algebra. Emphasis is on the practical application and use of mathematical fundamentals, principles, and techniques. Prerequisite: MAT 50 or equivalent.

MAT 70 Introductory Algebra	3	2	0	4

This course is designed for the high school graduate who desires to learn or to review, the fundamentals of basic algebra. The course includes the methods of solving problems involving basic formulas. Also included are the fundamental techniques and principles used with monomials and simple equations; including the use of exponents and the algebraic laws of signs in the course provides the basis for solving problems using simple simultaneous equations. The course also includes the methods and techniques of solving binomials, ratio, and proportion. Emphasis is on practical work in solving problems involving the fundamentals, principles, and techniques of basic algebra. Prerequisite: MAT 60 or equivalent.

MAT 91 Basic Mathematics I	3	2	0	4

The meaning of number and numerals. Reading numerals; operations with whole numbers: addition, subtraction, multiplication, division, basic operations with sets and subsets; 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 Mathematics 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; numbers of various bases-expanded notation. Basic geometry of lines; measurements and scales; planes and space; right triangles; indirect measurement; numerical trigonometry of right triangles. Prerequisite: MAT 91 or equivalent.

MAT 93 Basic Mathematics 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. Units of measure and relationship of units of measure, and the metric system. Introduction to basic algebra. Prerequisite: MAT 92 or equivalent.

MAT 94 Pre-Algebra	3	2	0	4

A review of arithmethic, the numbers in various bases; operations with integers; addition, subtraction, multiplication division; common fractions; decimal fractions; percentages; powers and roots, metric system; geometry of plane figures; perimeters and areas, the right triangle, other triangles, the circle, rectangular solids, cylinders, pyramids, cones, and spheres. Prerequisite: None.

MAT 95 Algebra I 3 2 0 4

Basic concepts and operations of algebra; algebraic symbols; signed numbers; equations of the first degree; special products and factoring; operations with fractions; fractional and literal equations; problem solving. Prerequisite: MAT 94 or equivalent.

MAT 96 Algebra II 3 2 0 4

A continuation of MAT 95. Systems of first-degree equations in two and three variables; graphing equations in the rectangular coordinate system; exponents and radicals; quadratic equations; complex numbers. Prerequisite: MAT 95 or equivalent.

MAT 101 Technical Mathematics I 5 0 0 5

The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operation, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed. Prerequisite: Two years of algebra or equivalent.

MAT 102 Technical Mathematics II 5 0 0 5

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

MAT 103 Technical Mathematics III 5 0 0 5

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

MAT 106 Electronic Data Processing Math I 5 0 0 5

The real number system is developed. Characteristics of decimal numbers and numbers in other bases are examined. Binary arithmetic is studied. The fundamental operations of algebra, linear and nonlinear functions, linear inequalities, and common logarithms are studied. Emphasis throughout the course is placed on the orderly procedures in problem solving. Prerequisite: Two years of algebra or equivalent.

MAT 107 Electronic Data Processing Math II 5 0 0 5

A study of topics such as linear and nonlinear functions, inequalities, systems of linear equations and inequalities, determinants, matrices, sequences, series, linear programming, Boolean algebra, logic, truth tables, and flowcharts. Emphasis throughout the course is placed on the orderly procedures in problem solving. Prerequisite: MAT 106 or equivalent Math background.

MAT 108 Introduction to College Mathematics 5 0 0 5

Essential and basic principles of mathematics including a study of elementary set theory and mathematical logic. Prerequisite: One year of algebra or equivalent.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
MAT 109 College Algebra I	5	0	0	5

A logical, reasoned development of a real number system with emphasis on traditional arithmetic properties and operations, basic concepts of algebra and informal geometry. Prerequisite: Two years of algebra or equivalent.

MAT 110 Business Mathematics	3	0	0	4

This course stresses the fundamental math operations and their application to business problems. Topics covered include price-making, interest and discounts, and commissions. Prerequisite: None.

MAT 111 College Trigonometry	5	0	0	5

Trigonometric ratios; trigonometric functions, angles, real numbers, and composite arguments; trigonometric identities; graphs of trigonometric functions; use of logarithms in trigonometry. Prerequisite: Two years of algebra and permission of instructor, or MAT 109.

MAT 112 College Algebra II	5	0	0	5

A continuation of MAT 109 to include relations and functions, logarithmic and exponential functions, linear and quadratic systems, variation, matrices and determinants, and sequences and series. Prerequisite: MAT 109.

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. Prerequisite: Two years of algebra and one year of trigonometry and permission of instructor, or MAT 109 and 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.

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 298 Special Problems 1 0 0 1

The operational aspects of the following are developed: sine, cosine, tangent; rectangular and polar forms of complex numbers; determinants to 3rd order; Cramer's Rule. Prerequisite: Two years of algebra or equivalent.

MAT 1101 Vocational Mathematics I 3 2 0 4

Practical number theory. Analysis of basic operations; addition, subtraction, multiplication, and divisions, fractions, decimals, powers and roots, percentages, ratio and proportion, plane and solid geometric figures used in industry; measurement of surfaces and volumes, and the introduction to algebra used in trades. Prerequisite: None.

MAT 1102 Vocational Algebra 3 2 0 4

Basic concepts and operations of algebra; historical background of our base-10 number system, algebraic operations: addition, subtraction, multiplication and division; fractions letter representation, grouping factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by addition and subtraction, substitution, graphing; exponents; quadratic equations, and application to shop problems. Prerequisite: MAT 1101 or equivalent.

MAT 1103 Vocational 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. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations of plane figures and volumes of solids. Prerequisite: MAT 1101 or equivalent.

MAT 1104 Vocational Trigonometry 3 2 0 4

Trigonometric ratios; solving problems with right triangles, using tables, and interpolating; solution of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse function of trigonometric equations. All topics are applied to practical problems. 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, finding the amount of pure drugs and tablets, working with solutions, pediatric dosages, dosage by division of tablets, calculation of doses in minims. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
MAT 1110 Math for Building Trades	3	2	0	4

Basic concepts of arithmetic: addition, subtraction, multiplication, and division; fractions and decimals; powers and roots; percentage. Basic concepts of algebra: signs and symbols, addition, subtraction, multiplications, and division; equations; ratio and proportion; factors, exponents, and roots; formulas. Basic concepts of geometry; principles of linear, angular, circular, surface and volume measurement; geometric lines and shapes; angles; common geometric construction. Basic concepts of applied trigonometry; right triangles and the trigonometric functions; acute triangles; oblique triangles. Application of these basic mathematical concepts of the carpentry, electrical, masonry, and plumbing trades. Prerequisite: None.

MAT 1116 Math for Plumbing	3	2	0	4

Provides the student with the 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; and for estimating heat loss. Prerequisite: None.

MAT 1123 Machinists 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 ratio, lead screw, and indexing problems with emphasis on application to the machine shop. Practical applications and problems furnish the trainee with experience in geometric propositions and trigonometric relations to shop problems and concludes with an introduction to compound angle problems. Prerequisite: MAT 1102.

MAT 1151 Trigonometry I	3	0	0	3

A review of trigonometric functions and tables and solution of problems involving figures into right triangles and relationships between trigonometric functions. Solutions of oblique triangles; the sine and cosine laws; the tangent and contangent laws. Problems involving tapers, the sine bar, precision dies, taper-plus gauges, angles and circular arcs. Prerequisite: MAT 1102 or equivalent.

MAT 1152 Trigonometry II	3	0	0	3

This course consists basically of the fundamentals of solid geometry and trigonometry of compound angles, problem solving from pictorial drawings of compound angular holes, tilting angles and angles of rotation, and problems having tool and die application. Prerequisite: MAT 1151.

MAT 1180 Machinist Mathematics II	3	2	0	4

Fundamental concepts of plane trigonometry. Functions of the acute angle. Functions of any angle. Relationships between the functions. Trigonometric tables. Interpolation, solution of right triangles, law of sines, law of cosines, and solution of oblique triangles. Prerequisite: MAT 1123.

Mechanical/Machine Shop Courses

MEC 96 Shop Practices: Machine Shop 0 2 4 4

Brief overview of machines that are used in the machine shop. Deals primarily with their identification, nomenclature of machines, elementary operation of the lathe, drill press, grinder, and milling machine. Sample projects apply procedures using this equipment. Prerequisite: None.

MEC 237 Control Systems 2 4 0 4

Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, applications and their utilization in industrial processes. Prerequisite: PHY 102; ELC 205.

MEC 1101 Theory & Practice I 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 are introduced both in theory and practice. Prerequisite: None.

MEC 1101A Theory & Practice I 2 0 6 4

This is the first part of MEC 1101 offered in two parts. See MEC 1101 for description. Prerequisite: None.

MEC 1101B Theory & Practice I 1 0 6 3

This is the second part of MEC 1101 offered in two parts. See MEC 1101 for description. Prerequisite: MEC 1101A.

MEC 1102 Theory and Practice II 3 2 6 6

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

MEC 1102A Theory & Practice II 2 0 3 3

This is first part of MEC 1102 offered in two parts. See MEC 1102 for full description. Prerequisite: MEC 1101.

MEC 1102B Theory & Practice II 2 0 4 3

This is second part of MEC 1102 offered in two parts. See MEC 1102 for full description. Prerequisite: MEC 1102A.

MEC 1103 Theory and Practice III 3 2 6 6

Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to basic indexing terminology with additional processes on calculating, cutting, and measuring of spur, helical, and worm gears and wheels. The trainee uses precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises are 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 1103A Theory and Practice III	1	2	3	3

This is the first part of MEC 1103 offered in two parts. See MEC 1103 for full description. Prerequisite: MEC 1102.

MEC 1103B Theory and Practice III	2	0	4	3

This is the second part of MEC 1103 offered in two parts. See MEC 1103 for full description. Prerequisite: MEC 1103A.

MEC 1104 Structure of Metals	3	2	0	4

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 1105 Theory and Practice IV	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. Following procedures faithfully and establishing good work habits and attitudes acceptable to the industry. Prerequisite: MEC 1103.

MEC 1106 Heat Treating Practices	2	4	0	3

Working knowledge of the methods of treating ferrous and non-ferrous metals. The effects of hardening, tempering, and annealing upon the structure and physical properties of the metal; trainees are given the opportunity to acquaint themselves with the equivalent 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 to point positioning for drilling operations, straight line milling operations and contour milling operations. The command language and programming procedures as they apply to this particular unit are applied. Prerequisite: None.

MEC 1108 Basic Metallurgy	3	0	3	4

Fundamentals of Metallurgy, grain size, effect of carbon content, and hardness testing devices; analysis of the structure of metals and alloys; interpretation of properties, specifications, and uses. Selected laboratory exercises related to test and lectures are utilized. 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 with hand tools, measuring and terminology; engine lathe work, basic milling machine operations are introduced with student lab exercises relating to lectures and textbook study. Prerequisite: None.

MEC 1111 Machine Processes II 2 0 3 3

Grinding, gages, and their uses in production; gears, types of gears and methods of manufacture, milling operations, metal finishing for accuracy and surface finish. The lectures are followed by laboratory exercises that stress the principles involved in metal cutting. Prerequisite: MEC 1110.

MEC 1112 Machine Shop Process 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 learns the best methods of fastening parts together, clamping, and locating methods and the application of jigs and fixtures to production machining. Emphasis is stressed throughout on the quality of workmanship and precision tolerances. Prerequisite: Four quarters of Machine Shop or equivalent.

MEC 1152 Gages and Special Tools 2 2 0 3

A study of precision gages is made; special tools and their application to production studied. The student has practice in making plug gages, ring gages, snap gages, etc. The student also has product work in the making of special slide tools, form tools, and fly cutters. Prerequisite: Four quarters of Machine Shop or equivalent.

MEC 1153 Advanced Tool Making 4 0 7 6

Project work consisting of special cutting tools, cutter sharpening, and advanced jig bore and rotary table projects are included in this course. Further instruction and practice on jigs and fixtures, form grinding and grinding wheel dressing procedures is also included. Prerequisite: MEC 1151 and 1152.

MEC 1154 Die Making I 1 0 6 4

This course is designed to introduce the student to the principles of dies and die making. Simple piercing and blanking dies are studied and the student becomes acquainted with terminology common to the trade, accuracy, surface, finish, clearences, radii and the punch press are studied. The student designs sketches, and builds a die which is set up and run on the punch press. Specified accuracy is maintained. Prerequisite: 4 quarters of Machine Shop or equivalent.

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 effecting stripping force are discussed along with bending stresses, deformation due to bending and the bend allowance curve. The students design, sketch, and build a form and bending die. Development of correct working habits and close tolerance machining is stressed. Prerequisite: MEC 1154.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
MEC 1156 Die Making III	2	0	9	5

The theory and design of progressive dies are studied. The student is given instruction in the location of pilots, the progressive cam stages, grinding operations, and blank development. The students machine, assemble, and set up a conventional progressive die involving three or more stages. Further theory and practice is given in plastics molds. Prerequisite: MEC 1155.

MEC 1158 Introduction to Plastic Molding	2	0	9	5

This course includes 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. Prerequisite: Four quarters of Machine Shop or equivalent.

MEC 1170 Mold Making I	2	0	9	5

The technique of producing optical finishes, gating runner systems, ejection methods, venting and cooling, and procedures of final assembly of the mold are the intent 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 on compression and transfer molding, but includes innovations now in practice. Prerequisite: MEC 1170.

MEC 1179 Materials Testing	2	0	3	3

Basic properties of selected engineering materials are studied. Course also involves operating principles of testing equipment. Determination of mechanical properties of materials, chemical analysis of metals, and a limited number of other industrial materials are covered. Elements of heat treating, testing procedures, interpretation of test results and report writing are included. Prerequisite: MEC 1104.

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

To develop skills and understanding of machining precision parts by use of cylindrical grinders, use of magnetic sine table in conjunction with surface grinders, use of optical measuring equipment and precision end rods on machines so equipped, and methods and procedures of checking and inspecting precision parts, maintaining good housekeeping and safe working habits in all places. Prerequisite: MEC 1105.

MEC 1182 Jig and Fixture Making	3	0	9	6

Develop understanding of principle and work of jigs and fixtures. Fabricate simple jigs and fixtures to be used on course projects. Stimulate thinking concerning simplicity and safety features of the job and/or fixture while emphasizing accuracy of parts produced. Develop self-confidence and pride in doing highly skilled work. Prerequisite: MEC 1181.

MEC 1183 Machine Repair 2 0 4 3

To acquaint the student with basic fundamentals of repairing machine tools with emphasis placed on machines maintaining their original accuracy. Primary phases are preventive maintenance, adjustment of bearings and fittings, assembly and disassembly of components, and methods of checking squareness and alignment. Good work habits are stressed throughout. Prerequisite: None.

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 is 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 is taught; boring bar, honing machine, valve grinder and hydraulic press. Application to the automotive trade. Basic instruction on lathe operation, drill-press work, use of the micrometer and other measuring devices peculiar to machine work. Prerequisite: None.

MEC 1199 Cooperative Training 0 0 15 5

This course is applicable when arrangements can be made between school and an employer to offer it. Provides the student with an opportunity to pursue, under staff supervision, work experience in a specialized field. Periodic conferences are 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 motivation to the student and realism to his academic and technical program of studies. Prerequisite: MEC 1103 & permission of faculty advisor.

Music Courses

MUS 101 Introduction to Music 3 0 0 3

This is a course designed to introduce the general student to the literature of music. Music and composers of all historical periods are heard and studied sufficiently to acquaint the student with music of Western Civilization. Emphasis is on listening rather than on 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 skillful blending to 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, projects, and listening. Prerequisite: None.

MUS 107 Concert Chorus I	0	3	0	1

This course consists of a choral singing group of mixed voices (male and female) which learn the art and technique of choral singing and perform a variety of outstanding music. The chorus is designed for all students who love to sing and is open to all men and women regardless of planned major. Basic fundamentals of music are studied and injected into the choral program. Included in this course are studies of choral literature ranging from simple folk songs to extended compositions in larger forms. Public performances are given periodically. Prerequisite: None.

MUS 108 Concert Chorus II	0	3	0	1

This course consists of a choral singing group of mixed voices (male and female) which use the art and technique of choral singing to perform a variety of outstanding music. The chorus is designed for all students who love to sing and is open to all men and women regardless of planned major. Basic fundamentals of music are studied and injected into the choral program. Included in this course are studies of choral literature ranging from simple folk songs to extended compositions in larger forms. Public performances are given periodically. Prerequisite: MUS 107.

MUS 109 Concert Chorus III	0	3	0	1

This course consists of a choral singing group of mixed voices (male and female) which use the art and technique of choral singing to perform a variety of outstanding music. The chorus is designed for all students who love to sing and is open to all men and women regardless of planned major. Basic fundamentals of music are studied and injected into the choral program. Included in this course are studies of choral literature ranging from simple folk songs to extended compositions in larger forms. Public performance are given periodically. Prerequisite: MUS 108.

Nursing Courses

NUR 101 Nursing I	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. Prerequisite: None. Corequisite: PSY 101, ENG 103, BIO 106.

NUR 102 Nursing II 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 begin utilizing the nursing process in administering nursing care to children and adults with specific health needs. Prerequisite: NUR 101, PSY 101, ENG 104, BIO 106. Corequisite: SOC 101, BIO 107, PSY 202.

NUR 103 Nursing III 6 9 0 9

Nursing III (Nursing of Children and Adults II) gives the student the opportunity to study in depth some of the major medical and surgical health problems. Emphasis of study is placed on the needs of patients who require surgical intervention and who are experiencing nutritional problems and fluid and electrolyte imbalance. Included in the study are needs of patients with conditions of the reproduction system. 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 illness on personality, family and the community. The study provides a broad background of information that assists the student to implement the nursing process at a more advanced level when caring for the hospitalized child or adult. Prerequisite: NUR 102, BIO 107, PSY 202. Corequisite: BIO 108, PSY 204.

NUR 104 Nursing IV 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 promotion. The family-centered approach is used, and the family unit serves as the frame-work for the nursing care of mothers during the maternity cycle and of their newborn infants. Normal aspects of material-infant care are stressed. Adaptations are made to include common complications occurring during the maternity cycle and in the neo-natal period. Experience in giving nursing care to mothers and infants is provided in local clinics and hospital settings. Prerequisite: NUR 103, BIO 108, SOC 101, PSY 202. Corequisite: SOC 102.

NUR 205 Nursing V 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 course is divided into two segments, one of which introduces the student to various concepts regarding mental illness, communication and behavior. Learning experiences are provided which enables the students to acquire theoretical knowledge as well as to develop personal awareness of themselves. The focus of the other segment is on nursing care of patients with physical conditions that alter the patient's appearance and/or physical functioning to the extent that it also affects their self concepts and their interpersonal relations. The student is given opportunities in the clinical setting to develop skills in planning, implementing and evaluating nursing intervention for patients with behavioral disorders and those patients experiencing changes in body image. Prerequisite: NUR 104, PSY 204. Corequisite: ENG 105, HIS 106.

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

NUR 206 Nursing VI 6 12 0 10

Nursing VI (Nursing of Children and Adults IV). The focus of the course is on those health problems which involves 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 as the nursing problem and objective are identified, and realistic nursing interventions implemented. Emphasis is placed on increasing verbal and non-verbal communication skills. Opportunities are provided for the student to identify teaching implications and initiate teaching plans which assist the patient and his family in adjusting to the changes brought about by the health problems. Prerequisite: NUR 205. Corequisite: ENG 204, ENG 210, Humanities elective.

NUR 207 Nursing VII 6 12 0 10

Nursing VII (Nursing of Children and Adults V) is designed to assist the nursing student in carying for patients of all age groups with major health problems that 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. 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 situations. Prerequisite: NUR 206. Corequisite: NUR 208, ECO 102.

NUR 208 Nursing VIII 3 0 0 3

Nursing VIII (Professional 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. Corequisite: NUR 207, ECO 102.

Nutrition Course

NUT 101 Nutrition 3 0 0 3

Study of the basic facts from the field of nutrition with emphasis on applications to the planning of balanced diets to meet needs of individuals in various life stages. The responsibilities of health workers in promoting good nutrition is stressed. Prerequisite: BIO 106, BIO 107.

Physical Education Courses

PED 101 Personal Hygiene 2 0 0 2

This course presents basic health knowledge to develop proper health habits and attitudes, including mental health of the individuals necessary to meet current and future health needs. Prerequisite: None.

PED 102 Personal and Community Health 5 0 0 5

This course includes information and principles for protection and promotion of individual and public health. Emphasis is given to mental health, parenthood, nutrition, disease prevention, and the community organizations for maintaining and improving health in society. The functions of health agencies at all governmental levels and their roles in control and prevention of communicable diseases, air and water polution control, and promotion of community health are covered. Prerequisite: None.

PED 111 First Aid 2 0 0 2

This introductory first aid course explains the fundamental theories and practices in prevention of accidents, current safety practices, and rules for daily living, and immediate and temporary aid to victims of sudden illness or accidents. 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 2 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. (freestyle, untimed).

PED 124 Water Sports 0 2 0 1

This is a course to teach improvement in stamina and water skills applied in all water sports. It includes introduction to water sports such as water polo and water basketball, etc. Prerequisite: PED 122 *or* equivalent to satisfaction of coach-instructor concerned.

PED 137 Individual Sports: Golf 1 2 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.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PED 143 Individual Sports: Tennis	1	2	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 211 First Aid & 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 & 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.

PED 223 Lifesaving	1	2	0	2

This is a course in the principles and techniques in American Red Cross Methods in Lifesaving and water safety. The American Red Cross Junior or Senior Red Cross Lifesaving Certificate is awarded to qualifying students. Prerequisite: PED 122. Must be able to demonstrate adequate ability, skills, and competency in swimming, diving, basic first aid and water safety to the satisfaction of instructor.

PED 224 Water Safety Instructors	1	2	0	2

This course is designed to qualify students for an American Red Cross Water Instructor's Rating and Certificate. Prerequisite: PED 223 or equivalent satisfaction of instructor.

Philosophy Courses

PHI 101 Introduction to Philosophy	3	0	0	3

Philosophy 101 is an introductory course which uses a historical approach to the understanding of philosophy. The basic concepts, themes, theories, and arguments of ancient, 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.

PHY 91 Physical Science I, Level I 3 2 0 5

To introduce the student to the fundamental concepts that are directly related to our physical world; to acquaint the student with the scientific facts upon which the major concept and theories of science depend. A practical approach to science through laboratory exercises and demonstration is maintained. Prerequisite: None.

PHY 92 Physical Science II, Level I 3 2 0 5

Designed to make an analysis and general study of the various fields of work, energy, power and properties of matter, heat, light, sound, and applied electricity. Emphasis is placed on acquiring the basic concepts and the application of these concepts to our physical environment and work. Prerequisite: None/PHY 91.

PHY 93 Physical Science III, Level I 3 2 0 5

An introductory course to learn scientific skills in basic physics that are directly used in industry. Demonstration and audio-visual media are used extensively to give added support to the student. Prerequisite: None/Preferred PHY 91, 92.

PHY 94 Properties of Matter 3 2 0 5

Introductory physics and its application in fundamental concepts, fluids, simple and compound machines, work, energy, power, and heat. Selected experiments are performed by students in the laboratory. Prerequisite: None.

PHY 101 Properties of Matter 3 2 0 5

A fundamental course covering several basic principles of physics. Included are solids and their characteristics, liquids at rest and in motion, gas laws, temperature and heat, heat transfer and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course. Prerequisite: Algebra.

PHY 102 Work, Energy, and Power 3 2 0 5

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

PHY 103 Electricity 3 2 0 5

Basic theories of electricity, types of electricity; methods of production, and transmission and the transformation of electricity; electron theory, electricity by chemical action, friction, and magnetism; induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course. Prerequisite: PHY 101 and MAT 101.

PHY 104 Light & Sound 3 2 0 5

A survey of the concepts involving wave motion leads to a study of sound, its generation, transmission and detection. The principles of wave motion also serve as an introduction to a study of light, illumination and the principles involved in optical instruments. Application is stressed throughout. Prerequisite: MAT 101 and PHY 102.

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

PHY 110 Radiographic Physics 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: None.

PHY 1101 Properties of Matter 3 2 0 4

Introductory physics and its applications. Systems of measurement, theory of matter, properties of solids, liquids, and gases. Prerequisite: None.

PHY 1102 Electricity 3 2 0 4

Basic principles of electricity, types of electricity, and its production, and transmission, and transformation. Such factors as the electron theory, electrical measurement, magnetism, electromagnetism, and the magnetic effects of electricity constitute major areas of study. Prerequisite: None.

PHY 1103 Work, Energy, and Power 3 2 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 and the use of vectors and graphical presentations. Prerequisite: PHY 1101 and MAT 1101.

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 fixtures and piping. Planning new additions also is stressed. Prerequisite: None.

PLU 1110 Plumbing Pipework 5 0 15 10

This course introduces students to the tools, fittings, and small equipment used by plumbers. Most of the time is spent in the shop where the student can learn how to handle these materials correctly. The student performs operations such as threading, cutting, caulking, and sweating of the various kinds of pipe and tubing used in the trade. Prerequisite: None.

PLU 1110A Plumbing Pipework 3 0 2 4

This course is the first third of PLU 1110. See above for course description. Prerequisite: None.

PLU 1110B Plumbing Pipework 2 0 5 3

This course is the second third of PLU 1110. See above for course description. Prerequisite: PLU 1110A.

PLU 1110C Plumbing Pipework 1 0 8 4

This course is the final third of PLU 1110. See above for course description. Prerequisite: PLU 1110B.

PLU 1111 Domestic Water Systems 2 0 9 5

The installation of water distribution systems beginning with the source of supply and including the location of pipes, valves, and pumps in both single-story and multi-story buildings are studied. Plumbing installations are made to provide practical applications. Heating devices, and the storage and circulation of hot water are studied. Private and public sewage and drainage systems, including their ventilation is a part of this course. Field trips are taken to study various types of installations. Prerequisite: PLU 1110.

PLU 1112 Installation of Plumbing Fixtures 3 0 9 6

The differences in materials and styles of lavatories, bathtubs and sinks, the proper use of traps and the many ways that these fixtures can be installed form the bases of this course. Students get actual practice by installations. Prerequisite: PLU 1111.

PLU 1120 Low Pressure Steam Systems 2 0 6 4

The students become acquainted with types of low pressure steam boilers, and the principles of boiler operation. Boiler accessories such as connectors, fittings, and insulation are included. Low pressure steam systems, their layout, and component parts are studied and installed. Equipment used in heat transmission, such as radiators, coils, and connectors is included. Prerequisite: PLU 1110.

PLU 1121 High Pressure Steam Systems 3 0 9 6

Applications of low pressure steam equipment is continued. Principles involved in industrial applications of both low-pressure and high-pressure steam equipment. Commercial and industrial blueprints are studied utilizing low and high pressure equipment. High pressure boilers and installations of high pressure systems are emphasized. Prerequisite: PLU 1120.

PLU 1123 Hot Water Panel Heating 3 0 6 5

The piping and accessory equipment needed to transfer hot water to radiators, heaters, and coils, and the advantages and disadvantages of each of these units are studied, including apparati for radiant heating and panel heating. Methods of "sizing" equipment for various installations are included. Practical application is provided in installing this equipment. Prerequisite: PLU 1110, 1120, and 1121.

PLU 1125 Industrial Piping 3 0 6 5

Piping systems of boilers, turbines, and steam engines especially as they are used in steam power plants, and process piping such as is used in the chemical industries are the major emphasises of this course. Prerequisite: PLU 1112.

PLU 1126 Hydraulic Systems Plumbing 2 0 3 3

Plumbing applications in hydraulic systems. Hydraulic principles, circuits, control valves, actuators, pumps, fluids and various accessories that complete hydraulic systems are studied. Installations and servicing methods of these systems are undertaken. Prerequisite: PLU 1112.

Power, Mechanics, and Engines Courses

PME 1011 Electrical Systems I 3 0 3 4

An introduction to two- and four-cycle gasoline engines. Topics include the operation, care, and maintenance and rebuilding of engines. Study in testing of performance for efficient operation and the proper servicing techniques are also included. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PME 1018 Special Problems of Motorcycles	1	0	9	4

The course includes projects or problems of special interest to the student. This is an opportunity for the student to strengthen himself and to further specialize in an area of his choice. Some areas to be considered are: engines (top end and bottom end); fuel systems; electrical systems; and ignition systems. Prerequisite: None.

PME 1019 Trouble-shooting of Small Engines	0	0	9	3

Emphasis is placed on 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 is utilized. A fuel range of experiences in testing, adjusting, repairing, and replacing are utilized. Major emphasis is placed upon developing a logical sequence of diagnostic procedures utilizing skills developed in prior courses. Prerequisite: None.

PME 1101 Basic Engines	3	0	12	7

Introduction to uses of hand tools and measuring devices used in engine work. Instruction on construction, operation, servicing and maintenance of automotive engine components. Testing of engine performance. Instruction on servicing lubricating and cooling systems of the engine. This course is offered in a regular 11-week day-time situation. See PME 1101A and PME 1101B for Night-time application. Prerequisite: None.

PME 1101A Basic Engines	2	0	6	4

PME 1101 broken down into an "A" and "B" section for completion of course in two, 11-week night quarters. Same description of content as PME 1101. This first half of PME 1101 consists of lecture, lab, demonstrations and student involvement in repair and servicing processes on engine components. Prerequisite: None.

PME 1101B Basic Engines	2	0	6	4

Second half of day-time PME 1101 course which is taught during night-time instructional periods. This is mainly the shop portion of the course, involving the students in actual shop work. Prerequisite: PME 1101A.

PME 1102 Electrical & Fuel Systems	3	0	12	7

Introduction to basic electricity as it applies to automotive vehicles. Instruction in the operation testing and servicing of batteries, generators, regulators, of cranking motors and their controls, and the ignition systems (conventional and electronic); use of test equipment and methods of trouble-shooting. Prerequisite: PME 1101.

PME 1102A Electrical & Fuel Systems	2	0	6	4

This course is the first half of PME 1102. It is taught at night and is a prerequisite for PME 1102B. This course introduces basic electricity theory and operation of all the engine-electrical components, and lab procedures of repair and servicing of components. Prerequisite: PME 1101.

PME 1102B Electrical & Fuel Systems	2	0	6	4

This course is the second half of PME 1102; it is taught at night and is a continuation of PME 1102A. This course is primarily concerned with practical application of the theory and lab-practice procedures covered in PME 1102A. Prerequisite: 1102A.

PME 1111 Automotive Body Repair 3 0 18 9

This course introduces the student to the basic fundamentals of auto body repair and teach the basic skills of auto body refinishing. Prerequisite: None.

PME 1123 Chassis & Suspension 6 0 9 9

A study of the repairing, adjusting and servicing of the chassis components which consists of brake systems, suspension, and steering systems. Prerequisite: None.

PME 1123A Chassis & Suspension: Front End & Brakes 3 0 4 4

This course is taught at night and is the first half of PME 1123. It consists primarily of the study of repairing, servicing, and adjusting front suspensions as well as brake systems, both drum and disc types. Prerequisite: None.

PME 1123B Chassis & Suspension: Suspension & Steering Gears 2 0 6 0

This course is a continuation of PME 1123A, it consists primarily of the repairing, servicing and adjusting of the front and repair suspension systems and the steering gears, both manual and power types. Prerequisite: PME 1123A.

PME 1124 Auto: Power Trains 3 0 9 6

Power trains is a course which teaches skills in repairing, servicing and adjusting clutches, manual and over-drive transmissions, drivelines and U-joints, and final-drive assemblies. Prerequisite: PME 1101.

PME 1124A Auto: Power Trains 2 0 4 3

This course is taught at night and has the same content as the first half of PME 1124. See above for course description. Prerequisite: PME 1101.

PME 1124B Auto: Power Trains 1 0 5 3

This course is the second half of PME 1124. See above for course description. Prerequisite: PME 1124A.

PME 1125 Auto: Servicing 3 0 9 6

This course provides a transition period between the school situation and actual shop situation which the students will encounter on the job. All types of work experiences are encountered during this course including the duties of service manager and shop foreman. Prerequisite: First year and first 2 quarters of PME.

PME 1132 Fuel System 2 0 4 3

This course provides an in-depth study of the theory and operation of all the components in the fuel system. Procedures of repairing, servicing and adjusting are emphasized along with trouble-shooting techniques. Prerequisite: PME 1102.

PME 1133 Emissions Controls 1 0 3 2

With more and more emphasis being placed on air cleanliness, it became necessary to teach a course on automotive emissions controls. This course provides instruction on speed-controlled vacuum advances, exhaust-gas recirculation and controls for hydrocarbons and oxides of nitrogen. Prerequisite: PME 1132.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PME 1135 Auto: Air Conditioning	3	0	0	3

This course provides instruction in the theory of operation, the servicing, repairing and adjusting of automotive air conditioning systems, much emphasis is placed on developing skills in diagnostic procedures of trouble-shooting. Prerequisite: PME 1102.

PME 1151 Special Problems of Motorcycles	1	0	9	4

A thorough study of the electrical and fuel systems of two- and four-cycle engines on various small equipment. Characteristics of fuels, types of fuel systems, tools, and testing equipment for the fuel and electrical systems are studied. Prerequisite: None.

PME 1158 Equipment Repair	2	0	6	4

A course designed to cover various related equipment pertaining to the specialty course of study. Study is confined to types of drive structure of equipment, accessories for special application, etc. Prerequisite: None.

PME 1160 Marine Outboard Engine	5	0	15	8

An introductory course of the design, operation, and maintenance of small outboard marine engines. Trouble-shooting and repair of minor breakdowns are studied including the electrical, drive, cooling, and mechanical systems. Prerequisite: None.

PME 1170 Power-plant Trouble Shooting	3	0	6	5

Instruction is provided to improve the students' skills in the trouble-shooting techniques which are necessary for automotive mechanics today. Emphasis is placed on learning to diagnose troubles in the mechanical, electrical, cooling, lubricating and fuel systems of the power plant. Prerequisite: All engine related courses.

PME 1181 Tune-Up	3	0	6	5

This course teaches the student how to service, test and adjust the electrical, fuel and emission systems on today's engines. Instruction is provided in both conventional and electronic ignition testing and repair. Prerequisite: PME 1102.

PME 1182 Automatic Transmissions	6	0	6	8

This course acquaints the students with the basic principles of planetary gear trains, hydraulic control devices, torque converters and oil curcuits. Instruction covers the 4 major automotive-manufacturers transmissions. Prerequisite: PME 1124.

PME 1182A Automatic Transmissions	3	0	3	4

This is the first half of the automatic transmission course and is taught at night. It covers the theory of operation of planetary gear trains, oil circuits, torque converters and hydraulic controls. Lab application is provided. Prerequisite: PME 1124.

PME 1182B Automatic Transmissions	3	0	3	4

This is the second half of PME 1182, it is offered at night and involves the students in procedures of repairing, servicing, and adjusting the four major automatic transmissions. Trouble-shooting and diagnostic procedures are introduced at this time. Prerequisite: PME 1182A.

PME 1183 Chassis Electrical Systems 5 0 4 6

This course is designed to acquaint the students with a knowledge of the operation, servicing and repair of such components as power windows, seats and tops, of windshield wipers and their controls. It develops the students' skills at trouble-shooting and repairing all chassis wiring including vehicle lights. Prerequisite: PME 1102.

PME 1183A Chassis Electrical Systems 3 0 2 4

This course is the first half of PME 1183, taught in two consecutive night quarters. See description for PME 1183. Prerequisite: PME 1102.

PME 1183B Chassis Electrical Systems 2 0 3 3

This course is the second half of PME 1183, taught in the evening. See above course description. Prerequisite: PME 1183A.

PME 1188 Small Gas Engines 3 0 3 4

Develops basic skills and knowledge in operation, maintenance and repair of small gasoline engines. Trouble-shooting is also emphasized. Prerequisite: None.

PME 1199 Cooperative Training 0 0 15 5

Provides the student with the opportunity to pursue, under staff supervision, work experience in a specialized field. Periodic conferences are 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 motivation to the student and realism to his academic and technical program of studies. Prerequisite: Satisfactory completion of all first year requirements, and the approval of the instructor.

Operating Room Technician Courses

PML 1001 Nursing Assistant 2 0 0 2

A study in broad perspective of the field of nursing, with emphasis on current trends related to division of responsibility among various types and levels of health workers. To help the student develop awareness of the scope of the health field and beginning understanding of health facilities, modern nursing, and the role of the nurses' facilities. Prerequisite: None.

PML 1093 Theory of Surgical Procedures I 4 4 0 6

This course includes a review of anatomy and physiology of the various body systems, an extensive study of the most common surgical procedures performed, and includes terminology, diagnostic procedures, pre-operative preparation, the surgical procedure and instructions in the use of special instruments and equipment. Prerequisite: PML 1080, 1090, 1091, 1092.

PML 1094 Clinical Practice I 0 0 15 5

This course is designed to assist the student in demonstrating a safe level of practice and knowledge of all courses combined. This includes improving dexterity, anticipating the needs of other members of the team and improving organization for economy of time, motion and priority of needs. Prerequisite: PML 1092.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PML 1095 Clinical Practice II	0	0	24	8

Continuation of PML 1094. Prerequisite: PML 1085, 1093, 1094, 1096.

PML 1096 Anatomy & Physiology II	3	2	0	4

A continuation of PML 1091. Prerequisite: PML 1091, 1092.

PML 1097 Theory of Surgical Procedures II	4	4	0	6

A continuation of PML 1093. Prerequisite: PML 1085, 1093, 1094, 1096, 1098.

PML 1098 Seminar I	0	2	0	1

Seminar time is used to review experiences in Theory of Surgical Procedures I and Clinical Practice II. Prerequisite: PML 1080, 1090, 1091, 1092.

PML 1099 Seminar II	0	2	0	1

This seminar time is used to review experiences in Theory of Surgical Procedures II and Clinical Practice II. Prerequisite: PML 1095, 1097.

PML 1191 Understanding Effects of Illness	1	0	0	1

A study of the diverse effects of illness on the patient, family, and community and the family to make adjustments and help the students develop understanding of common effects of illness on patient, family, and community, and beginning skills in helping patients adjust to illness and/or hospitilization. Prerequisite: None.

PML 1192 Making Observations on Patients	1	0	3	2

A study of the diverse effects of illness in relation to observations the nurses' assistant should be able to make and report with accuracy and dependability. To help the student develop beginning skill in making reliable observations on patients and in reporting to appropriate nursing personnel. Prerequisite: None.

PML 1193 Safety Measures in Care	1	0	3	2

A study of methods used to protect patients and personnel from infections and accidents and the role of the nurses' assistant in the event of internal or external disaster. To help the student develop understanding of medical asepsis, safety, and emergency situations in relation to the role of the nurses' assistant. Prerequisite: None.

PML 1194 Measures to Promote the Patient's Comfort	0	2	3	2

A study of bedside nursing procedures used in assisting patients with daily needs to help the student develop beginning skills in those aspects of patient care appropriate to the role of the nurses' assistant. Prerequisite: None.

PML 1195 Special Types of Patient Care	2	2	3	4

A study of simple procedures commonly ordered by the doctor and appropriate to the role of nurses' assistant to help the student develop beginning skill in the performance of nursing performance of nursing procedures related to the care of isolated patient, in carrying out orders for unsterile irrigations and simple therapeutic measures, and in meeting selected needs of the surgical patient. Prerequisite: None.

PML 1196 Becoming a Hospital Employee 2 2 3 4

A study of the nurses' assistant as a practitioner, with emphasis on effective job performance and fulfillment of citizenship responsibilities to help the student make the transition to a fully responsible employee role, fulfill citizenship responsibilities as a wage-earner, and set personal standards for quality performance as a member of the nursing team. Prerequisite: None.

Practical Nursing Education Courses

PNE 93 Introduction to Nursing 3 0 3 3

This course is designed to introduce and promote a basic understanding and appreciation of nursing as a service to others, to introduce a concept of health and disease to observe skills and abilities and to apply knowledge in the clinical situation. Prerequisite: None.

PNE 1101 Vocational Adjustments I 3 0 0 3

A study of the principles of good personal and vocational behavior of the Practical Nurse student to enable her/him to work and communicate with ease and intelligence with the doctor, professional nurse, patient and allied hospital employees. It is also designed to stimulate the interest of the student in public relations acceptable to the health of the community. Prerequisite: None.

PNE 1102 Body Structure and Function 5 0 0 5

The course consists of a study of the general plan of the body and the 10 systems: Nervous, skeleton, muscular, circulatory, digestive, respiratory, endocrine, integumentary, urinary, male and female reproductive systems — designed for understanding the cooperative functions of the total human body. This course also includes a study of microorganisms and their relationship to disease. Prerequisite: None.

PNE 1103 Nursing Skills I 4 6 6 8

This course is designed to teach the Practical Nurse student the principles involved in giving good nursing care. It is felt that if principles are understood, they can be adapted to many situations. Insofar as possible clinical nursing coincides with classroom activity at the affiliating hospital in medical and surgical areas. Prerequisite: None.

PNE 1104 Emergency & Disaster Nursing 2 0 0 2

This course is designed to acquaint the Practical Nurse student with measures of first aid and emergencies so she/he is able to function efficiently until completing the course in Medical-Surgical Nursing. Prerequisite: None.

PNE 1105 Nutrition and Diet 3 0 0 3

This course is designed to give the Practical Nurse student an understanding of good nutrition and some knowledge of the diet therapy. He/she learns to apply the understanding to the dietary treatment of the more common diseases. Prerequisite: None.

PNE 1106 Nursing Skills II 3 0 0 3

This course is designed as a continuation of Nursing Skills I in which the student has more practice with the skills and principles in the techniques needed in the nursing care of the patient. Prerequisite: PNE 1103.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PNE 1107 Medical & Surgical Nursing I	5	0	15	10

A course of study to help the Practical Nurse student acquire a basic knowledge of Medical and Surgical Nursing. This course deals with the cause of disease, treatment and prevention of disease, with diseases and disorders of the various systems in the body, with the major emphasis on nursing care. The clinical period deals with continued nursing care given at the affiliating hospital in the medical and surgical areas with continued depth training. Prerequisite: PNE 1102, 1103.

PNE 1108 Nursing Care of Children	3	0	7	6

The purpose of this course is to consider the patterns of normal growth and development. Insofar as possible, the classroom activity centers around discussions of normal growth and development and certain deviations. This is designed to help the student recognize the nursing needs of the sick child as well as the needs of the well child. Prerequisite: PNE 1102, 1106.

PNE 1109 Nursing Care of Mother	3	0	7	6

A study of the child-bearing woman, dealing with conception, pregnancy, labor, and the puerperim, and the care of the newborn child with nursing care experience in the obstetrical and nursery areas of the affiliation clinical areas. Prerequisite: PNE 1102, 1106.

PNE 1110 Medical & Surgical Nursing II	5	0	0	5

This course is designed to help the Practical Nurse student to acquire knowledge for safely caring for the medical and surgical patient. This course deals with a continuance of Medical and Surgical Nursing I. Prerequisite: PNE 1107.

PNE 1111 Drugs & Administration	3	0	0	3

This course is designed to give the Practical Nurse student a knowledge of drugs, the dangers involved in handling, laws regarding the use of drugs, side effects, and skills in administering drugs intelligently and safely. Prerequisite: MATH 1105.

PNE 1112 Medical & Surgical Nursing III	0	0	21	7

This course is designed so the student continues to integrate principles and concepts from all principles and concepts from all previous courses. The student develops further skills in recognizing and meeting the needs of patients with complex nursing problems, and assists the registered nurse in more complex nursing. Prerequisite: PNE 1106, 1110, and 1111.

PNE 1113 Geriatrics	3	0	4	5

This course is designed to give the Practical Nurse student a general background of information of the geriatric patient upon which may be built with experiences in nursing care. This information may be adapted for use in the home, the hospital, or other agencies. Prerequisite: None.

PNE 1115 Mental Health	3	0	0	3

This course is designed to help the Practical Nurse student to 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: PNE 1110.

PNE 1116 Vocational Adjustments II 2 0 0 2

This course is designed to help the Practical Nurse student to 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: PNE 1101.

PNE 1298 Special Problems 0 5 0 0

Self-study students, on their own time, may spend time in the lab to re-enforce learning procedures either by observing visual aids or by practice. Prerequisite: None.

Political Science Courses

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 are examined and evaluated. Prerequisite: None.

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 the human as a biological-social organism. Topics covered include the history of the development of psychology, theory of statistical concepts, intelligence, motivation, emotions, and learning. 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 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 are explored in depth. Prerequisite: PSY 101.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PSY 204 Abnormal Psychology	3	0	0	3

The principal abnormal phases of behavior, and the ways by which the individual develops abnormal habits of thinking and acting are studied. 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 conflicts. 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 couseling. 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: None. (PSY 101 recommended).

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

This course is designed to assist law enforcement officers in gaining a better understanding of relationships on the job, at home, and in the community as a member 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: PSY 101.

PSY 240 Parapsychology	2	2	0	3

In this course an examination is made of a range of parapsychological phenomena, with emphasis on demonstrating the parapsychological and/or psychological functions involved. Prerequisite: PSY 101.

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 260 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 application of techniques that effect motivation. Prerequisite: PSY 101.

PSY 280 Forensic Psychology 5 0 0 5

This course covers a study of the causes of crime, the corrrections, 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 aberrant criminal activities are emphasized. Prerequisite: PSY 101.

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 relations within the work situation. Prerequisite: None.

PSY 1106 Applied Psychology 3 0 0 3

This course studies the procedures of building an efficient, enthusiastic business team and deals with the nature of the problems which arise in business organizations. The individual and his behavior are discussed, as well as the problems of influence and authority. Prerequisite: None.

PSY 1120 Personality 3 0 0 3

This course involves a practical study of the adjustment processes and the healthy personality. Prerequisite: PSY 1106.

Physical Therapy Courses

PTH 101 Introduction to Physical Therapy 3 3 0 4

Beginning with the historical background of Physical Therapy including the development of formal educational programs for the Physical Therapy Assistant, this course includes the following: concepts of health and disease; overview of total medical spectrum; interprofessional relationships between members of the health care team; 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

An introduction to the principles and techniques of selected physical therapy treatment methods. Includes the development of basic skills in common modalities, body mechanics and transfer techniques. Includes selected clinical laboratory experience in cooperating health agencies as well as curriculum laboratory. Prerequisite: PTH 101.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PTH 103 Physical Therapy Procedures II	3	6	0	5

A continuation of the study of the physical and psychological principles and techniques of selected physical therapy treatment measures. Additional modalities are introduced that are more complicated: such as low frequency and high frequency currents, short wave and microtherm diathermy and ultra sound. 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 care service. Prerequisite: PTH 102.

PTH 104 Physical Therapy Procedures III	3	9	0	6

A continuation of study of the principles and techniques of selected physical therapy measures. Review and reinforcement of previously offered procedures. Included in this groups are the use of light radiation sources, infra-red and ultra violet; paraffin; hydrotherapy measures; use of adaptive equipment and appliances (wheelchairs, braces, splinting). After receiving 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 application of basic physical therapy measures. All previously learned skills are reviewed thoroughly. The student is introduced to home-bound physical therapy provided by a public health or home health agency. Classroom and laboratory practice is continued. Then 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

This course parallels the clinical affiliations. Students present case studies and progress notes on patients treated in their clinical assignments. Rationale for a specific treatment in view of a given diagnosis is discussed as well as problems encountered. 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; use of assistive and resistive exercise equipment. A review of joint structure, muscle origins and insertions, innervations, actions and physiology are included. Orientation to highly specialized exercise techniques is offered, but competence is required only in the more routine therapeutic exercise and ambulation techniques. Prerequisite: PTH 102.

PTH 201 Patho-Physiology for P. T. 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 are discussed in depth for each of the diagnostic categories covered. Prerequisite: PTH 103.

PTH 210 Psychology of Adjustment 3 0 0 3

Review of basic personality development and characteristics, with emphasis on the psychological implications of interpersonal relationships, especially as it may apply to the health team worker and the patient. Emotional reactions to disease, physical impairment, and/or handicap by persons with varying basic personality characteristics is explored moderately. The health team worker's personal adjustment to the disabled or severely injured patient is discussed. Prerequisite: PTH 201.

PTH 215 Community Health and Welfare 3 0 0 3

This survey course identifies and describes the various health and welfare resources within a community and the coordination between these agencies. Distinction is made between the public, voluntary and private sectors of health and welfare. Future trends in the delivery of services are discussed. Emphasis is placed on the referral system for total patient care. Prerequisite: PTH 201.

PTH 298 Clinical Education 4 30 0 14

For a period of eleven weeks, the student is assigned to a variety of clinical settings for planned learning experience and practice under supervision. 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 to tographical 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 skelton. Further patient care procedures, medical terminology, and radiographic exposure principles are included. Topographic anatomy of the axial skeleton is incorporated in the positioning classes. Prerequisite: RDT 101.

RDT 103 Radiologic Technology III 4 3 0 5

The student learns the techniques and topographic anatomy for basic views of the thoracic and abdominal viscera, skull, soft tissue radiography and fluorography. He/She is taught how to prepare the patient and the contrast media for these studies. Prerequisite: RDT 102.

RDT 111 Clinical Education I 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 also applies some of the simpler principles of radiographic exposure. There are regular sessions of film critique, and radiation protection measures are emphasized and observed. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
RDT 112 Clinical Education II	0	0	12	4

Practical experience in a clinical setting. The student continues to improve his/her basic skills in darkroom technique and patient positioning for routine studies of upper and lower limbs, the shoulder, and pelvic girdles. She practices the techniques for roentgenographic studies of the spine and thorax; regular sessions of film critique and radiation protection measures are emphasized and observed. Prerequisite: RDT 101 and 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, working in fluoroscopy, also makes radiographs of the abdominal and thoracic viscera without use of contrast media. Soft tissue radiography (exclusive of mammography) and location of foreign bodies are touched upon. Radiation protection measures are reemphasized and observed. Prerequisite: RDT 102 and RDT 112.

RDT 114 Clinical Education IV	1	0	39	4

The student spends the entire summer quarter gaining clinical experience and developing skills in the techniques of diagnostic radiography. He/She reviews all he/she has learned about 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 are emphasized and observed. Prerequisite: 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 concerns a continuation of radiation protection, equipment maintenance, more advanced work in the radiography of the skeleton and art of pediatric radiology. Special views, techniques, and topographic anatomy for diagnostic radiology of the skeleton are emphasized. Departmental administration is taught at this time. Prerequisite: RDT 114.

RDT 205 Radiologic Technology V	4	3	0	5

This course is confined to special radiographic procedures and the mechanics and uses of photofluorographic. The student becomes acquainted with the specialized and highly technical procedures used in these studies, the equipment, and the general indication and contra-indications for each examination. The student is familiarized with the basic principles of radiation therapy and a brief course on dental radiography. Prerequisite: RDT 204 and RDT 215.

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 and RDT 216.

RDT 215 Clinical Education V 0 0 27 9

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 27 9

Practical experience in a clinical setting with emphasis on special radiographic procedures; use of photofluorographic unit, if available; cineradiography; and use of a portable x-ray machine. Radiation protection measures are emphasized and observed. Prerequisite: RDT 204 and RDT 215.

RDT 217 Clinical Education VII 0 0 27 9

Practical experience in a clinical setting with emphasis on radiation therapy and nuclear medicine. Radiation protection is emphasized and observed. Prerequisite: RDT 205 and RDT 216.

RDT 218 Clinical Education VIII 1 0 39 14

The student spends the summer quarter improving skills in the techniques of general diagnostic radiography and fluoroscopy with both adults and children. He/She has the opportunity to work in the areas of nuclear medicine with a demonstration on radiation therapy on a limited basis. Radiation protection is emphasized and observed. *There is a two-week extension of the Clinical Education course beyond the eight quarter's termination. Prerequisite: RDT 206 and RDT 217.

Recreational 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 & 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 on hiking or camping trips. Field trips and projects are emphasized. Prerequisite: None.

REC 111 Introduction to Recreation 5 0 0 5

Introduces the basic fundamentals of the nature, scope, significance of organized recreation services. It includes study of factors involved in the operation of basic recreation units, major program areas, and organizational patterns. Prerequisite: None.

REC 112 Arts and Crafts 2 3 0 3

This course is designed to give the student maximum practical experience in creative crafts projects and to provide the opportunity to master the techniques of teaching these projects to varying age groups in a number of recreation settings. Students are instructed in planning activities for an arts and crafts program and gain experience in ordering supplies. Prerequisite: None.

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

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 mastery 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 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 207 Sports Officiating 2 2 0 3

A course designed to acquaint students with the rules, knowledge and skills in officiating recreational activities. Also included are how to recruit, train and schedule officials for activities. 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 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 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. Prerequisites: 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 250 Family, School and Community Health 3 0 0 3

This course is the study of factors which influence physical and mental health. Topics covered include first aid, accident prevention, drugs, alcohol, environmental factors hazardous to health, and communicable diseases. Attention is given to practices which aid the individual in maintaining good physical and mental health. Prerequisite: None.

REC 299 Recreation Internship 1 18 0 7

This is an actual work experience in which the student serves as a leader with a recreation department, park, or summer camp. Prerequisite: None.

Real Estate Courses

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 & 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 & 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 effecting 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 the development location. Prerequisite: RLS 286 or Real Estate License.

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

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 286 Real Estate Fundamentals and Principles 4 2 0 5

A survey course designed to provide both the beginner and the 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 qualifies 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 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 effecting the value of real estate, local, State, federal, and neighborhood influences and attitudes, economical factors and estimation of value. Prerequisite: RLS 286 or Real Estate License.

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. Prerequisite: RLS 286 or Real Estate License.

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.

Sociology Courses

SOC 101 Principles of Sociology 3 0 0 3

This course is an introduction to the scientific study of human interaction as it takes place within social relationships, organizations, social structures, and societies. The student is provided an opportunity to analyze the various methods used by sociologists to collect and to analyze verifiable data to arrive at generalizations about human behavior. Social patterns are studied within the framework of social institutions. Included in this course are an introduction to social stratification and its consequences as well as the study of social change. Prerequisite: None.

SOC 102 Marriage & the Family 3 0 0 3

The sociology of marriage and the family is designed to provide the student with insight into the family as an element in the social structure, its functioning, and changing character. The student is given an opportunity to study the sociological approach to family research and family role structures. The strengths and weaknesses of the various forms of families are considered as well as the factors involved in family disorganization. Prerequisite: None. (Recommend SOC 101.)

SOC 203 Sociology of Death and Dying 3 0 0 3

This is a course designed to present the philosophical, anthropological, sociological, and cultural aspects of grief, bereavement, and frustration which are the consequences of death and dying. The student is afforded an opportunity to analyze the differential rates of death among the various groups, races, and societies, as well as the various causes and types of death. Further, the student is provided instruction on the preparation for death and an insight into the social roles of ritual specialists associated with death and dying, such as the health care specialists and funeral directors. Current issues releated to death and dying are discussed in depth. Prerequisite: None. (Recommend SOC 101.)

SOC 210 Contemporary Social Problems 3 0 0 3

Contemporary Social Problems uses the macrosociological and microsociological approaches to study contemporary social problems. The student is afforded an opportunity to study and analyze the epidemiologic, social, and cultural factors associated with deviant behavior, drug associated problems, criminal structures, social disorganization, racial and intergroup conflicts, poverty, violence, and population crisis as well as ecological problems. Prerequisite: SOC 101.

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

Social Science Courses

SSC 90 Introduction to the Social Sciences 3 2 0 4

This course is a general introduction to the following social sciences: anthropology, economics, geography, history, political science, psychology, and sociology. The student is provided an historical perspective of the development of the substantive content of the social sciences, the scientific nature of the sciences is presented and some possible applications of each social science are discussed. A basic aim of this introductory course is to supply an appreciation of each discipline and information which the student needs to understand the content and methods of the social sciences. Prerequisite: None.

SSC 205 American Institutions 3 0 0 3

This is a course in applied sociology studying the institutional and social structures found in American society. The course of study includes an analysis of the effects of geography, natural resources, and population on the social institutions of a society. The consequences of social stratification on groups and institutions are included in this course. The basic institutions of family, religion, education, economic, and political receive an indepth treatment as do the evasions of normative patterns and values. Theoretical treatment is also presented to the student on integration, social change and cultural change. Prerequisite: None. (Recommended SOC 101.)

Welding Courses

WLD 95 Shop Practices: Welding 2 0 4 3

A practical course in sheet metal and welding which gives the student an overview of how all craftsmen need a basic knowledge of processes used in these areas. Lectures, demonstrations and practice covering oxyacetylene, arc-welding and soldering; proper layout procedures and fabrication of sheet metal in the shop. Prerequisite: None.

WLD 1112 Mechanical Testing & 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 test to be covered are: DESTRUCTIVE — guided freebend, notched-bend, tee-bend, prepanning, nick-tear, tension and impact; NON-DESTRUCTIVE — visual, red dye penetrant, etching, hydraulic, pneumatic, hydrostatic, boroscopic, radiograph, gamma ray, post-heating, magnetic particles, halide, halogen, cladding and magnaflux. Prerequisite: WLD 1120 and WLD 1121.

WLD 1120 Oxyacetylene Welding & Cutting 3 0 12 7

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units. Welding procedures such as practice of puddling and carrying the puddle, running flatheads; butt welding in the flat, vertical and overhead position; brazing; hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds. Prerequisite: None.

WLD 1120A Oxyacetylene Welding & Cutting 2 0 6 4

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, and assembly of units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, groove welds in the flat and vertical position. Prerequisite: None.

WLD 1120B Oxyacetylene Welding & Cutting 1 0 6 3

Welding beads fillets and groove welds in horizontal and overhead position, brazing, hard and soft soldering, and cutting. Safety processes and procedures are stressed throughout the course. Students perform mechanical testing and inspection to determine quality of the welds. Prerequisite: WLD 1120A.

WLD 1121 Arc Welding 3 0 13 8

The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes 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 so the student may detect weaknesses in welds. Safety procedures are emphasized throughout the course in the use of tools and equipment. Prerequisite: None.

WLD 1121A Arc Welding 2 0 6 4

The operation of AC transformers and DC motor generators arc welding sets. Studies are made of welding heats, polarities, and joints. Safety procedures are emphasized throughout the course in the use of tools and equipment. The student learns to weld beads, fillets, and groove welds in the flat and vertical positions. Prerequisite: None.

WLD 1121B Arc Welding 1 0 9 4

The study of electrodes and where each is used to the fullest advantage for the welder. The use of various tools and machinery used in welding and safety. The student learns to weld beads, fillets and groove welds in the horizontal and overhead position. The student is introduced to various types of electrodes. Prerequisite: WLD 1121A.

WLD 1122 Commercial & Industrial Practice 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: WLD 1120, WLD 1121, WLD 1124, and DFT 1118.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
WLD 1123 Inert Gas Welding	1	0	3	2

Introduction and practical operations in the use of inert-gas-shield arc welding. A study is 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 rods, process variations and applications, manual and automatic welding. Prerequisite: 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, fixed position using shielded metal arc welding processes according to Section VIII and IX of the ASME code. Prerequisite: 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 tensils strength test to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds. Prerequisite: WLD 1123 and WLD 1124.

WLD 1180 Basic Welding	1	0	5	2

A short course in welding, both oxyacetylene and electric, designed as a helping course for Automotive Mechanics, Air Conditioning and Refrigeration Trade, Drafting, Sheet Metal and Machine Shop students. This course covers a minimum of technical facts, and is designed to teach the student to weld in the flat position only. Prerequisite: None.

1977

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Holidays, Holy Days and Commemorative Days

Jul. 4 Independence Day

Sep. 5 Labor Day
13 Jewish New Year
17 Citizenship Day
22 Jewish Yom Kippur

Oct. 10 Columbus Day
24 Veterans Day
24 United Nations Day
31 Halloween

Nov. 8 Election Day
24 Thanksgiving Day
27 First Sunday of Advent

Dec. 25 Christmas Day*

1978

JANUARY

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Holidays, Holy Days and Commemorative Days

Jan. 1 New Year's Day*

Feb. 8 Ash Wednesday
12 Lincoln's Birthday*
14 St. Valentine's Day
20 Washington's Birthday

Mar. 17 St. Patrick's Day
19 Palm Sunday
24 Good Friday
26 Easter Sunday

Apr. 22 Jewish Passover

May 14 Mother's Day
20 Armed Forces Day
21 Trinity Sunday
29 Memorial Day

Jun. 11 Children's Day
14 Flag Day
18 Father's Day

Jul. 4 Independence Day

Sep. 4 Labor Day
17 Citizenship Day

Oct. 2 Jewish New Year
9 Columbus Day
11 Jewish Yom Kippur
23 Veterans Day
24 United Nations Day
31 Halloween

Nov. 7 Election Day
23 Thanksgiving Day

Dec. 3 First Sunday of Advent
25 Christmas Day

1979

JANUARY

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22 Thanksgiving Day

Dec. 2 First Sunday of Advent
25 Christmas Day

• Denotes absence dates for NCO

R→ Denotes dates classes cancelled for Registration