FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

1988-1990
CATALOG

February 1989 Edition

VOLUME X

P.O. BOX 35236 • FAYETTEVILLE, NORTH CAROLINA 28303-0236 • PHONE (919) 323-1961

GENERAL INFORMATION

PURPOSE OF CATALOG

The purpose of this catalog is to provide prospective students with a general description of Fayetteville Technical Community College and give detailed information regarding the various programs and services offered by the College. Inasmuch as the educational process necessitates change, the information and educational requirements in this catalog represent a flexible program which may be altered where such alterations are thought to be in the mutual interest of the College and its students.

The provisions of this catalog do not constitute any offer for a contract which may be accepted by students through registration and enrollment in the College. Fayetteville Technical Community College reserves the right to change without notice any fee, provision, offering or requirements for admission or graduation. The College further reserves the right to require a student to withdraw from the College for cause at any time.

Each curriculum shall be governed by the requirements in effect on the date of enrollment. If a student withdraws from Fayetteville Technical Community College and subsequently returns or does not remain continuously enrolled (summers excluded), the requirements in effect at the time of return will govern.

STUDENT RESPONSIBILITY

All programs establish certain academic requirements that must be met before a degree is granted. Advisors, department heads and deans are available to help the student understand and arrange to meet these requirements, but the student is responsible for fulfilling them. If, at the end of a student's course of study the requirements for graduation have not been satisfied, the degree will not be granted. For this reason, it is important for each student to acquaint himself or herself with all academic requirements throughout his or her college career and to be responsible for completing all such requirements.

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1988-89 ACADEMIC CALENDAR

	On-Campus 11-week term	6-1 (5½ weeks)	6-2 (5½ weeks)	8-1 session 8-week term	8-2 session 8-week term	16-week term	Cont. Ed.
Summer 88-89							
Registration	5/19, 5/31	5/19, 5/31	7/11				6/6, 6/17
Classes begin	5/31	5/31	7/11				6/6
Last day to add	6/6	5/31	7/11				6/17
Last day for refunds	6/9	6/6	7/15				
Student holidays	7/4	7/4					
Faculty/staff leave	7/4	7/4					
Last day of term	8/17	7/8	8/17				8/25
Graduation	8/19						6/16
Fall 88-89							
Registration	8/30, 8/31, 9/1, 9/6			8/29, 8/30	10/24, 10/25	8/29, 8/30	
Orientation	8/29						
Classes begin	9/7			8/29	10/24	8/29	9/12
Last day to add	9/13			8/30	10/25	9/2	
Last day for refunds	9/16			9/6	10/31	9/7	
Student holidays	11/24, 11/25			9/5	11/24, 11/25	9/5, 11/24, 11/25	
Faculty/staff leave	9/5, 11/24, 11/25			9/5	11/24, 11/25	9/5, 11/24, 11/25	11/24, 11/25
Last day of term	11/22			10/22	12/17	12/17	12/15
Winter 88-89							
Registration	11/16, 11/17, 11/29			1/9, 1/10		1/9, 1/10	1/2
Classes begin	11/30			1/9		1/9	1/2
Last day to add	12/6			1/10		1/13	1/14
Last day for refunds	12/9			1/17		1/18	
Student holidays	12/19-1/1, 1/16			1/16		1/16, 3/24	1/16
Faculty/staff leave	12/22-1/1, 1/16			1/16		1/16	1/16
Last day of term	3/1			3/4		4/29	2/23
Spring 88-89							
Registration	2/21, 2/22, 3/6			3/7, 3/8	5/1, 5/2		3/6
Orientation	2/22						
Classes begin	3/7			3/7	5/1		3/6
Last day to add	3/13			3/8	5/2		3/18
Last day for refunds	3/16			3/13	5/8		
Student holidays	3/24			3/24			3/27-3/30
Faculty/staff leave	3/24			3/24			3/24
Last day of term	5/23			4/29	6/24		5/20
Graduation	6/1						
Summer 89-90							
Registration	5/18, 5/29	5/18, 5/30	7/7	7/3, 7/5			6/5
Classes begin	5/29	5/29	7/7	7/3			6/5
Last day to add	6/2	5/29	7/7	7/5			6/16
Last day for refunds	6/7	6/2	7/11	7/10			
Student holidays	7/4	7/4		7/4			7/4
Faculty/staff leave	7/4	7/4		7/4			7/4
Last day of term	8/15	7/6	8/15	8/26			8/24
Graduation	8/18						6/15

Rev. 6/88

FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

BOARD OF TRUSTEES

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Thomas Council, Vice Chairman

Howard L. Hall, Secretary

APPOINTMENTS

Name	Expiration Date	Appointed By
Harry F. Shaw	June 30, 1989	Board of County Commissioners
Jimmy Harvey	June 30, 1991	Board of County Commissioners
Wayne T. Williams	June 30, 1989	Board of County Commissioners
Steve R. Satisky	June 30, 1991	Board of County Commissioners
Thomas Council	June 30, 1989	County School Board
Thornton W. Rose	June 30, 1991	County School Board
Mrs. Lura S. Tally	June 30, 1989	County School Board
Howard L. Hall	June 30, 1991	County School Board
William L. Dukes	June 30, 1991	Governor
Tom R. McLean	June 30, 1989	Governor
Robert C. Lewis, Jr.	June 30, 1991	Governor
Mrs. Tommie B. Evans	June 30, 1989	Governor

ATTORNEY

L. Stacy Weaver, Jr.

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Pat Hickmon, Executive Director
FTCC Foundation, Inc.

HISTORY

The doors of Fayetteville Industrial Education Center were opened in the fall of 1961 offering classes in the old senior high school while the physical facilities in the Honeycutt area were being finished.

Fayetteville Technical Community College began its on-campus educational operations in December 1963 with the formal opening of Lafayette Hall. From the humble beginning of a 38,000 square foot building, the physical facilities have evolved to a complex of over 300,000 square feet of classroom, shop, and laboratory space on a 93 acre campus.

By 1965, Lafayette Hall was expanded by 50 percent and four temporary classrooms were needed. The first of several bond issues were approved by the voters of Cumberland County to begin work on the first 10 classrooms of Cumberland Hall. Additional wings were added in 1971, and the final sections were completed in 1976. Today, this houses the Building Trades curricula, all Health Occupations, and a majority of the Business education curricula along with the College's Computer Center and a 350-seat auditorium.

The year 1971 saw the completion of the Paul H. Thompson Library and the development of the Rose Garden. The Rose Garden was developed and is maintained through a cooperative effort by FTCC, city agencies, and the local Rose Society. The setting provided by the symmetrical arrangement of over 800 plants is one of rare beauty during the May through September blooming season and has become a distinctive community attraction and FTCC landmark.

Between 1971 and 1975, a small Administration Building, two greenhouses, and several temporary classrooms, along with the Cumberland Hall wings, were added to the campus complex. During that same period, enrollment grew by an astounding 400 percent, and the need for additional facilities to meet the demand became critical. Again Cumberland County voters responded to that need by approving a bond issue of 3.5 million dollars, part of which was utilized to purchase the adjacent Horace Sisk Junior High School buildings and properties from the Fayetteville City School System and to renovate and remodel it to support FTCC educational offerings.

The resulting 90,000 square foot facility provided general and specific classroom and laboratory space needed for expansion of several ongoing programs, and the specialized facilities required to support new curricular offerings. Additionally, convertible space was made available to ease overcrowded staff and faculty work areas, and in 1977 the College began its phased occupancy of this three building complex.

FTCC has never enjoyed the luxury of having enough classroom space to accommodate its student body, but by 1979 it was obvious from continuing and forecasted enrollment growth patterns that the need for additional facilities would reach an even more critical stage by the mid 1980's. As an interim measure, the Board of Trustees authorized the use of remaining construction funds and in-house capabilities to build an eight-classroom annex to the Horace Sisk Building and a six-bay automotive shop building. These were completed by trades students in the summer of 1981. In 1983, an additional 10 classrooms were constructed.

Today, construction has been completed on a new 50,000 square foot Student Development Building that provides the students with a pleasant waiting area and will centralize the Student Services. Admissions, Counseling, Financial Aid, Veterans' Services, and Placement/Alumni Affairs are only a few services housed in this building.

Effective January 1, 1981, the North Carolina Community College System was transferred from under the control of the State Board of Education to the newly created State Board of Community Colleges. This new Board will lead the N.C. Community College System into the third decade of educational challenge. FTCC's Board of Trustees and administration will guide the institution forward to meet the ever-expanding and complex technical, vocational, and adult educational needs of the citizenry.

NONDISCRIMINATION STATEMENT

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

Fayetteville Technical Community College 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
Vice President for Personnel
Fayetteville Technical Community College
P.O. Box 35236
Fayetteville, North Carolina 28303

PURPOSE

The purpose of Fayetteville Technical Community College is to provide occupational, technical, and general education programs which meet the needs and desires of its student population, community business, industry, and health facilities. To improve the educational base of society, FTCC encourages life-long learning and prepares students for further educational experiences.

FTCC identifies the educational needs of applicants and assists students in satisfying these needs at minimal expense. Each adult who applies will be admitted to a program appropriate to his/her abilities and interests.

FTCC provides instruction in the basic skills needed to contribute effectively to society. Continuing Education programs are designed to meet specific needs in basic educational competencies, high school completion, upgrading occupational skills, and other avocational or practical skills required for the rapidly changing technology in the community.

Curricular programs reflect the changing technical, commercial, industrial, and health needs of Fayetteville, Cumberland county, and surrounding areas. Various curricula offer remedial preparation, certificates, diplomas, and associate degrees. FTCC offers courses and programs at times and places convenient to prospective students. Courses are also available for high school graduates who need additional academic preparation before attempting college work.

EDUCATIONAL PROGRAM CLASSIFICATION

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

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

B. General and Service Programs

General Education - Instruction in English, mathematics, natural science, the social sciences, and the humanities. Some programs offer the flexibility necessary for students to construct a program of studies according to needs.

The Associate Degree in General Education is essentially a two-year program in which students may complete all work toward an associate degree. Courses include those learning experiences traditionally considered to be the arts and science subjects and may be transferable to four-year colleges with which Fayetteville Technical Community College has articulation agreements.

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

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

C. 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 or certification 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.

D. Vocational and Technical Programs - Specialized training to provide depth in manipulative skills and diagnostic abilities in a selected range of activities and to develop a strong basic background in such related areas as mathematics, social and physical science, and communicative skills. Some programs include highly specialized training for effective entrance into specialized areas of business and industry.

E. Continuing Education - Instruction which provides a community-wide program of courses to prepare individuals for better job opportunities, retraining in present employment, civic and community leadership, and family living.

ACCREDITATIONS AND ASSOCIATIONS

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

The following curricula offered by Fayetteville Technical Community College are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

1. Civil Engineering Technology
2. Electronics Engineering Technology

AMERICAN BANKERS ASSOCIATION'S AMERICAN INSTITUTE OF BANKING

The American Institute of Banking is an integral part of the organization and mission of the American Bankers Association (ABA) whose purpose is to enhance the ability of America's bankers and banks to serve effectively and profitably the needs and desires of the American public.

AMERICAN BAR ASSOCIATION

Fayetteville Technical Community College's Paralegal Technology program is certified by the American Bar Association.

AMERICAN BOARD OF FUNERAL SERVICE EDUCATION

Fayetteville Technical Community College's Department of Funeral Service Education is approved by the North Carolina State Board of Mortuary Science and the American Board of Funeral Service Education.

AMERICAN DENTAL ASSOCIATION

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

AMERICAN PHYSICAL THERAPY ASSOCIATION

The Physical Therapist Assistant program at Fayetteville Technical Community College is accredited by the American Physical Therapy Association.

DEPARTMENT OF COMMUNITY COLLEGES

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

JOINT REVIEW COMMITTEE ON EDUCATION IN RADIOLOGIC TECHNOLOGY

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

JOINT REVIEW COMMITTEE FOR RESPIRATORY THERAPY EDUCATION

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

JOINT REVIEW COMMITTEE ON EDUCATION FOR THE SURGICAL TECHNOLOGIST

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

NATIONAL LEAGUE FOR NURSING

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

NORTH CAROLINA BOARD OF NURSING

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

NORTH CAROLINA DEPARTMENT OF INSURANCE

Fayetteville Technical Community College is approved by the North Carolina Department of Insurance for the purpose of pre-licensing education.

NORTH CAROLINA REAL ESTATE LICENSING COMMISSION

The North Carolina Real Estate Licensing Commission approves and certifies all fundamental and advanced real estate instructors and approves the Fundamentals of Real Estate course, Real Estate Law, Real Estate Finance, and Real Estate Brokerage Operations courses of instruction.

NORTH CAROLINA STATE BOARD OF CERTIFIED PUBLIC ACCOUNTANT EXAMINERS

Fayetteville Technical Community College is approved by the North Carolina State Board of Certified Public Accountant Examiners for the purpose of mandatory Certified Professional Education credits.

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS

Fayetteville Technical Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award certificates, diplomas, and associate degrees. (The Southern Association of Colleges and Schools is a regional accrediting agency for the purpose of identifying and accrediting institutions which meet their standards for quality and scope of higher education.)

UNITED STATES DEPARTMENT OF EDUCATION

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

PROFESSIONAL ORGANIZATIONS

The College 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. Also, FTCC employees hold individual memberships in professional organizations related to their interests and areas of responsibility.

1. American Association of Community and Junior Colleges
2. American Council on Education
3. North Carolina Association of Adult Educators
4. North Carolina Association of Junior Colleges
5. Southern Association of Colleges and Schools

GENERAL INFORMATION

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

ADMISSIONS POLICIES AND PROCEDURES

1. Applicants must submit an application form, including a residency statement.

2. Applicants must be high school graduates. A state equivalency (GED) certificate or GED test results which meet N.C. equivalency standards are acceptable in lieu of a high school diploma. Official transcripts verifying secondary school completion must be sent to the Director of Admissions, P.O. Box 35236, Fayetteville, NC 28303.

3. Applicants who have previously attended any other college or post-secondary institution must request official transcripts of all work attempted be sent to the Admissions Office.

4. Each applicant is required to submit a medical history statement; the information provided will be used in health care. FTCC does not discriminate on the basis of handicap in the recruitment and admissions of students and the operation of any of its programs and activities. Approved health area students must submit physical and dental exams on forms provided by the Admissions Office.

5. Each applicant is scheduled for an admissions interview. Previous school records and the results of the entrance test battery will be used in conjunction with the student's personal aspirations to help plan a workable educational program.

6. Applicants for Engineering Technology curricula, Radiologic Technology, Respiratory Therapy Technology, and General Education must have a minimum of two units of algebra in their backgrounds; one unit of chemistry and one unit of biology are required for Radiologic Technology, and Respiratory Therapy Technology applicants.

7. Applicants for Associate Degree Nursing, Dental Hygiene, Emergency Medical Science, and Physical Therapist Assistant must have a minimum of one unit of algebra, one unit of biology, and one unit of chemistry in their academic backgrounds.

8. Applicants for Funeral Service Education must have a minimum of one unit of algebra and two units of biology in their academic backgrounds.

9. Applicants for Pharmacy Technology must have a minimum of one unit of Algebra and one unit of biology in their academic backgrounds.

10. Applicants for Architectural Technology must have a minimum of one unit of algebra in their academic backgrounds.

11. Applicants for all other curricula need no specific academic preparation beyond the normal high school courses required for high school diploma; however, it may be advisable that applicants take refresher courses in the sciences and in math and have acquired good reading habits.

12. Applicants who do not seek to apply credit to any diploma or degree will be enrolled as "special credit students." Special credit students need only submit an application, medical form, and residency statement.

13. Applicants applying for financial aid and/or VA benefits must meet all entry requirements before they can be certified by this institution for third party payments.

14. This school is authorized under federal law to enroll non-immigrant alien students. International students are carefully screened for evidence of English proficiency, adequate financial backing, and academic credentials indicating potential for success.

15. The following admissions policy relative to the placement test battery requirement is effective for all applicants:

a. All applicants must meet stated requisites for the program for which they are applying regardless of whether they are required to take the placement tests. Prerequisites may be satisfied by a high school unit (2 semesters), its equivalent, or a college level course. High school grades in prerequisite courses must be a 77% or better. College grades in prerequisite courses must be a "C" or better.

b. Class ranking used to make determination will be the student's position in his high school graduating class as recorded on his high school transcript.

Those applicants who will be required to take the placement tests are:

a. Applicants whose high school transcript does not reflect rank in class.

b. Applicants who have a GED or high school equivalency certificate.

c. Applicants who do not meet the stated prerequisites for the program for which they are applying.

d. Applicants who are applying for a vocational curriculum and who are under the top 50% of their high school graduating class.

e. Applicants who are applying for a technical program and who are under the top 25% of their high school graduating class.

Those applicants who will not be required to take the placement tests are:

a. Applicants who meet all the stated prerequisites and who hold an associate degree or higher.

b. Applicants who meet all the stated prerequisites for the technical program for which they are applying and who rank in the upper 25% of their high school class.

c. Applicants who meet all the stated prerequisites for the vocational program for which they are applying and who rank in the upper 50% of their high school class.

d. Students who are taking Developmental Studies courses under limited approval and who make grades of "C" or better in all courses undertaken. Students taking Developmental Studies courses must meet prerequisite requirements for the curriculum which they plan to enter. Prerequisite requirements may include evaluative testing. Students who are taking curricular courses for exploratory purpose on limited approval and who maintain a 3.0 QPA on those courses may continue without having to take the placement tests.

Admission of Transfer Students

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

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

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

Transfer students must complete a minimum of 24 hours of credit at FTCC to be eligible to receive an associate degree unless a SOCAD program participant.

Fayetteville Technical Community College is a Serviceman's Opportunity College (SOC) and supports the concept that military personnel should be encouraged to begin their post-secondary education while serving their country. FTCC also participates in the SOCAD network with degree completion programs available to the serviceman in Accounting, Criminal Justice-Protective Services Technology, Business Computer Programming, Foodservice Management, General Education, General Occupational Technology, Industrial Management and Public Administration.

Under the SOCAD Program FTCC will evaluate non-traditional educational experience for possible transfer credit not to exceed 60% of the AAS degree requirements.

Students are encouraged to submit for transfer credit evaluation CLEP test results, DANTES test results, military service school records, MOS evaluations, and civil service training documents. CLEP/DANTES must meet the recommended ACE minimum score. All course work considered for transfer must be equivalent to FTCC courses appropriate to the student's program of study. SOC policies extend to dependents of military members and to veterans who started their enrollment at FTCC prior to discharge from the service.

Intercurricular Transfer of Credits

If a student changes curriculum, he/she may be allowed transfer credit for applicable courses taken and passed in the previous curriculum. These grades will be treated in the same way as transfer credit and will carry no quality points for total quality point averages in the new curriculum.

Re-admission of Former Students

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

1. A student who withdrew for unavoidable reasons may be eligible for re-admission at the beginning of the next quarter.

2. A student who was suspended for unsatisfactory academic progress is required to re-apply for re-entrance through the Admissions Office. Re-admissions decisions will then be made by the Admissions Committee based upon a review of previous grades, consultation with instructors and department chairpersons involved, additional achievement and/or interest testing and interviews to determine the reasons for unsatisfactory progress. In cases where the probable causes of unsatisfactory progress while previously enrolled have not been removed, re-entry to curricular studies may be denied or re-entry approved under specific conditions which can include change of curriculum, remedial course work, and probationary status.

3. A study who was dismissed from the College by disciplinary action may re-enter only upon approval by the Dean of Students.

4. A student who withdraws from the institution and re-enters at a later quarter, including students who have completed at least one or more quarters, will be subject to curricular requirements in effect for the following fall quarter. In cases where students re-enter at the beginning of fall quarter, they are subject to the requirements of the curriculum at the fall quarter re-entry.

5. Any student indebted to the institution is ineligible to re-enter until all financial obligations to the institution have been satisfied.

SERVICES FOR THE HANDICAPPED

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

STUDENT FINANCES

Expenses

The estimated academic expenses for an academic year (3 quarters) are approximately $846.00 for an in-state student and $2727.00 for an out-of-state student. These expenses are listed separately below.

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

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

	In-State	Out-of-State
Tuition	225.00	2106.00
Activity Fee	9.00	9.00
Books and Supplies	600.00	600.00
Parking Fees	12.00	12.00
TOTAL	$846.00	$2727.00

*Tuition and fees may change because of legislative or institutional policy revisions subsequent to publication of Catalog.

Other Fees:

1. Additional expenses required to cover uniforms, instruments, tools, malpractice insurance, and dues to student associations are detailed in the institution's recruitment brochures.

2. Tuition for students taking less than 12 quarter hours is $6.25 per credit hour for in-state students and $58.50 per credit hour for out-of-state students. Note: "Tuition is set by state policy and is subject to change without notice."

3. Parking stickers are issued upon payment of the parking fees. Students are held responsible for all parking regulations as stated in the Rules and Regulations Bulletin.

4. All prospective graduates will be charged a graduation fee of $15.00.

5. Senior citizens are entitled to free registration.

Out-of-State Waiver for Military

Out-of-state service members and eligible dependents stationed at a North Carolina base are eligible to be charged the in-state tuition rate.

Residency Classification for Tuition Purposes

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

Responsibilities of the Student Relative to Residency Classification

1. If you currently are classified as a nonresident for tuition purposes, it is your right to petition for a change in classification to that of resident if you claim that you are now and, for at least the twelve-month period immediately preceding the date of such petition, have been a legal resident of the State of North Carolina. The fact that you have resided in the state for twelve months does not in itself constitute in-state residency. You must be able to show proof that you have indeed taken steps to become a legal resident. Examples are: filing income tax in North Carolina, registering for voting, listing personal property taxes, automobile registration, etc.

2. If you currently are classified as a resident for tuition purposes, it is your obligation to petition for a change in classification to that of a nonresident if you have reasonable basis for believing that change in facts requires such a change in classification. Failure to fulfill this obligation may result in appropriate disciplinary action including, but not necessarily limited to, cancellation of enrollment. If it is determined that in fact you have become a nonresident, the effective date of change in applicable tuition rates shall be the next quarter following the date of change in facts which required the change in classification, unless you are deemed eligible to further enjoy the in-state tuition rate under the statutory twelve-month grace period. If you claim eligibility as a member of the Armed Forces or a dependent relative of such a member to be charged the in-state tuition rate under GS 116-143.3, you must submit the appropriate application prior to initial enrollment or re-enrollment for which you claim the tuition benefit. You must submit the application prior to each successive academic year of enrollment.

3. North Carolina laws requires that each student supply all information requested relative to residency classification for tuition purposes. Failure to do so would result in classification as a nonresident for tuition purposes.

Financial Obligations

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

Refunds

TUITION REFUNDS for students shall not be made unless the student is, in the opinion of the College, compelled to withdraw for unavoidable reasons. In such cases, 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 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. No requests for refunds will be approved after the periods indicated above.

BOOKSTORE REFUNDS are made under the following conditions:

A. Students are allowed ten (10) calendar days beginning with the first day of the quarter to return textbooks for refund or credit as outlined below.

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

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

ACADEMIC STANDING

Credits

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

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

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

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

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

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

Grading Procedures

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

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

1. Inc. -- Incomplete: Given at the discretion of the instructor when all course requirements have been satisfied. Students must remove Incompletes by the mid-term of the following quarter, or an automatic "F" grade is assessed.

2. WD -- Given through the 20% date of the class. No penalty is involved.

3. WP -- Assigned after the 20% date of the class to those students who are passing at the time of withdrawal (date on drop/add form) and who formally withdrew (completed withdrawal form through instructor). WF -- Assigned to all drops after the 20% date of the class who are not eligible for a WP.

4. NC -- No Credit: Fayetteville Technical Community College offers thee student an alternative grading plan. The intent of this grading plan is to allow a student to explore fields of study outside his/her known areas of competency. Such courses will not be computed in grade-point averages, and therefore, no credit or penalty is attached to the "No Credit" grade; however, all course requirements must be met by the student. Limitations on the number of courses taken for "No Credit" will be handled on an individual basis. A student may not repeat the same courses for a "No Credit" grade. Developmental Studies courses are remedial in nature and are ineligible for "No Credit" grades. A drop at any time 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.

5. P -- Proficiency: Students who plan to take a challenge examination must contact the department chairperson of the curriculum in which they wish to challenge the course. Where a CLEP test is available for such courses, students are urged to take the CLEP subject exams. All students who request to take a proficiency exam in any course must complete the exam within the first four class days of the quarter. Students must be registered for the course in order to take a proficiency exam. No proficiency exams will be given beyond the first four class days of any quarter for courses in which a student is registered for that quarter. Student grade cards will indicate by an asterisk (*) courses passed by proficiency. A student will not be carried on the class roll for the purpose of full-time enrollment after passing a proficiency exam for that class. Veteran students will not receive educational monetary benefits for courses passed by proficiency. Students who pass courses by proficiency are urged to add another course to their schedule during drop/add period.

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

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

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

Academic Deficiency

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

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

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

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

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

Developmental Studies

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

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

Attendance Policy

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

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

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

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

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

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

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

G. Health Occupations Programs do have attendance policies that are more stringent than the above. Health students will receive a copy of attendance requirements during the first days of class.

Course Drop/Add Policy

1. Students may not add a class after the first five school days of any quarter.

2. A student may drop a class as late as the 20% date of the class without penalty. The transcript will indicate a "WD."

3. A student who has to withdraw from the institution for unavoidable reasons within the first 10 calendar days may request a refund.

4. A student who drops a class after the 20% date of the class and is passing at the time of official withdrawal will be given a "WP."

5. A student who drops a class after the 20% date of the class, and is not eligible for a "WP," will receive a "WF."

6. All students who drop must follow the instructions listed in the current Student Handbook under "withdrawals."

Withdrawals

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

1. Student Withdrawal - He/she officially withdraws. (This constituted student withdrawal and is effective as of that date.)

2. Administrative Withdrawal

   a. He/she ceases attending class. Students who are absent for more than 20% of scheduled class sessions may be dropped from the class rolls. (See Attendance Policy.)

b. The responsible instructional personnel are reasonably assured that the student does not intend to pursue the learning activities of the class. (This constitutes administrative withdrawal and is effective as of that date.)

c. He/she completes the minimum objectives stated for the class, or transfers to another class.

Class Repeat Rules

Students should not repeat courses previously passed with a "C" or better. Students who fail a required course will be required to repeat the course. Both grades made on a given course will be counted on the student's total quality point average.

Veterans should be aware that they cannot receive VA benefits for duplication of courses previously passed with a grade of "D" or higher.

Student Records

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

1. The Registrar is responsible for student records. The following documents will be maintained as a part of the student's institutional records and will be subject to all state and federal regulations governing the safety and confidentiality of those records: completed application, completed medical form, veterans' records, statement of residency, transcripts, any statement of waiver by the student concerning student records, and a list of persons, firms, or other institutions to which a copy of the institutional records have been sent.

2. A student may receive a copy of his/her transcript upon graduation. One official transcript may be sent to a school of his/her choice upon written request. A fee of $1 is charged for each transcript after the first one.

3. When a student has a name change or change of address, he/she is responsible for contacting the Registrar's Office in person to fill out the necessary forms.

4. Transcripts and other information on students will not be released until all financial obligations to the institution have been satisfied.

5. Any student with outstanding (unpaid) fines at the end of an academic quarter may not be permitted to re-register, nor have his/her grades released, nor have course completion certificate released until payment of such debts has been accomplished.

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

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

Fayetteville Technical Community College classifies the following as directory information: Name and enrollment status, including curriculum and dates of enrollment. The student's address, telephone number and location on campus may also be released if the request is legitimate and a need for emergency access exists as determined by the Registrar or staff. School officials may release this information to any person without the consent of the parents or the student. Any parent or eligible student who objects to the release of any or all of this information without his/her consent must notify in writing the Registrar by a date which is five (5) school days from the date that the student receives his/her Student Handbook. The objective must state what information the parent or student does not want to be classified as directory information. If no objective is received by the aforesaid date, the information will be classified as directory information until the beginning of the next school year.

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

Requirements for Graduation

To be eligible for graduation, the student must:

1. Successfully complete the curricular requirements in effect at the time the student entered the curriculum. Students who enter a curriculum after the winter quarter are subject to the curricular requirements in effect for the following fall quarter. A student who withdraws from the institution and re-enters at a later quarter, including students who have completed at least one or more quarters, will be subject to curricular requirements in effect for the following fall quarter. In cases where students re-enter at the beginning of fall quarter, they are subject to the requirements of the curriculum at the fall quarter re-entry.

2. Have met all admissions requirements for the program in which the student will graduate, including receipt of high school transcript and transcripts of all post-secondary school work.

3. Have sufficient quality points to average 2.0 in total program.

4. 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.)

5. Must have taken care of ALL financial indebtedness to Fayetteville Technical Community College, including a graduation fee.

6. Applications for degrees or diplomas mailed to students when nearing completion of requirements, must be completed by the student and returned no later than the end of the winter quarter for the spring graduation and the end of the spring quarter for summer graduation from those programs that are completed in sequence during the summer quarter (i.e., Emergency Medical Science, Radiologic Technology, and certain vocational curricula). The College assumes no responsibility for making special adjustments for students who fail to file applications by the designated time. A candidate who fails to file an application for graduation or meet graduation requirements by the designated date for each automatically voids his candidacy for that particular graduation.

7. Substitution of courses for graduation purposes must be approved by the department chairperson and the Associate Vice President for Student Development.

Classification of Students

Full-time student: A student enrolled for 12 or more quarter hours.
Part-time student: A student enrolled for fewer than 12 quarter hours.
Freshman: A student who has fewer than the number of quarter hours required for the first three quarters.
Sophomore: A student who has satisfied freshman requirements.

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

Non-Matriculating Student: Students who wish to take courses for exploratory purpose, for their own pleasure, for job skills, etc., and who do not intend to pursue a degree or diploma may take up to 45 credit hours without meeting admission requirements.

However, students must meet all admission requirements and be formally approved for a curriculum before they may be approved to file VA or FA benefits.

HONORS AND AWARDS

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

President's List

The President's List is published at the end of each quarter to honor students with an outstanding grade point average. Final grades of an A or B on a minimum of 12 credit hours of curricula work are required for inclusion on the President's List. Developmental Studies students are ineligible for consideration for the President's List.

Marshals

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

Trox Poland Memorial Award

The criteria set forth for this award are as follows:

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

Who's Who

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

STUDENT DEVELOPMENT

The Office of Student Development at Fayetteville Technical Community College is located in the Student Development Building. Counselors are available to assist students from 8:00 a.m. to 9:00 p.m. each day, Monday through Friday.

Students, faculty, and staff who need assistance should feel free to contact staff personnel in the Student Development Office.

Students are urged to come to the Student Development Office any time during school hours. A counselor will be available to assist all students with career plans, personal concerns, or educational counseling.

The Student Development Staff is responsible for the following functions:

1. admissions
2. alumni or follow-up coordination
3. career development
4. counseling
5. financial aid
6. graduate job placement
7. health services
8. new student orientation
9. recruitment
10. registration
11. student activities
12. student housing
13. testing

The foregoing services are provided to assist students in achieving their educational goals as quickly as possible. Students should feel free to come in any time for assistance.

Counseling Services

Counselors at Fayetteville Technical Community College are available to assist students in developing skills and attitudes needed to deal effectively with their surroundings. Short term and long term goals are developed in the counseling relationship which are worthwhile and realistic. Responsibilities of counseling are shared equally between counselor and student with participation providing positive outcomes. Students' feelings and well-being are an important consideration in counseling sessions.

Confidentiality is respected and kept between the counselor and the student in counseling relationships. Termination of counseling occurs when the counselor and student agree that the counseling goal has been reached or enough significant progress has been made. A part of the termination process involves summarizing what has occurred from the beginning counseling session to the present and to future directions. Through termination, the student is committed to future growth.

The professional training of the counselor provides the opportunity to assist students with planning careers, exploring and interpreting interests and abilities, clarifying values, developing interpersonal communication skills, and problem-solving skills. Serious problems, such as personality disorders which require special treatment, are referred to the appropriate community agencies.

Career Development

Assistance with the development of realistic career goals and plans is available through the Career Center. Through the Career Center an individual can talk with a trained counselor and work jointly in solving problems associated with career choices, daily choices and educational planning. The Career Center offers information on career-related topics, including job descriptions, duties, working environments, earnings, minimum entry skills, and the education and training required for entry into the job market. Special testing, including attitude and achievement tests, are utilized to aid the career development process. Career Center services are available to students, staff and faculty, and members of the community.

Financial Aid

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

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

1. Pell Grants
2. Supplemental Educational Opportunity Grants
3. North Carolina Student Incentive Grant
4. National Direct Student Loan
5. College Work-Study
6. College Foundation - federally insured student loan program
7. Wachovia Scholarship Program
8. Carolina Telephone Scholarship
9. FTCC Foundation Scholarship

10. North Carolina Community College Scholarship Program
11. Tom McLean Endowed Scholarship
12. W. Vardell Williamson Scholarship
13. Professional Construction Estimators Association
14. Highsmith-Rainey Memorial Hospital Auxiliary Nursing Scholarship
15. Local aid funds. Complete information on available loans and scholarships is published yearly by the Financial Aid Office.
16. Tuition-book fees or emergency loans (short-term loans repayable in 30/60 days.
17. Long-term loans - delayed payment educational loans to full-time students.
18. Waiver of out-of-state tuition for current military personnel stationed at a North Carolina base and their dependents.
19. Tuition waiver for senior citizens.
20. Other sources of financial aid are often available through independent agencies such as VA, Vocational Rehabilitation, JPTA, military service, and National Guard.

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

The applicant must:

1. Be a citizen or national of the United States or be in the United States for other than a temporary purpose, or be or intend to be a permanent resident, or be a permanent resident of the Trust Territory of the Pacific Islands.
2. Provide selective service acknowledgement letter, if male; if female, must sign appropriate affidavit.
3. Students enrolled in Developmental Studies are ineligible for all federal financial aid programs.
4. Be enrolled on at least half-time basis.
5. Maintain "satisfactory academic progress" in the course of study the student is pursuing, (see academic standing) in the Student Handbook.
6. Not be in default on any NDSL or Guaranteed loan made for attendance at FTCC or owe a refund on federal grant aid received at Fayetteville Technical Community College.

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

Requests for all financial aid should be made when you apply for admission to FTCC. Applications received before July 1, will receive primary consideration for the subsequent academic year. Applications received after that date will be processed as funds are available.

Any student who needs financial aid or has questions concerning financial aid should contact the Financial Aid Office in the Student Development Center.

Financial Aid (Title IV Funds)

Students who are no longer eligible for Title IV financial aid support due to lack of satisfactory progress may request an extension of financial aid through the Student Appeals process. Students may appeal financial aid decisions through their counselor to the Associate Vice President for Student Development. The appeal must be in writing and should state the reasons for prior unsatisfactory progress and specify the action that has been taken to insure academic success upon continuation/re-entry.

Extensions of financial aid will be considered within the existing guidelines. Reinstatement would require mitigating circumstances as defined by the institution.

1. Serious illness effecting grades and/or attendance.
2. Illness of an immediate family member effecting the student's grades and/or attendance.
3. Employment conflicts effecting the student's grades and/or attendance.
4. Academic problems resulting from a physical handicap.
5. Other mitigating circumstances as determined by the institution.

Student Government Association

The Student Government Association represents the student body in institutional affairs at Fayetteville Technical Community College. Members of the Student Government Association are assigned to serve as members of an institutional standing committee. The president of the Student Government Association serves on the FTCC Steering Committee. The president, as head of the student body, also serves as an ex officio member of the FTCC Board of Trustees.

Student Housing

Housing arrangements are the student's responsibility. As a member of the North Carolina State Department of Community Colleges, FTCC does not provide student housing. Assistance is available in locating living arrangements in the community. Students in need of housing should contact the Director of Admissions. The college assumes no responsibility in any financial arrangement between the student and the landlord. Financial arrangements for rooms are on an individual basis between the student and the landlord.

Health Services

Health services at FTCC are handled by the Health Services Coordinator. Each shop and lab is equipped with first-aid kits. Basic first aid is available. Students are referred to an area health care facility when treatment is required. Health counseling is provided by a trained staff member. The Health Services Coordinator will act as a referral agent as necessary.

Student Insurance

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

Students participating in athletic activities which are a part of their regular schedule instruction are covered by this insurance. Students participating in organized intramural sports are also covered.

The student accident insurance plan does not guarantee payment of all medical costs, and the student is responsible for the payment of all costs in excess of those paid by the insurance policy. A copy of the student accident insurance plan for the College is available in the Health Services Office.

Job Placement

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

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

Student Activities

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

FACULTY ADVISORY SYSTEM

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

GENERAL STUDENT REGULATIONS

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

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

1. Students are expected to conduct themselves as mature adults at all times.

2. Students who negligently lose, damage, destroy, sell, or otherwise dispose of school property placed in their possession or entrusted to them will be charged the full extent of the damage or loss and will be subject to disciplinary action.

3. Students who engage in such acts as cheating, stealing, gambling, profane language, or personal combat make themselves liable to disciplinary action, which may include being dropped from school.

4. Under no condition will alcoholic beverages or illegal drugs be permitted in or on the school property. No one under the influence of alcohol or illegal drugs will be permitted on the campus. Any violation of this regulation will result in the expulsion of the student.

5. Use of school equipment, including computer terminals, is considered a privilege and not to be abused. Use of computer equipment and terminals not authorized by the instructor or department chairperson will be considered unauthorized and will result in disciplinary action. Improper use of computer equipment and terminals includes use of unauthorized passwords, access to unauthorized programs, and other activities not expressly required for specific class assignments.

6. Students are required to observe "no smoking" regulations.

7. Students are under a moral obligation to conduct themselves in a respectful manner in off-campus housing.

8. Off-campus activities under the name or sponsorship of FTCC are subject to the same rules and regulations for on-campus activities.

9. Students are responsible for information, rules and regulations published in the Catalog and Student Handbook.

Dismissal

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

Students' Right to Due Process

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

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

The procedure for appeals is detailed in the current FTCC Student Handbook.

Parking Violation Appeals

Appeals of parking violations may be submitted in person or in writing at the Security/Traffic Office. Appeals cannot be made via telephone or at other campus locations. To be considered, appeals must be submitted within ten days of the alleged offense. The Traffic/Administrative Officer is granted final authority to grant or deny an appeal based upon its merits.

LEARNING RESOURCES CENTER

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

The Library provides excellent facilities for study, research, browsing, self-improvement, and enjoyment. The Library houses over 40,000 volumes of books and subscribes to over 350 current magazines and newspapers. Back issues of periodicals are available in bound volumes, unbound issues, and on microfilm. Audiovisual software, such as filmstrips, records, cassettes, and slides are available in the Library, as is the space and equipment necessary for viewing and listening. The Library also has available for student use an Apple IIe computer and printer, electric typewriters, a Xerox copying machine, and college catalogs for post-secondary institutions in the southeastern states. The Library also has the capacity of providing computerized literature searches of the Dialog data bases. The staff is always ready to instruct students in the use of the Library and to assist them in finding information here or at other institutions through interlibrary loans.

The Learning Lab/Skills Lab is a service facility available to the student body and any adult in the community. The Lab offers a wide selection of subjects and materials in a variety of formats including computers, cassettes, filmstrips, texts, and personal tutors. The Learning Lab/Skills Lab supports courses and programs on campus and in the community. It is an excellent place to prepare for any academic endeavor or to get assistance in current studies. The Learning Lab has a program for the General Education Development test (GED) and courses for North Carolina teacher renewal. This comprehensive facility specializes in individualized teaching at the level of need.

Media Services provides a qualified staff and excellent facilities to support the instructional programs with materials production and equipment. Equipment that circulates is controlled through Media Services. Students in need of assistance for class assignments, projects, or presentations should contact Media Services.

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

CONTINUING EDUCATION

General Information

Fayetteville Technical Community College provides educational opportunities for occupational skills, developing new competencies, participating in self-enrichment classes, or enrolling in Literacy Education Classes (Adult Basic Education, G.E.D. English as a Second Language, or Adult High School). Continuing Education courses vary in length depending on content, academic level and student needs.

Fayetteville Technical Community College offers Continuing Education programs throughout Fayetteville, Cumberland County, Ft. Bragg and Pope Air Force Base. Many of the courses are available during the evening at area junior and senior high schools. Arts, crafts and other general interest courses are also available at select locations within the college's service area, while special industry classes are conducted at several industrial sites.

In addition, Fayetteville Technical Community College offers on campus, a limited number of Saturday courses as well as regularly scheduled classes at the Center for Business and Industry.

Continuing Education courses are noncredit in nature and cannot be used to fulfill requirements for an Associate Degree or Vocational Diploma.

Purposes

The general purposes of the Division of Continuing Education are:

- To provide a variety of Continuing Education courses to area residents.
- To insure quality instruction and meaningful learning opportunities.
- To offer courses at convenient times, locations and at a reasonable cost.
- To be receptive to area business and industry training needs.
- To plan, coordinate, and supervise emergency service, fire, rescue and law enforcement training for the general well being of the entire community.
- To identify educational and vocational needs of special adult populations within the area and provide services to meet those needs.
- To foster and enhance in-service training programs for Continuing Education instructors.

Admission

Adults eighteen years of age or older are eligible to enroll in Continuing Education courses offered by Fayetteville Technical Community College on campus or at area locations. Students under eighteen with special needs or interest areas should contact their high school guidance counselor or a representative of the Continuing Education staff for further information.

Fees

Registration fees are established by the North Carolina General Assembly except for those courses offered through community service. All fees must be paid on or before the first class session. Persons 65 years of age and older are exempt from Continuing Education registration fees. Pre-registration is encouraged for most classes - contact the Registration and Records Office if assistance is needed. Refunds will be granted only for cancelled classes. Books and supplies are available through the FTCC Bookstore which is located in the Student Development Center. The Bookstore maintains hours to accommodate day and evening students.

Certificates

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

EDUCATIONAL PROGRAMS

Adult Basic Education

The goal of this program is to teach adults the basic skills of reading, writing, math, money management and problem solving. The program is offered at no charge to adults 18 years of age and older. Books are provided for each student and classes are conducted at many locations throughout the area.

General Education Development

The GED course is designed for adults 18 years of age and older who have not received a High School Diploma. The course will prepare students for the five GED exams in reading (literature and the arts), mathematics, writing (English), social studies, and science. The GED certificate signifies that the graduate has achieved a level of educational development equivalent to that of High School Diploma recipients.

English as a Second Language

ESL classes are designed for any adult who is not a native English speaker. Reading, writing, speaking, and basic living skills are taught. Students are placed in class levels with other students having similar language needs. Classes and books are FREE.

Compensatory Education

Compensatory education is designed to provide remedial academics to adults 18 years of age and older who have been diagnosed as being delayed learners. Classes are free and all books and materials are provided.

Adult High School Diploma

This program provides adults with an opportunity to earn a High School Diploma which is issued by Fayetteville Technical Community College in cooperation with the Cumberland County Board of Education.

The curricula consists of course studies in English, science, mathematics, and social studies. There is no registration fee. Classes are available throughout the area.

HUMAN RESOURCES DEVELOPMENT

Human Resources Development is a self-improvement, job-seeking skills class for the unemployed adult, 18 years of age or older. During the six-week class the students are provided instruction in the area of self-awareness, communication skills, interviewing techniques and resume preparation. The objective of the class is to enhance the students' potential for employment by improving their job seeking skills and techniques.

OCCUPATIONAL EXTENSION

Occupational Extension Education provides adults an opportunity to learn new occupational skills or upgrade current ones. Classes are offered throughout the area and special courses may be organized whenever a sufficient number of students indicate an interest in a particular topic. Courses include aviation (ground school), business education, health, management development, basic computer operation, general contractors license preparation, substitute teacher training among others.

COMMUNITY SERVICES

The Community Service Department is responsible for offering a wide variety of extension courses in arts, crafts, home economics, foreign language, personal development, and general interest throughout Cumberland County. This department is also responsible for providing courses to county senior citizens centers and rest homes/nursing homes.

EMERGENCY SERVICES TRAINING

This department is responsible to the community in saving lives through C.P.R. training and emergency medical technician training; for training firefighters to save lives and protect property; and to train law enforcement officers for the prevention of crime and the apprehension of criminals.

CENTER FOR BUSINESS AND INDUSTRY

The Center for Business and Industry is responsible for providing manufacturing industry, service industry and governmental agencies in the greater Cumberland County area with training for their employees. Skills training related to specific occupations or operations within a given business are developed and made available at the Center for Business and Industry and/or at the work site.

Specific program areas include: pre-employment training, in-plant training, new and expanding industry, focused industrial training, customer designed courses and programs, literacy in the workforce, and small business consultation.

COOPERATIVE EDUCATION

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

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

Eligibility

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

1. Completion of application from the Co-op Office.
2. Completion of 6 hours of credit ("C" average).
3. Agreement of the rules and regulations of the employing firm during the work term.
4. Possession of the abilities, interest, and maturity to benefit from the Co-op experience.

Academic Credit

Students are assigned to a Co-op Coordinator who guides the students in writing measurable learning objectives (MLO's) and completing a workbook.

You earn one (1) credit hour for satisfactory completion of a minimum of 110 hours ten (10) working hours per week x 11 weeks = 1 credit or two (2) credit hours for satisfactory completion of a minimum of 220 hours twenty (20) working hours per week x 11 weeks = 2 credits. A student may receive a maximum of two (2) credit hours per quarter and a maximum of twelve (12) credit hours toward degree requirements, depending on department curriculum standards for work experience.

How to Apply

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

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

Registration

Students must complete the Co-op application, acquire approval of a career-related job, obtain a Co-op workbook, course number, and request code during registration.

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

RESOURCE DEVELOPMENT

The Resource Development Office was created to seek external funding and to establish the FTCC Foundation, Inc., a non-profit organization established by the Board of Trustees of Fayetteville Technical Community College in January 1985. The Board is composed of 31 area business and civic leaders. The Foundation is organized to receive gifts of money or property to support the educational programs of the College. It provides flexibility in handling, receiving, disbursing, and investing money received from private sources. The Foundation has received over $100,000 since its inception. These donations were made by faculty and staff at FTCC, business and industry, Foundation Board members, FTCC trustees, and alumni and friends of FTCC.

NORTH CAROLINA VISITING ARTIST PROGRAM

The North Carolina Arts Council and the Community College System jointly sponsor a Visiting Artist at each of the 58 community and technical colleges. The Artists are not to teach formal classes, but to work as artists-in-residence for the communities where the schools are located. Residencies include areas such as music, dance, theatre, painting, sculpture, printmaking, film/video, photography, crafts, poetry, and fiction.

As community art resources, Visiting Artists present workshops, lecture/demonstrations, exhibitions, in-school activities, and productions. Fayetteville Technical Community College has been a part of this program since 1972 and has provided many versatile and talented artists for Fayetteville and Cumberland County.

ALUMNI ASSOCIATION

The Alumni Association of Fayetteville Technical Community College was officially founded in November 1984. The purpose of the organization is to foster a mutually beneficial relationship between the institution and its graduates.

Each member enjoys the benefits of continued use of campus resources such as the library and job placement, the receipt of a quarterly newsletter, and involvement in cultural and social activities on campus. There are no membership dues assessed.

The activities and growth of the Alumni Association are guided by a twelve member Board of Directors who are elected from within the membership.

The members of the Alumni Association are dedicated to advancing the growth and development of their alma mater, and to helping each other become better, more productive people. They share a pride in the past with a focus on the future.

CURRICULUM PROGRAMS

CURRICULUM PROGRAMS

ASSOCIATE DEGREE PROGRAMS

A/C, Heating & Refrigeration Technology
Accounting
Administrative Office Technology
Agricultural Science
Architectural Technology
Associate Degree Nursing
Automotive Service Technology
Automotive Technology
Banking and Finance
Business Administration
Business Computer Programming
Civil Engineering Technology
Commercial Art & Advertising Design
Criminal Justice/Protective Services Technology
Dental Hygiene
Early Childhood Associate
Electronics Engineering Technology
Emergency Medical Science
Foodservice Management
Funeral Service Education
General Education
General Occupational Technology
General Office
Horticulture Business Technology
Industrial Management
Insurance
Machinist Technology
Marketing and Retailing
Paralegal Technology
Physical Therapist Assistant
Postal Service Technology
Public Administration
Radiologic Technology
Recreation Associate
Real Estate
Respiratory Care Technology

DIPLOMA PROGRAMS

Agricultural Science & Mechanization
Automotive Body Repair
Automotive Mechanics
Carpentry & Cabinetmaking
Dental Assisting
Drafting-Mechanical
Electrical Installation and Maintenance
Foodservice Specialist
Industrial Mechanics
Pharmacy Technology
Plumbing
Practical Nursing Education
Surgical Technology
Tool & Die Making
Waste Water Treatment
Welding

CERTIFICATE PROGRAMS

Basic Law Enforcement Training
Cosmetology
Masonry
Nursing Assistant
Practical Foodservice

ACCOUNTING T-016

The purpose of the Accounting curriculum is to prepare the individual to enter the accounting profession through study of accounting principles, theories, and practices with related study in law, finance, management, and data processing operations.

The curriculum is designed to prepare the individual for entry-level accounting positions, such as junior accountant, bookkeeper, accounting clerk, cost clerk, payroll clerk, and related data processing occupations.

With experience and additional education, the individual will be able to advance to positions such as systems accountant, cost accountant, budget accountant, and property accountant.

Accounting

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ACC	120	Accounting Principles I	4	2	0	5
BUS	109	Desktop Computers	0	0	3	1
BUS	191	Keyboarding Skills I				
	OR					
BUS	192	Keyboarding Skills II	2	0	3	3
ENG	100	Reading Efficiency	0	0	3	1
ENG	101	Grammar				
	OR					
ENG	104	Usage & Composition I	3	0	0	3
MAT	106	EDP Math	5	0	0	5
			14	2	9	18
SECOND QUARTER						
ACC	121	Accounting Principles II	4	2	0	5
BUS	123	Business Finance I	2	2	0	3
BUS	128	Spreadsheets I	2	4	0	4
EDP	103	Introduction to Programming	3	0	0	3
ENG	102	Composition				
	OR					
ENG	105	Usage & Composition II	3	0	0	3
			14	8	0	18
THIRD QUARTER						
ACC	221	Intermediate Accounting I	5	0	0	5
BUS	110	Business Math w/Calculators	2	0	3	3
*BUS	124	Business Finance II	2	2	0	3
EDP	116	Business BASIC Language	3	2	0	4
ENG	103	Report Writing				
	OR					
ENG	108	Usage & Composition III	3	0	0	3
			15	4	3	18
SUMMER QUARTER						
ACC	122	Management Accounting	4	2	0	5
		Social Science	3	0	0	3
			7	2	0	8
FOURTH QUARTER						
ACC	222	Intermediate Accounting II	5	0	0	5
ACC	229	Federal Income Tax	5	0	0	5
BUS	115	Business Law I	4	0	0	4
BUS	282	Business Statistics	4	0	0	4
ECO	102	Macroeconomics	3	0	0	3
			21	0	0	21
FIFTH QUARTER						
ACC	223	Intermediate Acctng. III	5	0	0	5
ACC	225	Cost Accounting	4	2	0	5
BUS	116	Business Law II	4	0	0	4
ECO	104	Microeconomics	3	0	0	3
*ISC	251	Organization Effectiveness	3	0	0	3
			19	2	0	20
SIXTH QUARTER						
ACC	224	Advanced Accounting				
	OR					
ACC	227	Managerial Accounting	4	2	0	5
ACC	269	Auditing	5	0	0	5
ENG	204	Oral Communications	3	0	0	3
		Social Science	3	0	0	3
			15	2	0	16

Total Required Credits.....119

*Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of BUS 124 and/or ISC 251 provided he/she acquires the approval of the Department Chairperson and Co-op Director.

ADMINISTRATIVE OFFICE TECHNOLOGY T-030

The purposes of the Administrative Office Technology curriculum are to: (1) prepare the individual to enter the secretarial profession, (2) provide an educational program for individuals wanting education for upgrading (moving from one secretarial position to another) or retraining (moving from present position to secretarial position), and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

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

Administrative Office Technology

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
BUS 110	Business Math with Calculators	2	0	3	3
BUS 112	Records Management	4	0	0	4
*BUS 191	Keyboarding I				
OR					
BUS 192	Keyboarding II	2	0	3	3
ENG 101	Grammar	3	0	0	3
MAT 110	Business Mathematics	5	0	0	5
	Social Science or Humanities Elective	3	0	0	3
		19	0	6	21
SECOND QUARTER					
BUS 104	Keyboarding III	2	0	3	3
**BUS 106	Shorthand	5	0	0	5
BUS 261	Machine Transcription I	1	0	6	3
ENG 102	Composition	3	0	0	3
ENG 110	Business English	3	0	0	3
		14	0	9	17
THIRD QUARTER					
BUS 105	Keyboarding IV	2	0	3	3
BUS 107	Dictation & Transcription I	3	2	0	4
BUS 183	Terminology & Vocabulary I	5	0	0	5
	Related Elective	1	0	3	2
BUS 210	Infomation Processing Concepts	2	0	3	3
	Social Science or Humanities Elective	3	0	0	3
		16	2	9	20
SUMMER QUARTER					
BUS 131	Micro Computer Office Applications	1	0	3	2
BUS 150	Financial Accounting	4	2	0	5
	Social Science or Humanities Elective	3	0	0	3
		8	2	3	10
FOURTH QUARTER					
BUS 184	Terminology & Vocabulary II	5	0	0	5
BUS 206	Dictation & Transcription II	3	2	0	4
BUS 211	Information Processing App. I	4	0	3	5
ENG 204	Oral Communications	3	0	0	3
ENG 207	Business Communications for Word Processors	5	0	0	5
		20	2	3	22
FIFTH QUARTER					
BUS 130	Microcomputer Data Management	1	0	3	2
BUS 204	Information Processing App. II	4	0	3	5
BUS 207	Dictation & Transcription III	3	2	0	4
BUS 214	Secretarial Procedures	3	2	0	4
BUS 262	Machine Transcription II	2	0	3	3
		13	4	9	18
SIXTH QUARTER					
BUS 133	Micro Disk Operating	1	0	3	2
BUS 134	Integrated Software Applications	1	0	3	2
BUS 205	Information Processing App. III	2	0	3	3
BUS 270	Office Practice Seminar	3	0	0	3
BUS 290	Internship	0	0	10	1
		7	0	19	11

Total Required Credits.....119

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

Co-op Option: Qualified students may elect to take up to five (5) credit hours of Cooperative Education in place of BUS 106 provided he/she acquires approval from the Co-op Director and the Department Chairperson.

AGRICULTURAL SCIENCE T-126

The Agricultural Science curriculum is designed to prepare students in the scientific, technical, and managerial concepts of farm and agricultural enterprise operations.

The program emphasizes the management and operation of farms. Courses are included to prepare the student to be able to do most repairs and installation of buildings and equipment, as well as to undertake electrical, construction, and plumbing and irrigation requirements pertaining to the farm operation. Additional courses include those which prepare for planning, financing, marketing, and long-range forecasting of the farm enterprise.

The broad concepts taught in this curriculum prepare students for jobs in farm and agriculture-related enterprises. Some of the jobs graduates are qualified for are: farm machine operator, farm worker, farm equipment mechanic, farm manager or supervisor, and sales representative for agricultural equipment and supplies.

Agricultural Science

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
AGR 118	Feed Grain Crops	3	0	0	3
AGR 124	Plant Production	2	0	0	2
AGR 136	Agricultural Calculation	2	0	0	2
AGR 155	Plant Diseases	3	0	0	3
AGR 186	Soils & Fertilizers	5	0	0	5
AGR 272	Tobacco Production	5	0	0	5
ENG 101	Grammar	3	0	0	3
		23	0	0	23
SECOND QUARTER					
AGR 101	Farm Tractors I	1	0	3	2
AGR 108	Beef Cattle Production	2	0	0	2
AGR 123	Farm Machinery Maintenance: Welding & Repair	3	0	3	4
AGR 127	Animal Nutrition	2	0	0	2
AGR 154	Swine Production	2	0	0	2
AGR 228	Livestock Diseases & Parasites	4	0	0	4
ENG 102	Composition	3	0	0	3
		17	0	6	19
THIRD QUARTER					
AGR 102	Farm Tractors II	1	0	3	2
AGR 121	Weed Identification & Control	2	0	0	2
AGR 131	Soybean Production	2	0	0	2
AGR 143	Land Management Practices	3	0	3	4
AGR 213	Farm Enterprise Management	4	0	0	4
AGR 245	Crop Insects	2	0	0	2
ENG 103	Report Writing	3	0	0	3
		17	0	6	19
FOURTH QUARTER					
AGR 137	Farm Management in Computer Use	3	2	0	4
AGR 190	Greenhouse Production & Management	3	2	0	4
AGR 200	Chemical Pest Control	4	0	0	4
AGR 208	Marketing Farm Products	3	0	0	3
AGR 238	Farm Mechanization	3	0	0	3
ENG 204	Oral Communications	3	0	0	3
		19	4	0	21
FIFTH QUARTER					
AGR 112	Small Engine Repair	1	0	3	2
AGR 114	Farm Electrification	2	0	0	2
AGR 126	Farm Forest Management	3	0	0	3
AGR 128	Farm & Home Construction	2	0	3	3
AGR 183	Poultry & Egg Production	3	0	0	3
AGR 296	Agricultural Programs & Agencies	3	0	0	3
		14	0	6	16
SIXTH QUARTER					
AGR 133	Farm Water & Plumbing Systems	3	0	0	3
AGR 240	Fruit & Vegetable Production	4	0	0	4
AGR 243	New Sources of Farm Income	2	0	0	2
AGR 274	Pasture & Forage Crops	5	0	0	5
PSY 101	Introduction to Psychology	3	0	0	3
SOC 102	Marriage & Family	3	0	0	3
		20	0	0	20

Total Required Credits.....118

AGRICULTURAL SCIENCE AND MECHANIZATION (TECHNICAL SPECIALTY) T-017

The Agricultural Science and Mechanization (Technical Specialty) curriculum is designed primarily for individuals involved in farming or agricultural related enterprises. The courses are planned to provide technical, scientific, and managerial concepts which supplement and relate to the experiences of students in their employment. The basic knowledge and skills of farming operations involving crops and livestock are included to insure a continuity of the theory and the practical aspects of farming. Courses provide opportunities to gain knowledge and skills in crop and livestock production; managing the farm business; repairing, maintaining, and equipping the operation; laws and taxes; and long-range planning and forecasting.

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

Agricultural Science and Mechanization
(Technical Specialty)

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
AGR 118	Feed Grain Crops	3	0	0	3
AGR 124	Plant Production	2	0	0	2
AGR 136	Agricultural Calculation	2	0	0	2
AGR 155	Plant Diseases	3	0	0	3
AGR 186	Soils & Fertilizers	5	0	0	5
AGR 272	Tobacco Production	5	0	0	5
		20	0	0	20
SECOND QUARTER					
AGR 101	Farm Tractors I	1	0	3	2
AGR 108	Beef Cattle Production	2	0	0	2
AGR 123	Farm Machinery Maintenance: Welding & Repair	3	0	3	4
AGR 127	Animal Nutrition	2	0	0	2
AGR 154	Swine Production	2	0	0	2
AGR 228	Livestock Diseases & Parasites	4	0	0	4
		14	0	6	16
THIRD QUARTER					
AGR 102	Farm Tractors II	1	0	3	2
AGR 121	Weed Identification & Control	2	0	0	2
AGR 131	Soybean Production	2	0	0	2
AGR 143	Land Management Practices	3	0	3	4
AGR 213	Farm Enterprise Management	4	0	0	4
AGR 245	Crop Insects	2	0	0	2
		14	0	6	16
FOURTH QUARTER					
AGR 137	Farm Management in Computer Use	3	2	0	4
AGR 190	Greenhouse Production & Management	3	2	0	4
AGR 200	Chemical Pest Control	4	0	0	4
AGR 208	Marketing Farm Products	3	0	0	3
AGR 238	Farm Mechanization	3	0	0	3
		16	4	0	18
FIFTH QUARTER					
AGR 112	Small Engine Repair	1	0	3	2
AGR 114	Farm Electrification	2	0	0	2
AGR 126	Farm Forest Management	3	0	0	3
AGR 128	Farm & Home Construction	2	0	3	3
AGR 183	Poultry & Egg Production	3	0	0	3
AGR 296	Agricultural Programs & Agencies	3	0	0	3
		14	0	6	16
SIXTH QUARTER					
AGR 133	Farm Water & Plumbing Systems	3	0	0	3
AGR 240	Fruit & Vegetable Production	4	0	0	4
AGR 243	New Sources of Farm Income	2	0	0	2
AGR 274	Pasture & Forage Crops	5	0	0	5
ENG 101	Grammar	3	0	0	3
SOC 102	Marriage & Family	3	0	0	3
		20	0	0	20

Total Required Credits.....106

AIR CONDITIONING, HEATING, & REFRIGERATION TECHNOLOGY T-036

The Air Conditioning, Heating, and Refrigeration Technology curriculum develops an understanding of the principles involved in designing, planning, installing, operating, troubleshooting, and organizing maintenance of climate control equipment and systems. Graduates of the Air Conditioning, Heating and Refrigeration Technology curriculum should be able to assist in planning installations, designing systems, and organizing maintenance and work scheduling. In addition, they should be able to assist in installing, servicing, and operating environmental control systems in residential and commercial establishments. Job opportunities exist with companies that specialize in residential and commercial air conditioning, heating, and refrigeration systems, design, installation, and service. The graduate should be able to assist in designing mechanical equipment, ductwork, and electrical controls required in residential and commercial projects. With experience, the graduate should be able to design various air conditioning, heating, and refrigeration systems and function efficiently in working with systems designers, engineers, mechanics, sales engineers, and others in the field. The technician may be employed in areas of systems design, engineering assistance, estimating, sales, maintenance scheduling, installation, and service management in the growing field of air conditioning, heating, and cooling.

Air Conditioning, Heating, and Refrigeration Technology

FIRST QUARTER	Class	Lab	Clinic Shop	Quarter Hours Credit
AHR 101A Fundamentals of Refrigeration	3	0	3	4
AND				
AHR 101B Fundamentals of Refrigeration	2	0	3	3
OR				
AHR 101X Fundamentals of Refrigeration	5	0	0	5
AND				
AHR 101Y AHR-101 Lab	0	0	6	2
ENG 101 Grammar	3	0	0	3
MAT 100 Technical Algebra I	5	0	0	5
DFT 101 Technical Drafting	0	6	0	3
	13	6	6	18
SECOND QUARTER				
AHR 103X Commercial Refrigeration	5	0	0	5
AHR 103Y AHR-103 Lab	0	0	6	2
ENG 102 Composition	3	0	0	3
PHY 130X Physics I	3	0	0	3
PHY 130Y PHY-130 Lab	0	2	0	1
WLD 106 Techniques of Welding	1	0	6	3
	12	2	12	17
THIRD QUARTER				
AHR 135X Air Systems Fabrication I	1	0	0	1
AHR 135Y AHR-135 Lab	0	2	0	1
AHR 145A Warm Air Systems I	3	0	3	4
AND				
AHR 145B Warm Air Systems I	2	0	3	3
OR				
AHR 145X Warm Air Systems I	5	0	0	5
AND				
AHR 145Y AHR-145 Lab	0	0	6	2
ENG 103 Report Writing	3	0	0	3
PHY 131X Physics II	3	0	0	3
PHY 131Y PHY-131 Lab	0	2	0	1
	12	4	6	16
SUMMER QUARTER				
AHR 127 Equipment Application	6	0	0	6
*AHR 136X Air Systems Installation	2	0	0	2
*AHR 136Y AHR-136 Lab	0	0	3	1
PHY 132X Physics III	3	0	0	3
PHY 132Y PHY-132 Lab	0	2	0	1
	11	2	3	13
FOURTH QUARTER				
AHR 146X Warm Air Systems II	5	0	0	5
AHR 146Y AHR-146 Lab	0	2	0	1
AHR 203X Principles of Air Conditioning	8	0	0	8
AHR 203Y AHR-203 Lab	0	0	3	1
AHR 216X Circuits and Controls	4	0	0	4
AHR 216Y AHR-216 Lab	0	0	3	1
ENG 204 Oral Communications	3	0	0	3
	20	2	6	23
FIFTH QUARTER				
AHR 210X Hydronic Systems	6	0	0	6
AHR 210Y AHR-210 Lab	0	0	3	1
AHR 217X Circuits and Controls II	3	0	0	3
AHR 217Y AHR-217 Lab	0	0	3	1
ECO 205 Applied Economics	3	0	0	3
PSY 206 Applied Psychology	3	0	0	3
	15	0	6	17
SIXTH QUARTER				
AHR 209X A/C System Design	4	0	0	4
AHR 209Y AHR-209 Lab	0	0	3	1
AHR 227 Estimating & Contracting	5	0	0	5
AHR 256X Installation & Svc. Problems	4	0	0	4
AHR 256Y AHR-256 Lab	0	0	3	1
BUS 235 Small Business Management	3	0	0	3
	16	0	6	18

Total Required Credits.....122

*Co-op Option: Qualified students may elect to take up to three (3) credit hours of Cooperative Education in place of AHR 136X and AHR 136Y provided he/she acquires approval from the Co-op Director and Department Chairperson.

ARCHITECTURAL TECHNOLOGY T-041

The Architectural Technology curriculum provides individuals with knowledge and skills that will lead to employment and advancement in the field of architectural technology. Technical courses are included which will enable the graduate to advance into related areas of work as job experience is obtained or to continue toward an advanced degree in an associated field of technology.

Architectural technicians translate the architect's design sketches into complete and accurate plans and drawings for construction purposes. The technician will be involved in work requiring a knowledge of drafting, construction materials, mechanical and structural systems, estimating, building codes, and specification.

Initial employment opportunities exist with architectural and engineering firms, private utilities, contractors, and municipal governments.

Architectural Technology

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ARC	100	Sketching, Drawing & Composition	1	4	0	3
ARC	101	Arch. Drafting & Design I	2	0	6	4
ARC	111	Materials & Methods I	2	2	3	4
ENG	101	Grammar	3	0	0	3
MAT	100	Technical Algebra I	5	0	0	5
			13	6	9	19
SECOND QUARTER						
ARC	102	Arch. Drafting & Design II	2	0	6	4
ARC	110	Intro. to Architecture	2	0	3	3
ARC	112	Materials & Methods II	3	4	0	5
ENG	102	Composition	3	0	0	3
MAT	104	Technical Algebra II	5	0	0	5
			15	4	9	20
THIRD QUARTER						
ARC	103	Arch. Drafting & Design III	2	2	6	5
ARC	120	Codes, Specs., & Contracts	2	2	0	3
ARC	135	Intro. to Computer Aided Drafting	0	0	3	1
CIV	101	Surveying I	2	0	6	4
PHY	130X	Physics I	3	0	0	3
PHY	130Y	PHY-130 Lab	0	2	0	1
			9	6	15	17
SUMMER QUARTER						
ARC	130	Architectural Estimating	3	4	0	5
ARC	140	Computer Aided Drafting	2	4	0	4
OR						
ARC	140A	Computer Aided Drafting	1	2	0	2
AND						
ARC	140B	Computer Aided Drafting	1	2	0	2
			5	8	0	9
FOURTH QUARTER						
ARC	201	Arch. Drafting & Design IV	2	2	6	5
ARC	211	Architectural Presentations I	1	4	0	3
ART	221	Art Appreciation	5	0	0	5
ENG	103	Report Writing	3	0	0	3
PSY	206	Applied Psychology	3	0	0	3
		Elective	3	0	0	3
			17	6	6	22
FIFTH QUARTER						
ARC	202	Arch. Drafting & Design V	2	2	6	5
ARC	212	Arch. Presentations II	2	4	0	4
ARC	221	Arch. Environmental Systems I	1	2	3	3
CIV	110	Construction Planning Methods and Equipment	3	2	0	4
ENG	204	Oral Communications	3	0	0	3
			11	10	9	19
SIXTH QUARTER						
ARC	203	Arch. Drafting & Design VI	2	4	6	6
ARC	210	Project Seminar	2	6	0	5
ARC	220	Portfolio	1	4	0	3
*ARC	222	Arch. Environmental Systems II	1	2	3	3
			6	16	9	17

Total Required Credits....123

*Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of ARC 222 and/or three (3) hours of elective credits provided he/she acquires approval from the Co-op Director and the Department Chairperson.

ASSOCIATE DEGREE NURSING T-059

The Associate Degree Nursing curriculum is designed to prepare graduates to integrate the principles and theories of nursing and the sciences in utilizing the nursing process in the practice of nursing. The practice of nursing by associate degree nursing graduates consists of: (1) assessing the patient's physical and mental health, including the patient's reaction to illness and treatment regimens; (2) recording and reporting the results of the nursing assessment; (3) planning, initiating, delivering, and evaluating appropriate nursing acts; (4) teaching, delegating to, or supervising other personnel in implementing the treatment regimen; (5) collaborating with other health care providers in determining the appropriate health care for a patient; (6) implementing the treatment and pharmaceutical regimen prescribed by any person authorized by State law to prescribe such a regimen; (7) providing teaching and counseling about the patient's health care; (8) reporting and recording the plan for care, nursing care given, and the patient's response to that care; and (9) supervising, teaching, and evaluating those who perform or are preparing to preform nursing functions.

Graduates are eligible to take the National Council Licensure Examination (NCLEX-RN), which is required for practice as a registered nurse.

Individuals desiring a career in registered nursing should take biology, algebra, and chemistry courses prior to entering the program.

Associate Degree Nursing

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ENG	104	Usage & Composition I	3	0	0	3
NUR	101	Nursing I (Introduction to Nursing)	6	4	3	9
BIO	106X	Anatomy & Physiology I	5	0	0	5
BIO	106Y	BIO-106 Lab	0	0	3	1
PSY	101	Intro. to Psychology	3	0	0	3
			17	4	6	21
SECOND QUARTER						
NUR	102	Nursing II (Nursing of Children & Adults, I)	6	4	3	9
SOC	101	Intro. to Sociology	3	0	0	3
BIO	107X	Anatomy & Physiology II	5	0	0	5
BIO	107Y	BIO-107 Lab	0	0	3	1
PSY	202	Human Growth & Development	3	0	0	3
			17	4	6	21
THIRD QUARTER						
NUR	103	Nursing III (Nursing of Children & Adults, II)	6	2	9	10
BIO	108X	Microbiology I	5	0	0	5
BIO	108Y	BIO-108 Lab	0	0	3	1
PSY	204	Abnormal Psychology	3	0	0	3
			14	2	12	19
SUMMER QUARTER						
NUR	104	Nursing IV (Nursing of Mothers & Infants)	4	0	6	6
SOC	102	Marriage and Family	3	0	0	3
			7	0	6	9
FOURTH QUARTER						
NUR	205	Nursing V (Nursing of Children & Adults, III)	6	2	12	11
ENG	105	Usage & Composition II	3	0	0	3
ENG	204	Oral Communications	3	0	0	3
			12	2	12	17
FIFTH QUARTER						
NUR	206	Nursing VI (Nursing of Children & Adults, IV)	6	2	12	11
ENG	210	American Literature I	3	0	0	3
		Humanities	3	0	0	3
			12	2	12	17
SIXTH QUARTER						
NUR	207	Nursing VII (Nursing of Children & Adults, V)	6	0	15	11
NUR	208	Nursing VIII (Profesaional Development)	3	0	0	3
ECO	102	Macroeconomics	3	0	0	3
			12	0	15	17

Total Required Credits.....121

AUTOMOTIVE BODY REPAIR V-001

The Automotive Body Repair curriculum provides training in the use of the equipment and materials of the auto body mechanic trade. The student studies the construction of the automobile body and techniques of auto body repairing, rebuilding, and refinishing.

Repairing, straightening, aligning, metal finishing, and painting of automobile bodies and frames are typical jobs performed. Job titles include automobile body repairperson, automotive painter, and frame and chassis repairperson. Persons completing this curriculum may find employment with franchised automobile dealers, independent garages, or may start their own businesses.

Automotive Body Repair

Course Title	Class	Lab	Shop	Credit
FIRST QUARTER				
AUT 1111 Auto Body Repair I	6	0	12	10
OR				
AUT 1111A Auto Body Repair I	3	0	6	5
AND				
AUT 111B Auto Body Repair I	3	0	6	5
WLD 1180 Basic Welding	1	0	6	3
DFT 1101 Schematics & Diagrams	1	0	3	2
	8	0	21	15
SECOND QUARTER				
AUT 1112 Auto Body Repair II	6	0	12	10
OR				
AUT 1112A Auto Body Repair II	3	0	6	5
AND				
AUT 1112B Auto Body Repair II	3	0	6	5
WLD 1105 Auto Body Welding	2	0	6	4
PME 1110 Automotive Repair	3	0	6	5
	11	0	24	19
THIRD QUARTER				
AUT 1113 Auto Body Repair III	8	0	12	12
OR				
AUT 1113A Auto Body Repair III	4	0	6	6
AND				
AUT 1113B Auto Body Repair III	4	0	6	6
MAT 1101 Vocational Math	3	2	0	4
ENG 1101 Communication Skills: Grammar	3	0	0	3
	14	2	12	19
FOURTH QUARTER				
AUT 1114 Auto Body Repair IV	7	0	15	12
OR				
AUT 1114A Auto Body Repair IV	2	0	6	4
AND				
AUT 1114B Auto Body Repair IV	2	0	6	4
AND				
AUT 1114C Auto Body Repair IV	3	0	3	4
BUS 1103 Small Business Operations	3	0	0	3
ENG 1102 Vocational Communications	3	0	0	3
	13	0	15	18

Total Required Credits.....71

AUTOMOTIVE MECHANICS V-003

The Automotive Mechanics curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair, and adjust automotive vehicles. Manual skills are developed in practical shop work and the technical understanding of the operating principles involved in the modern automobile are taught through class assignments, discussions, and shop practices.

Automobile mechanics maintain and repair mechanical, electrical and body parts of passenger cars, trucks, and busses. 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 and use shop manuals and other technical publications as references for technical data. Persons completing this curriculum may find employment with franchised automobile dealers, independent garages, or may start their own business.

Automotive Mechanics

FIRST QUARTER	Class	Lab	Clinic Shop	Quarter Hours Credit
ENG 1101 Communicative Skills: Grammar	3	0	0	3
MAT 1101 Vocational Mathematics I	3	2	0	4
PHY 1101X Properties of Matter	3	0	0	3
PHY 1101Y PHY-1101 Lab	0	2	0	1
PME 1101 Automotive: Basic Engines	3	0	12	7
OR				
PME 1101A Automotive: Basic Engines	1	0	6	3
AND				
PME 1101B Automotive: Basic Engines	2	0	6	4
	12	4	12	18
SECOND QUARTER				
ENG 1102 Vocational Communications	3	0	0	3
PHY 1102X Electricity	3	0	0	3
PHY 1102Y PHY-1102 Lab	0	2	0	1
PME 1102 Engine Electrical Systems	6	0	9	9
OR				
PME 1102A Engine Electrical Systems	4	0	3	5
AND				
PME 1102B Engine Electrical Systems	2	0	6	4
	12	2	9	16
THIRD QUARTER				
DFT 1180 Trade Drafting	2	4	0	4
PHY 1103X Work, Energy, Power	3	0	0	3
PHY 1103Y PHY-1103 Lab	0	2	0	1
PME 1124 Auto: Power Trains	3	0	9	6
OR				
PME 1124A Auto: Power Trains	2	0	3	3
AND				
PME 1124B Auto: Power Trains	1	0	6	3
	8	6	9	14
SUMMER QUARTER				
AUT 111 Adam Computer Program	0	0	3	1
PME 1132 Auto Fuel Systems	3	0	3	4
	3	0	6	5
FOURTH QUARTER				
MEC 1198X Auto: Machine Shop	2	0	0	2
MEC 1198Y MEC-1198 Lab	0	0	6	2
PME 1123A Chassis and Suspensions	4	0	3	5
AND				
PME 1123B Chassis and Suspensions	1	0	6	3
OR				
PME 1123X Chassis and Suspensions	5	0	0	5
AND				
PME 1123Y PME-1123 Lab	0	0	9	3
PME 1181X Auto: Tune-Up	3	0	0	3
PME 1181Y PME-1181 Lab	0	0	3	1
WLD 1180 Welding: Basic	1	0	6	3
	11	0	24	19
FIFTH QUARTER				
PME 1133X Computers and Emissions	3	0	0	3
PME 1133Y PME-1133 Lab	0	0	3	1
PME 1182A Automatic Transmissions	3	0	3	4
AND				
PME 1182B Automatic Transmissions	3	0	3	4
OR				
PME 1182X Automatic Transmissions	6	0	0	6
AND				
PME 1182Y PME-1182 Lab	0	0	6	2
PME 1183A Chassis Electrical Systems	2	0	3	3
AND				
PME 1183B Chassis Electrical Systems	2	0	3	3
OR				
PME 1183X Chassis Electrical Systems	4	0	0	4
AND				

PME	1183Y	PME-1183 Lab	0	0	6	2
			13	0	15	18

SIXTH QUARTER

PME	1125X	Auto: Servicing II	3	0	0	3
PME	1125Y	PME-1125 Lab	0	0	9	3
PME	1134	Electronic Fuel Injection	3	0	0	3
PME	1135X	Auto: Air Conditioning	3	0	0	3
PME	1135Y	PME-1135 Lab	0	0	3	1
*PME	1170A	Power Plant Trouble Shooting	2	0	3	3
AND						
*PME	1170B	Power Plant Trouble Shooting	1	0	3	2
OR						
*PME	1170X	Power Plant Trouble Shooting	3	0	0	3
AND						
*PME	1170Y	PME-1170 Lab	0	0	6	2
			12	0	18	18

Total Required Credits....108

*Cooperative Education may be substituted for PME 1170X and PME 1170Y or PME 1170A and PME 1170B upon approval of the Department Chairperson and the Co-op Director.

AUTOMOTIVE SERVICE TECHNICIAN T-156

The Automotive Service Technician curriculum is comprised of cooperative education training and related instruction in the classroom. The related instruction is an organized and systematic form of instruction designed to provide the student with knowledge of theoretical, technical, and general academic subjects related to the trade of the automotive technician.

The cooperative work phase of the program requires students to be employed full-time in supervised automotive mechanic positions to receive on-the-job experience. The cooperative work phase will be supervised and evaluated.

Automotive Service Technician

				Class	Lab	Shop	Credit
First Quarter	AUT	101	Internal Combustion Engines I	2	4	0	4
	AUT	103	Electrical Systems I	2	4	0	4
	AUT	106	Auto Power Train Systems I	2	4	0	4
	ENG	101	Grammar	3	0	0	3
	MAT	100	Technical Algebra I	5	0	0	5
	PHY	130X	Physics I	3	0	0	3
	PHY	130Y	PHY-130 Lab	0	2	0	1
				17	14	0	24
Second Quarter	COE	131	Automotive Co-op Work Experience	0	0	30	3
				0	0	30	3
Third Quarter	AUT	102	Internal Combustion Engines II	2	2	0	3
	AUT	104	Electrical Systems II	2	2	0	3
	AUT	107	Auto Power Train Systems II	2	2	0	3
	AUT	108	Basic Automotive Fuel Systems	2	4	0	4
	ECO	205	Applied Economics	3	0	0	3
	ELN	100	Introduction to Electronics	4	2	0	5
	ENG	102	Composition	3	0	0	3
				18	12	0	24
Fourth Quarter	COE	132	Automotive Co-op Work Experience	0	0	30	3
				0	0	30	3

Fifth Quarter	AUT	105	Automotive Chassis & Suspension Systems	2	4	0	4
	AUT	110	Automotive Heating & Air Conditioning	2	2	0	3
	AUT	207	Automotive Engine & Power Train Systems Diagnosis	2	2	0	3
	AUT	208	Automotive Electrical & Fuel Systems Diagnosis	2	2	0	3
	BUS	235	Small Business Management	3	0	0	3
	ENG	103	Report Writing	3	0	0	3
	PSY	206	Applied Psychology	3	0	0	3
				17	10	0	22
Sixth Quarter	COE	133	Automotive Co-op Work Experience	0	0	30	3
				0	0	30	3
Seventh Quarter	AUT	205	Automotive Chassis & Systems Diagnosis	2	2	0	3
	AUT	203	Automotive Electronics	3	2	0	4
	AUT	215	Automotive Instrumentation & Chassis Electrical System	2	4	0	4
	AUT	216	Automotive Electronic Controlled Systems	3	2	0	4
	ENG	204	Oral Communications	3	0	0	3
			Elective	0	0	0	3
				13	10	0	21
Eighth Quarter	COE	134	Automotive Co-op Work Experience	0	0	30	3
				0	0	30	3
Ninth Quarter	AUT	218	Automotive Fuel Injection	3	2	0	4
	AUT	109	Automotive Emissions Systems	2	2	0	3
	AUT	217	Automotive Electronic Controlled Systems Diagnosis	3	2	0	4
	WLD	106	Techniques of Welding	1	0	6	3
			Social Science or Humanities Elective	0	0	0	3
				9	6	6	17

Total Required Credits.....120

Automotive Technology is designed to meet the need for preparing highly trained technicians to service and repair automobiles and light trucks equipped with highly technical electrical, electronics, and emission control systems. Emphasis is placed on the operation and servicing of the power train components, electrical systems, fuel systems, chassis and suspension, and emission controls of gasoline and diesel engine vehicles. Upon completion of this curriculum, the student should have the theoretical knowledge and background to understand the systems of the newer model automobiles and should be prepared to work as a technician servicing automobiles and light duty trucks.

Automotive Technology

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ENG	101	Grammar	3	0	0	3
MAT	100	Technical Algebra I	5	0	0	5
PHY	130X	Physics I	3	0	0	3
PHY	130Y	PHY-130 Lab	0	2	0	1
AUT	101	Internal Combustion Engines I	2	4	0	4
			13	6	0	16
SECOND QUARTER						
AUT	102	Internal Combustion Engines II	2	2	0	3
ENG	102	Composition	3	0	0	3
AUT	103	Electrical Systems I	2	4	0	4
AUT	106	Automotive Power Train Systems I	2	4	0	4
AUT	108	Basic Automotive Fuel Systems	2	4	0	4
			11	14	0	18
THIRD QUARTER						
ECO	205	Applied Economics	3	0	0	3
AUT	104	Electrical Systems II	2	2	0	3
AUT	107	Automotive Power Train Systems II	2	2	0	3
AUT	105	Automotive Chassis & Suspension Systems	2	4	0	4
AUT	110	Automotive Heating & Air Conditioning	2	2	0	3
			11	10	0	16

FOURTH QUARTER

BUS	235	Small Business Management	3	0	0	3
ENG	103	Report Writing	3	0	0	3
PSY	206	Applied Psychology	3	0	0	3
WLD	106	Techniques of Welding	1	0	6	3
			10	0	6	12

FIFTH QUARTER

ENG	204	Oral Communications	3	0	0	3
AUT	205	Automotive Chassis & Suspension Systems Applications	2	2	0	3
AUT	109	Automotive Emissions Systems	2	2	0	3
AUT	208	Automotive Electrical & Fuel Systems Application	2	2	0	3
AUT	207	Automotive Engine & Power Train Applicstion	2	2	0	3
			11	8	0	15

SIXTH QUARTER

AUT	210	Diesel Fundamentals	2	0	3	3
AUT	203	Automotive Electronics	3	2	0	4
AUT	215	Automotive Instrumentation & Chassis Electrical Systems	2	4	0	4
AUT	216	Automotive Electronic Controlled Systems	3	2	0	4
		Elective	3	0	0	3
			13	8	3	18

SEVENTH QUARTER

		Major Course	4	0	0	4
AUT	211	Automotive Diesel Engines	2	0	6	4
AUT	217	Automotive Electronic Controlled Systems Application	3	2	0	4
AUT	220	New Techniques in Automotive Technology	3	0	3	4
		Elective	3	0	0	3
			15	2	9	19

Total Required Credits.....116

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) hours of electives provided he/she obtains the approval of the Co-op Director and Department Chairperson.

BANKING AND FINANCE T-112

The purposes of the Banking and Finance curriculum are: (1) to prepare the individual to enter the banking and finance industries, (2) to provide an educational program for the banking employees wanting to receive the American Institute of Banking certificate, and (3) to provide an educational program to upgrade or retrain individuals presently employed in the banking or finance industry.

These purposes will be fulfilled through study in areas such as banking and finance principles, theories, and practices; teller operations, lending and collection procedures, financial analysis, marketing, and public relations.

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

Banking and Finance

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
BUS	101	Introduction to Business	3	0	0	3
BUS	191	Keyboarding Skills I				
OR						
BUS	192	Keyboarding Skills II	2	0	3	3
MAT	110	Business Math	5	0	0	5
EDP	104	Introduction to EDP	3	0	0	3
ENG	101	Grammar	3	0	0	3
		Social Science	3	0	0	3
			19	0	3	20

SECOND QUARTER

BUS	115	Business Law I	4	0	0	4
BUS	234	Management Principles	3	0	0	3
ECO	102	Macroeconomics	3	0	0	3
ENG	102	Composition	3	0	0	3
MAT	210	Business Math Applications	5	0	0	5
			18	0	0	18

THIRD QUARTER

BUS	109	Desktop Computers	0	0	3	1
BUS	116	Business Law II	4	0	0	4
ECO	104	Microeconomics	3	0	0	3
ENG	103	Report Writing	3	0	0	3
MKT	239	Marketing	5	0	0	5
		Elective	3	0	0	3
			18	0	3	19

SUMMER QUARTER

AIB	202	Principles of Bank Operations	4	0	0	4
BUS	272	Supervision	3	0	0	3
			7	0	0	7

FOURTH QUARTER

AIB	210	Money and Banking	4	0	0	4
AIB	217	Corporate Banking	4	0	0	4
BUS	150	Financial Accounting	4	2	0	5
ENG	204	Oral Communication	3	0	0	3
		Elective	3	0	0	3
			18	2	0	19

FIFTH QUARTER

AIB	203	Bank Investments	4	0	0	4
AIB	205	Bank Management	4	0	0	4
BUS	151	Management Accounting	4	2	0	5
___	___	Major Elective	4	0	0	4
		Social Science	3	0	0	3
			19	2	0	20

SIXTH QUARTER

AIB	209	Installment Credit	4	0	0	4
AIB	211	Federal Reserve System	4	0	0	4
AIB	213	Trust Functions & Services	4	0	0	4
AIB	233	Analyzing Financial Statements	4	0	0	4
			16	0	0	16

Total Required Credits.....119

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) hours of elective credits provided he/she acquires approval from the Co-op Director and the Department Chairperson.

BASIC LAW ENFORCEMENT TRAINING T-189

The Basic Law Enforcement Training curriculum certificate program prepares individuals to take the Basic Training-Law Enforcement Officers certification examination mandated by the North Carolina Criminal Justice Education and Training Standards Commission and/or it prepares individuals to take the Justice Officers Basic Training certification examination mandated by the North Carolina Sheriffs' Education Standards Commission. Successful completion of this curriculum certificate program requires that the student satisfy the minimum requirements for certification by the Criminal Justice Commission and the Sheriffs' Commission. The student satisfactorily completing this program should possess at least the minimum degree of general attributes, knowledge, and skills to function as an inexperienced law enforcement officer.

Job opportunities are available with state, county, and municipal governments in North Carolina. In addition, knowledge, skills, and abilities acquired in this course of study qualifies one for job opportunities with private enterprises in such areas as industrial, retail, and private security.

COURSE AND HOUR REQUIREMENTS

Title	Lecture	Lab	Clinic Shop	Credits
MAJOR COURSE:				
LCJ 100 Basic Law Enforcement Training	15	0	27	24
RELATED COURSES:				0
GENERAL EDUCATION:				0
WORK EXPERIENCE:				0
ELECTIVES:				0
TOTAL CREDITS:				24
PERCENTAGE OF QHC AWARDED AS CLASS QH CREDITS:				62.5%
AWARD:				Certificate

This curriculum complies with the standard approved by the State Board of Community Colleges.

BUSINESS ADMINISTRATION T-018

The Business Administration curriculum is designed to prepare an individual for entry into middle-management occupations in various businesses and industries. The curriculum provides an overview of the business and industrial world - its organization and management.

The purpose of the curriculum will be fulfilled through courses designed to develop competency in: (1) understanding the principles of organization and management in business operations, (2) utilizing modern techniques to make decisions, (3) understanding the economy through study and analysis of the role of production and marketing, (4) communicating orally and in writing, and (5) interpersonal relationships.

Through these skills and through development of personal competencies and qualities, the individual will be able to function effectively in middle-management activities in business or industry.

Business Administration

			Class	Lab	Clinic/Shop	Quarter Hours Credit
FIRST QUARTER						
BUS	101	Introduction to Business	3	0	0	3
BUS	191	Keyboarding Skills I				
OR						
BUS	192	Keyboarding Skills II	2	0	3	3
ECO	102	Macroeconomics	3	0	0	3
EDP	104	Introduction to EDP	3	0	0	3
ENG	101	Grammar	3	0	0	3
MAT	110	Business Math	5	0	0	5
			19	0	3	20
SECOND QUARTER						
BUS	115	Business Law I	4	0	0	4
BUS	234	Business Management	3	0	0	3
ECO	104	Microeconomics	3	0	0	3
ECO	276	Money and Banking	3	0	0	3
ENG	102	Composition	3	0	0	3
MAT	210	Business Math Applications	5	0	0	5
			21	0	0	21
THIRD QUARTER						
BUS	109	Desktop Computers	0	0	3	1
BUS	116	Business Law II	4	0	0	4
BUS	233	Personnel Management	3	0	0	3
COE	101	Personal Dev. & Comm.	3	0	0	3
ENG	103	Report Writing	3	0	0	3
MKT	239	Marketing	5	0	0	5
			18	0	3	19
SUMMER QUARTER						
BUS	247	Business Insurance I	3	0	0	3
___	___	Major Elective	___	___	___	3
						6
FOURTH QUARTER						
BUS	150	Financial Accounting	4	2	0	5
BUS	260	Government and Business	3	0	0	3
BUS	272	Supervision	3	0	0	3
ENG	204	Oral Communications	3	0	0	3
		Social Science	3	0	0	3
		Elective	3	0	0	3
			19	2	0	20
FIFTH QUARTER						
BUS	123	Business Finance I	2	2	0	3
BUS	128	Spreadsheets I	2	4	0	4
BUS	151	Management Accounting	4	2	0	5
ENG	206	Business Communications	3	0	0	3
		Social Science	3	0	0	3
			14	8	0	18
SIXTH QUARTER						
BUS	124	Business Finance II	2	2	0	3
BUS	236	Integrative Management	2	2	0	3
ECO	201	Labor Economics	3	0	0	3
MKT	225	Techniques in Selling	3	0	0	3
		Elective	3	0	0	3
			13	4	0	15

Total Required Credits.....119

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) hours of elective credits provided he/she acquires approval from the Co-op Director and Department Chairperson.

BUSINESS COMPUTER PROGRAMMING T-022

The primary objective of the Business Computer Programming curriculum is to prepare individuals for gainful employment as computer programmers. The objective is fulfilled through study and application in areas such as computer and systems theories and concepts, data processing techniques, business operations, logic, flowcharting, programming procedures and languages, and types, uses, and operation of equipment.

Entry-level jobs as computer programmer and computer programmer trainee are available. With experience and additional education, the individual may enter jobs such as data processing manager, computer programmer manager, systems analyst, and systems manager.

Business Computer Programming

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
BUS	150	Financial Accounting	4	2	0	5
BUS	191	Keyboarding Skills I				
OR						
BUS	193	Keyboard Skillbuilding	2	0	3	3
EDP	103	Introduction to Programming	3	0	0	3
EDP	104	Introduction to EDP	3	0	0	3
MAT	106	EDP Math I	5	0	0	5
			17	2	3	19
SECOND QUARTER						
BUS	128	Spreadsheets	2	4	0	4
BUS	151	Management Accounting	4	2	0	5
EDP	109X	COBOL I	4	0	0	4
EDP	109Y	EDP-109 Lab	0	0	3	1
ENG	101	Grammar	3	0	0	3
MAT	107	EDP Math II	3	0	0	3
			16	6	3	20
THIRD QUARTER						
BUS	123	Business Finance I	2	2	0	3
EDP	110	COBOL II	4	0	3	5
EDP	114	Operating Systems	2	0	3	3
ENG	102	Composition	3	0	0	3
PHI	102	Introduction to Logic	3	0	0	3
			14	2	6	17
SUMMER QUARTER						
EDP	204	COBOL III	4	0	3	5
ENG	204	Oral Communications	3	0	0	3
			7	0	3	8
FOURTH QUARTER						
EDP	212	Data Base Management	3	0	3	4
EDP	221	Systems Analysis and Design I	3	4	0	5
		Major Elective	3	2	0	4
		Major Elective	4	0	3	5
			13	6	6	18
FIFTH QUARTER						
EDP	217	Data Communications	3	0	0	3
EDP	223	Systems Analysis and Design II	3	4	0	5
PSY	101	Introduction to Psychology	3	0	0	3
		Major Elective	3	2	0	4
		Major Elective	4	0	3	5
			16	6	3	20
SIXTH QUARTER						
BUS	282	Business Statistics	4	0	0	4
ECO	102	Macroeconomics	3	0	0	3
EDP	216	Computer Programming Project	3	0	9	6
		Elective	3	0	0	3
			13	0	9	16

Total Required Credits...118

*A maximum of six (6) credits may be earned in EDP 202 and/or Cooperative Education in lieu of six (6) hours of the additional EDP courses.

CARPENTRY AND CABINETMAKING V-007

Carpenters construct, erect, install, and repair structures of wood, plywood, and wallboard, using hand and power tools. This curriculum is designed to prepare individuals with skills and knowledge of construction with wood. The curriculum includes mathematics, blueprint reading, methods of construction and information on building materials, and energy efficient construction.

Carpenters work on new construction and maintain and repair many types of existing structures, both residential and commercial. They have an understanding of building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, insulation and other energy saving materials, 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 may be designated according to the specialty as rough carpenter, framing carpenter, form carpenter, scaffolding carpenter, acoustical insulating carpenter, and finish carpenter.

Carpentry and Cabinetmaking

FIRST QUARTER		Class	Lab	Shop	Quarter Hours Credit
CAR 1101	Carpentry	5	0	15	10
OR					
CAR 1101A	Carpentry	1	0	6	3
AND					
CAR 1101B	Carpentry	1	0	6	3
AND					
CAR 1101C	Carpentry	3	0	3	4
DFT 1110	Blueprint Reading: Building Trades	1	2	0	2
ENG 1101	Grammar	3	0	0	3
MAT 1110	Math for Building Trades	5	0	0	5
		14	2	15	20
SECOND QUARTER					
DFT 1111	Blueprint Reading & Sketching	1	2	0	2
ENG 1102	Vocational Communications	3	0	0	3
CAR 1102	Carpentry: Framing	5	0	15	10
CAR 1113	Carpentry: Estimating	3	0	0	3
		12	2	15	18
THIRD QUARTER					
BMS 1114	Building Codes Level I	3	0	0	3
OR					
BMS 1115	Building Codes Level II	3	0	0	3
OR					
BMS 1116	Building Codes Level III	3	0	0	3
CAR 1103	Carpentry: Millwork & Cabinetmaking	5	0	15	10
PHY 1103X	Work, Energy, Power	3	0	0	3
PHY 1103Y	PHY-1103 Lab	0	2	0	1
		11	2	15	17
*FOURTH QUARTER					
BUS 1105	Construction Business Operations	3	0	0	3
CAR 1104	Carpentry: Finishing	5	0	15	10
PSY 1101	Human Relations	3	0	0	3
		11	0	15	16
FIFTH QUARTER					
CAR 1110	Shop Operation and Mgmt.	2	0	0	2
CAR 1111	Cabinetmaking	3	0	15	8
OR					
CAR 1111A	Cabinetmaking	3	0	3	4
AND					
CAR 1111B	Cabinetmaking	0	0	6	2
AND					
CAR 1111C	Cabinetmaking	0	0	6	2
DFT 1140	Cabinetry Sketching and Drafting	4	2	0	5
		9	2	15	15
**SIXTH QUARTER					
BUS 1103	Small Business Operations	3	0	0	3
CAR 1112	Cabinetmaking-Custom Built-Ins	5	0	15	10
OR					
CAR 1112A	Cabinetmaking-Custom Built-Ins	3	0	3	4
AND					
CAR 1112B	Cabinetmaking-Custom Built-Ins	1	0	6	3
AND					

CAR	1112C	Cabinetmaking-Custom Built-Ins	1	0	6	3
DFT	1141	Cabinetry Design	4	2	0	5
			12	2	15	18

Total Required Credits....104

*Student may leave program upon completion of fourth quarter and be awarded a diploma in carpentry (70 credits required).

**Students who complete all six quarters will be awarded an advanced diploma in carpentry and cabinetmaking (104 credits required).

CIVIL ENGINEERING TECHNOLOGY T-038

The Civil Engineering Technology curriculum provides the specialized background and related theory for technicians who work primarily with architects and engineers in the field of construction. The Civil Engineering Technician carries out many of the planning and supervising tasks necessary in the construction of transportation systems such as highways, pipelines, railroads, airfields, and transmission lines; structures for residential and commercial buildings, bridges, dams, and power plants, and water and waste treatement systems. The graduate may perform job tasks in planning, drafting, estimating, supervising, inspecting, or managing construction projects. Other duties might include ordering materials, interpreting plans and specifications, structural detailing and drafting work, and making engineering computation of earthwork, storm drainage, and property surveys.

Upon graduation from this program, the Civil Engineering Technician may qualify for various jobs such as surveying instrumentation and/or party chief, field or laboratory materials tester, construction foreman, field engineering technician or superintendent, expeditor, manager, estimator, construction materials or equipment salesperson, inspector, drafter, or structural detailer. Graduates of this program may receive credit toward qualifying to be a land surveyor. They may also continue their education toward a bachelor's degree in engineering technology.

Civil Engineering Technology

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
ENG	101	Grammar	3	0	0	3
MAT	121	Technical Mathematics	5	0	0	5
DFT	101	Technical Drafting	0	6	0	3
CIV	101	Surveying I	2	0	6	4
CIV	107	Civil Engineering Computations	2	0	3	3
			12	6	9	18
SECOND QUARTER						
ECO	205	Applied Economics	3	0	0	3
ENG	102	Composition	3	0	0	3
MAT	122	Technical Mathematics II	5	0	0	5
PHY	101X	Properties of Matter	3	0	0	3
PHY	101Y	PHY-101 Lab	0	2	0	1
DFT	111	Construction & Structural Drafting	0	6	0	3
			14	8	0	18

THIRD QUARTER

ENG	103	Report Writing	3	0	0	3
CIV	102	Surveying II	2	0	6	4
CIV	112	Construction Estimates	2	0	6	4
PHY	102X	Work, Energy and Power	3	0	0	3
PHY	102Y	PHY-102 Lab	0	2	0	1
MAT	123	Technical Mathematics	5	0	0	5
			15	2	12	20

SUMMER QUARTER

CIV	103	Surveying III	2	0	6	4
CIV	114	Statics	5	0	0	5
			7	0	6	9

FOURTH QUARTER

PHY	103X	Electricity	3	0	0	3
PHY	103Y	PHY-103 Lab	0	2	0	1
CIV	108	Hydraulics	4	0	3	5
CIV	110	Construction Methods	3	2	0	4
CIV	219	Strength of Materials	4	0	3	5
			14	4	6	18

FIFTH QUARTER

CIV	202	Properties of Soil	4	0	3	5
CIV	221	Reinforced Concrete	5	0	0	5
CIV	227	Subdivision Design	1	0	6	3
CIV	231	Portland Cement & Asphalt Concrete	3	0	3	4
CIV	271	City & Regional Planning	3	0	0	3
			16	0	12	20

SIXTH QUARTER

ENG	204	Oral Communications	3	0	0	3
CIV	204	Surveying IV	2	0	6	4
CIV	229	Municipal Engineering	3	0	3	4
CIV	230	Design of Roads & Pavement	3	0	3	4
		Social Science or Humanities Elective	3	0	0	3
			14	0	12	18

Total Required Credits.....121

*Co-op Option: Qualified students may elect to take up to seven (7) credit hours of Cooperative Education in place of CIV 101 and/or DFT 101 provided he/she acquires approval from the Co-op Director and Department Chairperson.

COMMERCIAL ART AND ADVERTISING DESIGN T-070

Students in the Commercial Art and Advertising Design curriculum study advertising, illustration, layout, typography, design, photography, graphic communication, and production.

Commercial artists and advertising designers create and design layouts and art work for print and audio visual media. They may design and prepare letterheads, brochures, illustrations, and art for publication; produce package design; and prepare lettering, type, and art for print and audio visual media.

Job opportunities for graduates of this program may be in art and design studios, advertising agencies, department stores, industrial advertising departments, government agencies, television and film studios, and the printing and publishing industry.

Commercial Art and Advertising Design

FIRST QUARTER			Class	Lab	Clinic	Quarter Hours Credit
ART	221	Art Appreciation	5	0	0	5
BUS	118	Word Proc. on Microcomputers	1	2	0	2
CAT	103	Basic Drawing	0	6	0	3
CAT	104	Basic Design	3	0	3	4
CAT	105	Visual Organization	3	0	3	4
ENG	101	Grammar	3	0	0	3
			15	8	6	21

SECOND QUARTER

CAT	106	Production/Basics	3	0	3	4
CAT	108	Typography I	3	0	3	4
CAT	107	Photography I	3	0	3	4
OR						
CAT	115	Introduction to Photography I	1	2	0	2
AND						
CAT	116	Introduction to Photography II	1	2	0	2
CAT	121	Life Study I	2	4	0	4
ENG	102	Composition	3	0	0	3
MAT	110	Business Math	5	0	0	5
			19	4	9	24

THIRD QUARTER

CAT	117	Photography II	3	0	3	4
CAT	118	Design Studio I	3	0	3	4
CAT	119	Production/Printing I	3	0	3	4
CAT	122	Life Study II	2	4	0	4
ENG	103	Report Writing	3	0	0	3

PHI	102	Introduction to Logic	3	0	0	3
			17	4	9	22

SUMMER QUARTER

ART	107	Watercolor I	1	2	0	2
CAT	127	Photography III	3	4	0	5
ENG	204	Oral Communications	3	0	0	3
			7	6	0	10

FOURTH QUARTER

CAT	204	Layout	3	0	3	4
CAT	205	Illustration I	3	0	3	4
CAT	206	Typography II	3	0	3	4
MKT	243	Advertising	5	0	0	5
			14	0	9	17

FIFTH QUARTER

CAT	215	Illustration II	2	4	0	4
CAT	216	Computer Operations for Grsphic Designers	2	0	3	3
CAT	219	Production/Printing II	3	0	3	4
PSY	206	Applied Psychology	3	0	0	3
			10	4	6	14

SIXTH QUARTER

CAT	225	Advanced Design/Illustration	2	4	0	4
CAT	235	Design Studio II	2	4	0	4
CAT	240	Portfolio	3	0	3	4
MKT	287	Commercial Display	2	4	0	4
			9	12	3	16

Total Required Credits....124

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperstive Education in lieu of six (6) hours of major course work provided he/she acquires approval from the Co-op Director and Department Chairperson.

COSMETOLOGY V-009

The field of cosmetology is based on scientific principles. The Cosmetology curriculum provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, hair cutting and styling, and wig service.

Upon completion of this program and successful passing of a comprehensive examination administered by the North Carolina State Board of Cosmetic Arts, a license is given. The cosmetologist is called upon to advise men and women on problems of make-up and care of the hair, skin, and hands, including the nails. Employment opportunities are available in beauty salons, private clubs, department stores, women's speciality shops, as well as setting up one's own busineas.

Cosmetology

FALL QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
COS 1101	Intro. to Cosmetology Theory	3	0	0	3
COS 1102	Mannequin Practice	1	0	33	12
PSY 1101	Human Relations	3	0	0	3
		7	0	33	18

WINTER QUARTER

COS 1103	Cosmetology Theory I	4	0	0	4
COS 1104	Cosmetology Skills I	2	0	30	12
ENG 1101	Communicative Skills: Grammar	3	0	0	3
		9	0	30	19

SPRING QUARTER

COS 1105	Cosmetology Theory II	3	0	0	3
COS 1106	Cosmetology Skills II	1	0	33	12
ENG 1102	Vocational Communications	3	0	0	3
		7	0	33	18

SUMMER QUARTER

COS 1107	Advanced Cosmetology Theory	4	0	0	4
COS 1108	Advanced Cosmetology Practice	1	0	24	9
BUS 1103	Small Business Operations	3	0	0	3
		8	0	24	16

Total Required Credits.....71

Total Contact Hours.....1661

*A four quarter program culminating in the student attaining the 1500 hours of training necessary to sit for the North Carolina Cosmetic Arts Examination and licensure.

*As an alternative, the student may elect to exit this program after three quarters of work and 1200 hours of training. In this situation, licensure may be obtained only after the atudent takes and passes the required North Carolina Cosmetic Arts Examination and completes a 6 month supervised apprenticeship program.

CRIMINAL JUSTICE - PROTECTIVE SERVICES TECHNOLOGY T-129

The Criminal Justice - Protective Services Technology curriculum is designed so that it may be a multifaceted program of study. It may consist of study options in corrections, law enforcement, and security services.

The curriculum is designed with a core of courses to afford one the opportunity to acquire basic knowledge, skills, and attitudes in the generally accepted subject areas associated with a two-year study of correctional services, law enforcement services, and security services. It includes subjects such as interpersonal communications, law, psychology, and sociology.

In addition to core subject, the correctional services option provides an opportunity to study other generally accepted subjects indigenous to a two-year correctional services program such as confinement facility administration, correctional law, counseling, probation-parole services, and rehabilitation options. Similarly, the law enforcement option provides an opportunity to study other generally accepted subjects included in a two-year law enforcement services program such as criminal behavior, criminal investigation, patrol operation, traffic management, and other aspects of law enforcement administration and operations. The security services option provides an opportunity to study other generally accepted subjects related to a two-year security services program such as accident prevention and safety management, common carrier protection, fire prevention, private security, industrial security, retail security, security systems and surveillance.

Job opportunities are available with federal, state, county, and municipal governments. In addition, knowledge, skills, and attitudes acquired in this course of study qualify one for job opportunities with private enterprise in such areas as industrial, retail, and private security.

Criminal Justice - Protective Services Technology

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
ENG 101	Grammar	3	0	0	3
OR					
ENG 104	Usage & Composition I	3	0	0	3
LCJ 101	Introduction to Criminal Justice	5	0	0	5
LCJ 102	Constitutional Law	5	0	0	5
REC 124	Fitness Management	3	2	0	4
SOC 101	Introduction to Sociology	3	0	0	3
		19	2	0	20
SECOND QUARTER					
ENG 102	Composition	3	0	0	3
OR					

ENG 105	Usage & Composition II	3	0	0	3
LCJ 103	Criminology	5	0	0	5
LCJ 108	Criminal Law	5	0	0	5
POL 102	State & Local Government	3	0	0	3
PSY 101	Introduction to Psychology	3	0	0	3
		19	0	0	19

THIRD QUARTER

ENG 103	Report Writing	3	0	0	3
OR					
ENG 108	Usage & Composition III	3	0	0	3
LCJ 104	Law Enforcement Operations				
OR					
LCJ 105	Introduction to Corrections	3	0	0	3
LCJ 111	Interpersonal Comm. for Criminal Justice Personnel	3	2	0	4
LCJ 114	Organizational Theory and Behavior	5	0	0	5
POL 103	National Government	3	0	0	3
		17	2	0	18

SUMMER QUARTER

BUS 109	Desktop Computers	0	0	3	1
ENG 204	Oral Communications	3	0	0	3
PSY 204	Abnormal Psychology	3	0	0	3
		6	0	3	7

FOURTH QUARTER

LCJ 109	Criminal Evidence and Procedure				
OR					
LCJ 212	Prisoners Rights	3	0	0	3
LCJ 210	Criminal Investigation				
OR					
LCJ 106	Correctional Counseling	3	2	0	4
LCJ 202	Judicial Process	4	2	0	5
MAT 110	Business Mathematics				
OR					
MAT 131	College Mathematics	5	0	0	5
	Major Elective	3	0	0	3
		18	4	0	20

FIFTH QUARTER

BIO 200X	Human Biology	4	0	0	4
BIO 200Y	BIO-200 Lab	0	2	0	1
LCJ 200	Criminal Justice Planning	4	2	0	5
LCJ 209	Juvenile Justice Planning & Administration	5	0	0	5
LCJ 208	Identification Techniques	2	2	0	3
OR					
LCJ 107	Community-Based Corrections	3	0	0	3
		15-16	4-6	0	18

SIXTH QUARTER

LCJ 219	Criminalistics	1	4	0	3
OR					
LCJ 112	Confinement Facilities Management	3	0	0	3
LCJ 211	Community Relations and Ethics	4	2	0	5
LCJ 221	Substance Abuse	5	0	0	5
SOC 210	Social Problems	3	0	0	3
	Elective	3	0	0	3
		16-18	2-6	0	19

Total Required Credits.....121

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) credit hours of major electives or electives provided he/she acquires approval from the Department Chairperson and Co-op Director.

- DENTAL ASSISTING V-011

The Dental Assisting curriculum prepares graduates to assist the dentist in providing treatment services. Functions performed by the dental assistant include dental health teaching, preparing dental materials to be used, preparing the patient, taking dental X-rays, caring for dental supplies and equipment, passing instruments and materials to the dentist, making appointments, maintaining patient records and other office management procedures. Graduates may practice in dental settings such as dentists' offices, dental clinics, public health clinics, federal service clinics, dental schools and state health departments.

This curriculum prepares the graduate for certification as a Certified Dental Assistant by the Certifying Board of the Dental Assisting National Board, Inc.

Individuals desiring a career in dental assisting should, if possible, take biology, mathematics, and typing courses prior to entering the program.

Dental Assisting

			Class	Lab	Clinic	Quarter Hours Credit
FIRST QUARTER (Second Summer Session)						
BIO	1005	Anatomy & Physiology	2	0	0	2
DEN	1004	Dental Anatomy	4	0	0	4
DEN	1011X	Clinical Procedures I	2	0	0	2
DEN	1011Y	DEN-1011 Lab	0	2	0	1
			8	2	0	9
SECOND QUARTER (Fall Quarter)						
BIO	1013	Microbiology	2	0	0	2
DEN	1002X	Dental Materials I	2	0	0	2
DEN	1002Y	DEN-1002 Lab	0	0	3	1
DEN	1014X	Dental Roentgenology	2	0	0	2
DEN	1014Y	DEN-1014 Lab	0	6	0	3
DEN	1015	Pharmacology	2	0	0	2
DEN	1021X	Clinical Procedures II	3	0	0	3
DEN	1021Y	DEN-1021 Lab	0	6	0	3
ENG	1102	Vocational Communications	3	0	0	3
			14	12	3	21
THIRD QUARTER (Winter Quarter)						
DEN	1012X	Dental Materials II	2	0	0	2
DEN	1012Y	DEN-1012 Lab	0	0	3	1
DEN	1023X	Dental Health Education	2	0	0	2
DEN	1023Y	DEN-1023 Lab	0	0	3	1
DEN	1025	Oral Pathology	2	0	0	2
DEN	1026X	Dental Office Emergencies	1	0	0	1
DEN	1026Y	DEN-1026 Lab	0	2	0	1
DEN	1034X	Clinical Procedures III	4	0	0	4
DEN	1034Y	DEN-1034 Lab	0	4	3	3
PSY	1101	Human Relations	3	0	0	3
			14	6	9	20
FOURTH QUARTER (Spring Quarter)						
DEN	109	Dental Computers	0	0	3	1
DEN	1031	Dental Office Practice I	1	0	21	8
DEN	1032	Dental Office Management	4	0	0	4
DEN	1033	Professional Development	1	0	0	1
ENG	1103	Report Writing	3	0	0	3
			9	0	24	17
FIFTH QUARTER (First Summer Session)						
DEN	1041	Dental Office Practice II	1	0	18	7

Total Required Credits.....74

DENTAL HYGIENE T-054

The Dental Hygiene curriculum prepares graduates to take patient histories, teach oral hygiene, clean teeth, take x-rays, and apply preventive agents under the supervision of a dentist. Dental hygienists may be employed in dentists' offices, clinics, schools, public health agencies, industry, and educational institutions.

Graduates are eligible to take the National Board Dental Hygiene Examination, which is administered by the American Dental Association, Joint Commission on Dental Examinations; and the State Board Clinical Examination, which is administered by the North Carolina Board of Dental Examiners. A passing grade on both examinations is required for practice as a Registered Dental Hygienist in North Carolina.

Individuals desiring a career in dental hygiene should take biology, algebra, and chemistry courses prior to entering the program.

Dental Hygiene

			Class	Lab	Clinic	Quarter Hours Credit
FIRST QUARTER						
BIO	106X	Human Anatomy & Physiology	5	0	0	5
BIO	106Y	BIO-106 Lab	0	0	3	1
BIO	110X	Biological Chemistry for Health Sciences	3	0	0	3
BIO	110Y	BIO-110 Lab	0	0	3	1
DEN	111X	Dental Hygiene I	4	0	0	4
DEN	111Y	DEN-111 Lab	0	0	3	1
DEN	112	Dental Anatomy & Physiology	3	0	0	3
ENG	104	Usage & Composition I	3	0	0	3
			18	0	9	21
SECOND QUARTER						
BIO	107X	Human Anatomy & Physiology II	5	0	0	5
BIO	107Y	BIO-107 Lab	0	0	3	1
DEN	113	Histology & Embryology	3	0	0	3
DEN	121X	Dental Hygiene II	3	0	0	3
DEN	121Y	DEN-121 Lab	0	0	6	2
DEN	133X	Radiology	3	0	0	3
DEN	133Y	DEN-133 Lab	0	0	3	1
ENG	105	Usage & Composition II	3	0	0	3
			17	0	12	21
THIRD QUARTER						
BIO	108X	Microbiology	5	0	0	5
BIO	108Y	BIO-108 Lab	0	0	3	1
DEN	122	Head and Neck Anatomy	2	0	0	2
DEN	131X	Dental Hygiene III	2	0	0	2
DEN	131Y	DEN-131 Lab	0	0	9	3
DEN	214	Periodontology	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
			15	0	12	19
SUMMER QUARTER						
DEN	116	Medical-Dental Emergency Care	2	0	0	2
DEN	141	Dental Hygiene - IV	1	0	6	3
ENG	204	Oral Communications	3	0	0	3
NUT	101	Physiological Nutrition	3	0	0	3
			9	0	6	11
FOURTH QUARTER						
DEN	211X	Dental Hygiene V	1	0	0	1
DEN	211Y	DEN-211 Lab	0	0	12	4
DEN	213	General & Oral Pathology	6	0	0	6
DEN	215	Dental Health Education	3	0	0	3
DEN	222X	Dental Materials	3	0	0	3
DEN	222Y	DEN-222 Lab	0	0	3	1
			13	0	15	18
FIFTH QUARTER						
DEN	212X	Community Dental Health	3	0	0	3
DEN	212Y	DEN-212 Lab	0	0	3	1
DEN	221	Dental Hygiene VI	1	0	15	6
DEN	223	Pharmacology & Anesthesiology	3	0	0	3
SOC	101	Introduction to Sociology	3	0	0	3
			10	0	18	16
SIXTH QUARTER						
DEN	224	Office Management	1	0	0	1
DEN	225X	Chairside Assisting	1	0	0	1
DEN	225Y	DEN-225 Lab	0	0	3	1
DEN	231X	Dental Hygiene VII	1	0	0	1
DEN	231Y	DEN-231 Lab	0	0	15	5
DEN	232	Ethics & Jurisprudence	2	0	0	2
DEN	233	Dental Specialities	2	0	0	2
		Humanities	3	0	0	3
			10	0	18	16

Total Required Credits.....122

DEVELOPMENTAL STUDIES AT FTCC

The Developmental Studies program is designed as a "bridge" between high school and vocational/technical education. Courses are given to students to help them become able to enter the curriculum of their choice. People usually take Developmental Studies for one of the following reasons:

1. They did not complete the math and/or science courses in high school which they need to get into their chosen program.
2. They want to become better in certain specific subjects.
3. They want a good general review before enrolling in their chosen curriculum

Whatever the reason, Developmental Studies will "bridge the gap" between high school and vocational/technical school.

Developmental courses in English and reading, math, science, social studies, and personal growth and development are offered to students based on the needs of tbe individual student. Special interest courses are also offered as elective exploratory courses. A placement test messuring achievement in math, reading, and English grammar is used to determine the needed level of course work. Counselors work with students to help them plan the number and level of courses needed to be successful in their chosen program.

Admission to the regular vocational/technical programs will be based on how well the student does in the Developmental Studies courses. So, it is the student's opportunity and responsibility to do his/her best work in Developmental Studies.

Developmental Studies at FTCC is more than "prep" or "make-up" courses; this program also cares for the student as a person. Opportunities for personal growth and development are offered in classroom courses and in the support services available to the Developmental Studies student. Career/life planning, personal guidance and counseling, health services, and many other "extras" help the student to succeed in the classroom. Developmental Studies at FTCC cares for the whole person.

DEVELOPMENTAL STUDIES PROGRAM T-099

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 Level II. These courses are characterized by a rudimentary level of instruction, concentrated attention, small class size, and special-purpose and audiovisual equipment.

Developmental Studies

LEVEL I

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
ENG 94	Prescriptive Reading	3	2	0	4
ENG 80	Applied Reading Skills	3	2	0	4
MAT 91	Basic Math I	3	2	0	4
	Level I Science or Elective	3	2	0	4
		12	8	0	16
SECOND QUARTER					
ENG 95	Vocabulary and Reading I	3	2	0	4
ENG 97	Grammar and Composition	3	2	0	4
MAT 92	Basic Math II	3	2	0	4
	Level I Science or Elective	3	2	0	4
		12	8	0	16
THIRD QUARTER					
ENG 96	Vocabulary and Reading II	3	2	0	4
ENG 98	Composition	3	2	0	4
MAT 93	Basic Math III	3	2	0	4
	Level I Science or Elective	3	2	0	4
		12	8	0	16

LEVEL II

FIRST QUARTER					
ENG 94	Prescriptive Reading	3	2	0	4
ENG 80	Applied Reading Skills	3	2	0	4
MAT 95	Algebra I	3	2	0	4
	Level II Science or Elective	3	2	0	4
		12	8	0	16
SECOND QUARTER					
ENG 95	Vocabulary	3	2	0	4
ENG 97	Grammar and Composition	3	2	0	4
MAT 96	Algebra II	3	2	0	4
	Level II Science or Elective	3	2	0	4
		12	8	0	16
THIRD QUARTER					
ENG 96	Vocabulary & Reading I	3	2	0	4
ENG 98	Composition	3	2	0	4
MAT 97	Algebra III Trigonometry	3	2	0	4
	Level II Science or Elective	3	2	0	4
		12	8	0	16

The Drafting - Mechanical curriculum prepares individuals to enter the field of mechanical drafting. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The draftsman associates with many levels of personnel--administrators, engineers, skilled workers--and must be able to communicate effectively with them.

The mechanical drafting graduate performs the duties of a general drafter, specializing in making rough drafting sketches of proposed mechanical devices, and then draws necessary details. The drafter also prepares accurate scale drawings of parts for machines from specifications.

Drafting - Mechanical

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ENG	1101	Communicative Skills: Grammar	3	0	0	3
PHY	1101X	Properties of Matter	3	0	0	3
PHY	1101Y	PHY-1101 Lab	0	2	0	1
MAT	1102	Algebra	3	2	0	4
DFT	1170	Basic Drafting	2	2	3	4
DFT	1171	Basic Industrial Drafting	2	0	3	3
MEC	1110	Machine Processes I	1	0	3	2
			14	6	9	20
SECOND QUARTER						
ENG	1102	Vocational Communications	3	0	0	3
MAT	1104	Trigonometry	3	2	0	4
DFT	1172	Technical Sketching	2	0	3	3
PHY	1103X	Work, Energy, Power	3	0	0	3
PHY	1103Y	PHY-1103 Lab	0	2	0	1
DFT	1173	Industrial Drafting I	1	2	3	3
MEC	1111	Introduction to Manufacturing Processes	2	0	3	3
DFT	161	CAD I	0	0	3	1
			14	6	12	21
THIRD QUARTER						
DFT	1125	Descriptive Geometry I	2	2	0	3
DFT	1190	Industrial Drafting II	1	2	3	3
DFT	1191	Machine & Tool Drafting I	1	0	6	3
MEC	1108	Industrial Materials	3	0	3	4
DFT	1160	Manufacturing and Drafting	1	0	3	2
DFT	162	CAD II	0	0	3	1
			8	4	18	16
FOURTH QUARTER						
DFT	1192	Design Drafting & Tolerances	3	2	0	4
DFT	1193	Industrial Drafting III	1	0	6	3
DFT	1194	Machine & Tool Drafting II	2	2	3	4
DFT	1195	Steel Fabrication Drafting	3	0	3	4
DFT	1126	Descriptive Geometry II	2	2	0	3
			11	6	12	18

Total Required Credits.....75

EARLY CHILDHOOD ASSOCIATE T-073

The Early Childhood Associate curriculum prepsres individuals to work with programs and/or centers concerned with the care and development of infants and young children. Through study and application in such areas as child growth and development, physical and nutritional needs of children, care and guidance of children and communication with children and their parents, individuals will be able to function effectively in various programs and/or centers dealing with preschool children.

Job opportunities are available in such areas as day care centers, nursery schools, kindergartens, child development centers, hospitals, rehabilitation clinics, evaluation clinics, camps and recreational centers.

Early Childhood Associate

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
ENG 101 OR ENG 104	Grammar OR Usage & Composition I	3	0	0	3
PSY 101	Intro to Psychology	3	0	0	3
EDU 201	Intro to Preschool Education	3	0	0	3
EDU 202	Child Health, Safety & Nutrition	3	2	0	4
EDU 206	Creative Curriculum Activities I	3	2	0	4
		15	4	0	17
SECOND QUARTER					
ENG 102 OR ENG 105	Composition OR Usage & Composition II	3	0	0	3
PSY 202	Human Growth & Development	3	0	0	3
EDU 252	Principles of Day Care Operations	3	0	0	3
EDU 203	Pediatric First-Aid & CPR	3	2	0	4
EDU 207	Creative Curriculum Activities II	3	2	0	4
		15	4	0	17
THIRD QUARTER					
ENG 103 OR ENG 108	Report Writing OR Usage & Composition III	3	0	0	3
EDU 105	Discipline in the School	3	0	0	3
EDU 208	Language Arts Techniques	3	0	0	3
EDU 211	Food Preparation in Child Care	2	0	3	3
REC 236	Low Organized Games	1	0	3	2
	Related Elective	3	0	0	3
		15	0	6	17
SUMMER QUARTER					
ENG 204	Oral Communications	3	0	0	3
SOC 101	Intro to Sociology	3	0	0	3
	Elective or Co-op	4	0	0	4
		10	0	0	10
FOURTH QUARTER					
	Math or Science Requirement	5	0	0	5
EDU 108	Working with Exceptional Children	3	0	0	3
EDU 204	Program Planning in Preschool	3	0	0	3
EDU 210	Children's Literature	3	0	0	3
REC 250	Community Health Resources	3	0	0	3
		17	0	0	17
FIFTH QUARTER					
BUS 150	Financial Accounting	4	2	0	5
SOC 102	Marriage and Family	3	0	0	3
EDU 113	Working with Problem Children	3	0	0	3
EDU 205	Program Planning for Infants/Toddlers	3	0	0	3
	Related Elective	3	0	0	3
		16	2	0	17
SIXTH QUARTER					
BUS 233	Personnel Management	3	0	0	3
BUS 234	Principles of Management	3	0	0	3
EDU 120	Computer Literacy	3	0	0	3
EDU 209	Child Care Applications	0	0	6	2
EDU 253	Parent Education	3	0	0	3
___ ___	Humanities Elective	3	0	0	3
		15	0	6	17

Total Required Credits.....112

Open Elective or Co-op Option: Qualified students may elect to take up to four (4) credit hours of Cooperative Education in place of four (4) credit hours of electives provided he/she acquires the approval of the Co-op Director and Department Chairperson.

ELECTRICAL INSTALLATION & MAINTENANCE V-018

The Electrical Installation & Maintenance curriculum is designed to provide a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large segment of the program is laboratory and shop instruction designed to give the student practical knowledge and application experience in the fundamentals taught in class.

The graduate of this curriculum is qualified to enter an electrical trade as an on-the-job trainee or apprentice, assisting in the layout, installation, check out, and maintenance of systems in residential, commercial, or industrial settings.

Electrical Installation & Maintenance

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
DFT 1113	Blueprint Reading: Electrical	1	2	0	2
ELC 1112	Direct & Alternating Current	5	0	15	10
OR					
ELC 1112A	Direct & Alternating Current	2	0	6	4
AND					
ELC 1112B	Direct & Alternating Current	2	0	6	4
AND					
ELC 1112C	Direct & Alternating Current	1	0	3	2
MAT 1110	Math for Building Trades	5	0	0	5
PHY 1102X	Applied Physics II: Electricity	3	0	0	3
PHY 1102Y	PHY-1102 Lab	0	2	0	1
		14	4	15	21
SECOND QUARTER					
___ ____	Major Elective	4	0	0	4
DFT 1110	Blueprint Reading: Building Trades	1	2	0	2
ELC 1113	Alternating Current & Direct Current Machines and Controls	5	0	15	10
OR					
ELC 1113A	Alternating Current & Direct Current Machines and Controls	1	0	3	2
AND					
ELC 1113B	Alternating Current & Direct Current Machines and Controls	2	0	6	4
AND					
ELC 1113C	Alternating Current & Direct Current Machines and Controls	2	0	6	4
ENG 1101	Grammar	3	0	0	3
		13	2	15	19
THIRD QUARTER					
ELC 1124	Residential Wiring	5	0	9	8
OR					
ELC 1124A	Residential Wiring	3	0	3	4
AND					
ELC 1124B	Residential Wiring	2	0	6	4
ELN 1118	Industrial Electronics I	3	0	6	5
ENG 1102	Vocational Communications	3	0	0	3
PSY 1101	Human Relations	3	0	0	3
		14	0	15	19
FOURTH QUARTER					
BUS 1103	Small Business Operations	3	0	0	3
ELC 1125	Commercial & Industrial Wiring	5	4	6	9
OR					
ELC 1125A	Commercial & Industrial Wiring	3	2	3	5
AND					
ELC 1125B	Commercial & Industrial Wiring	2	2	3	4
ELN 1119	Industrial Electronics II	3	0	6	5
		11	4	12	17

Total Required Credits.....76

ELECTRONICS ENGINEERING TECHNOLOGY T-045

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

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

Electronics Engineering Technology

FIRST QUARTER	Class	Lab	Clinic Shop	Quarter Hours Credit
ENG 101 Grammar	3	0	0	3
MAT 101 Technical Mathematics I	5	0	0	5
CHM 101X Chemistry	3	0	0	3
CHM 101Y CHM-101 Lab	0	2	0	1
ELC 101X Fundamentals of Electricity I	4	0	0	4
ELC 101Y ELC-101 Lab	0	6	0	3
	15	8	0	19
SECOND QUARTER				
ENG 102 Composition	3	0	0	3
MAT 102 Technical Mathematics II	5	0	0	5
PHY 101X Physics: Properties of Matter	3	0	0	3
PHY 101Y PHY-101 Lab	0	2	0	1
DFT 101 Technical Drafting	0	6	0	3
ELC 103X Fundamentals of Electricity II	2	0	0	2
ELC 103Y ELC-103 Lab	0	0	3	1
ELN 103X Fundsmentals of Active Devices	2	0	0	2
ELN 103Y ELN-103 Lab	0	2	0	1
	15	10	3	21
THIRD QUARTER				
ELN 102X Logic Circuits	2	0	0	2
ELN 102Y ELN-102 Lab	0	2	0	1
ELN 104X Active Devices II	4	0	0	4
ELN 104Y ELN-104 Lab	0	0	3	1
ELN 110 Computer-Aided Circuit Analysis & Design Using Pascal	3	0	0	3
MAT 103 Technical Mathematics III	5	0	0	5
PHY 102X Physics: Work, Energy, Power	3	0	0	3
PHY 102Y PHY-102 Lab	0	2	0	1
	17	4	3	20
SUMMER QUARTER				
ELN 106 Passive Networks I	2	2	0	3
ELN 206 Active Network Analysis I	2	0	3	3
	4	2	3	6
FOURTH QUARTER				
ENG 204 Oral Communications	3	0	0	3
ELN 207 Active Network Analysis II	2	0	3	3
ELN 209 Passive Networks II	3	0	0	3
ELN 214 Computer Principles	2	4	0	4
MAT 286 Technical Mathematics IV	3	0	0	3
PHY 104X Physics: Light & Sound	3	0	0	3
PHY 104Y PHY-104 Lab	0	2	0	1
	16	6	3	20
FIFTH QUARTER				
ELN 216 Microcomputers	6	0	6	8
ELN 220 Electronic Systems	4	4	0	6
Elective	3	0	0	3
Social Science or Humanities Elective	3	0	0	3
	16	4	6	20
SIXTH QUARTER				
PSY 206 Applied Psychology	3	0	0	3
ELN 235 Industrial Mechanisms and Instrumentation	5	6	0	8
ELN 240 Industrial Applications & Microcomputers	4	0	3	5
ENG 103 Report Writing	3	0	0	3
	15	6	3	19

Total Required Credits.....125

Co-op Option: Qualified atudents may elect to take up to three (3) credit hours of Cooperative Education in place of three (3) hours of elective credits provided he/she acquires approval from the Co-op Director and Department Chairperson.

EMERGENCY MEDICAL SCIENCE T-139

The Emergency Medical Science curriculum is designed to prepare graduates, while under the direct supervision of a physician of MICN, to perform patient assessments and render emergency care in the pre-hospital and hospital setting. Students will learn the basic and advanced life support skills necessary by the combination of classroom teaching with practice in laboratory sessions and clinical experiences with emergency medical services and community hospitals.

As students progress through the curriculum, they become eligible to take certifying examinations for EMT, EMT-I, and EMT-P given by the North Carolina Office of Emergency Medical Services and/or the National Registry of Emergency Medical Technicians.

Graduates may be employed in emergency rooms of hospitals, ambulance or rescue squad services, industry, medical supply companies, educational institutions, and governmental agencies.

Individuals desiring a career in emergency medical science should take biology, mathematics, and if possible, chemistry prior to entering the program.

Emergency Medical Science

					Quarter Hours Credit
FIRST QUARTER		Class	Lab	Clinic	
BIO 106X	Human Anatomy & Physiology I	5	0	0	5
BIO 106Y	BIO-106 Lab	0	0	3	1
EMS 101	Introduction to Emergency Medical Science	4	2	0	5
OR					
EMS 101A	Introduction to Emergency Medical Science	3	0	0	3
AND					
EMS 101B	Introduction to Emergency Medical Science	1	2	0	2
ENG 104	Usage and Composition I	3	0	0	3
ENG 115	Medical Terminology & Vocabulary	3	0	0	3
OR					
ENG 115A	Medical Terminology & Vocabulary	2	0	0	2
AND					
ENG 115B	Medical Terminology & Vocabulary	1	0	0	1
		15	2	3	17
SECOND QUARTER					
BIO 107X	Human Anatomy & Physiology II	5	0	0	5
BIO 107Y	BIO-107 Lab	0	0	3	1
EMS 102	Assessment and Emergency Intervention Skills	3	2	3	5
OR					
EMS 102A	Assessment and Emergency Intervention Skills	2	2	0	3
AND					
EMS 102B	Assessment and Emergency Intervention Skills	1	0	3	2
EMS 110	EMS Skills I	0	0	3	1
ENG 105	Usage and Composition II	3	0	0	3
		11	2	9	15
THIRD QUARTER					
EMS 103	Medical & Trauma Management I	4	0	0	4
OR					
EMS 103A	Medical & Trauma Management I	2	0	0	2
AND					
EMS 103B	Medical & Trauma Management I	2	0	0	2
EMS 107	Clinical I	0	0	6	2
OR					
EMS 107A	Clinical I	0	0	3	1
AND					
EMS 107B	Clinical I	0	0	3	1
EMS 109	Medical Communications: Extrication & Rescue	2	2	0	3
OR					
EMS 109A	Medical Communications: Extrication & Rescue	2	0	0	2
AND					
EMS 109B	Medical Communications: Extrication & Rescue	0	2	0	1
EMS 111	EMS Skills II	0	0	3	1
PHM 102	Pharmacology I	5	0	0	5
		11	2	9	15
FOURTH QUARTER					
EMS 104	Medical & Trauma Management II	4	0	0	4
OR					
EMS 104A	Medical & Trauma Management II	2	0	0	2
AND					
EMS 104B	Medical & Trauma Management II	2	0	0	2
EMS 108	Clinical II	0	0	12	4
OR					
EMS 108A	Clinical II	0	0	3	1
AND					
EMS 108B	Clinical II	0	0	3	1
AND					
EMS 108C	Clinical II	0	0	3	1
AND					
EMS 108D	Clinical II	0	0	3	1
EMS 112	EMS Skills III	0	0	3	1
PHM 103	Pharmacology II	5	0	0	5
PSY 101	Introduction to Psychology	3	0	0	3
		12	0	15	17

FIFTH QUARTER

EMS 201	Cardiology	5	0	0	5
OR					
EMS 201A	Cardiology	3	0	0	3
AND					
EMS 201B	Cardiology	2	0	0	2
EMS 203	Clinical III	0	0	12	4
OR					
EMS 203A	Clinical III	0	0	3	1
AND					
EMS 203B	Clinical III	0	0	3	1
AND					
EMS 203C	Clinical III	0	0	3	1
AND					
EMS 203D	Clinical III	0	0	3	1
EMS 209	EMS Skills IV	0	0	3	1
ENG 108	Usage & Composition III				
OR					
	Other English course approved by Department Chairperson	3	0	0	3
	Elective	3	0	0	3
		11	0	15	16

SIXTH QUARTER

BIO 105X	Microbiology	3	0	0	3
BIO 105Y	BIO-105 Lab	0	2	0	1
EMS 202	Medical & Trauma Management III	3	0	0	3
EMS 204	Clinical IV	0	0	12	4
OR					
EMS 204A	Clinical IV	0	0	3	1
AND					
EMS 204B	Clinical IV	0	0	3	1
AND					
EMS 204C	Clinical IV	0	0	3	1
AND					
EMS 204D	Clinical IV	0	0	3	1
PSY 202	Human Growth & Development	3	0	0	3
		9	2	12	14

SEVENTH QUARTER

EDU 250	Methods of Instruction	2	2	0	3
OR					
EDU 250A	Methods of Instruction	0	2	0	1
AND					
EDU 250B	Methods of Instruction	2	0	0	2
EMS 205	Practicum	0	0	10	1
EMS 210	EMS Skills V	0	0	3	1
EMS 211	Clinical V	0	0	9	3
OR					
EMS 211A	Clinical V	0	0	3	1
AND					
EMS 211B	Clinical V	0	0	3	1
AND					
EMS 211C	Clinical V	0	0	3	1
EMS 212	Water Rescue	2	2	0	3
OR					
EMS 212A	Water Rescue	2	0	0	2
AND					
EMS 212B	Water Rescue	0	2	0	1
SOC 101	Introduction to Sociology	3	0	0	3
		7	4	22	14

EIGHTH QUARTER

EMS 207	Emergency Medical Science Seminar	2	0	0	2
EMS 208	Knowledge & Skills Analysis	3	0	0	3
BUS 272	Supervision	3	0	0	3
PSY 204	Abnormal Psychology	3	0	0	3
	Social Science or Humanities Elective	3	0	0	3
		14	0	3	14

Total Required Credits....122

FOODSERVICE MANAGEMENT T-074

The Foodservice Management curriculum trains students at the supervisory or "middle management" level in foodservice with particular emphasis on institutional foodservice. Students completing the first year of this curriculum and desiring additional study in supervision and management may continue for the second year or exit after the fourth quarter with a diploma as a Foodservice Specialist.

In addition to having a sound foundation in the science of food preparation and service, students will develop an understanding of the basic science and principles of quantity food preparation, an appreciation of accuracy and the use of standards in production, an increased knowledge of the space and equipment requirements for quantity food production and service operations of various types, and some ability to evaluate the effectiveness of the operation of a foodservice department. Also, students will understand pricing and cost controls, principles of nutrition as applied to institutional menu planning, safe methods of work performance, and appreciation of sanitation and hygiene in a foodservice operation.

The career opportunities available to a graduate of the Foodservice Management curriculum are dietetic assistant, food science supervisor, foodservice manager, dietary technician, unit manager, and chef-manager. Employment opportunities are available in hospitals, nursing homes, child care centers, college and university foodservices, school foodservices, industrial cafeterias, private clubs, airline foodservices, food processing manufacturers, foodservice contract companies, and commercial restaurants.

Foodservice Management

			Class	Lab	Clinic	Quarter Hours Credit
FIRST QUARTER						
ENG	101	Grammar	3	0	0	3
FSO	101	Orientation to Food Service	2	0	0	2
FSO	102X	Food Preparation I	3	0	0	3
FSO	102Y	FSO-102 Lab	0	0	6	2
FSO	103X	Equipment Layout & Design	3	0	0	3
FSO	103Y	FSO-103 Lab	0	2	0	1
FSO	104	Sanitation & Safety	3	0	0	3
FSO	107X	Baking	2	0	0	2
FSO	107Y	FSO-107 Lab	0	0	6	2
			16	2	12	21
SECOND QUARTER						
BUS	109	Desktop Computers	0	0	3	1
ENG	102	Composition	3	0	0	3
FSO	106	Nutrition & Menu Planning	4	0	0	4
FSO	112X	Food Preparation II	3	0	0	3
FSO	112Y	FSO-112 Lab	0	0	6	2
FSO	113	Dining Room Service	4	0	0	4
FSO	115	Cake Decorating	2	0	6	4
			16	0	15	21
THIRD QUARTER						
FSO	108	Foodservice Personnel & Production Management	3	0	0	3
FSO	114	Garnishing	1	0	3	2
FSO	117X	Advanced Baking	2	0	0	2
FSO	117Y	FSO-117 Lab	0	0	9	3
FSO	122X	Food Preparation III	2	0	0	2
FSO	122Y	FSO-122 Lab	0	0	9	3
MAT	110	Business Math	5	0	0	5
			13	0	21	20
SUMMER QUARTER						
FSO	110	Foodaervice Internship I	0	0	20	2
FSO	111	Seminar I	1	0	0	1
SOC	105	Social Culture	3	0	0	3
___	___	Major Course(s)	2	0	0	2
			6	0	20	8
FOURTH QUARTER						
BUS	150	Financial Accounting	4	2	0	5
ENG	103	Report Writing	3	0	0	3
FSO	202	Food Prep. & Service IV	2	0	6	4
FSO	203	Organization & Management	3	0	0	3
FSO	205	Menu Planning	3	0	0	3
			15	2	6	18
FIFTH QUARTER						
BUS	123	Business Finance	2	2	0	3
BUS	235	Small Business Management	3	0	0	3
FSO	204	Food Purchasing & Cost Control	3	0	0	3
FSO	212	Food Preparation & Service V	1	0	6	3
		Elective	3	0	0	3
			12	2	6	15
SIXTH QUARTER						
ENG	204	Oral Communications	3	0	0	3
FSO	207	Foodservice Merchandising	3	0	2	4
FSO	210	Foodservice Internship II	0	0	20	2
FSO	211	Seminar II	2	0	0	2
PSY	206	Applied Psychology	3	0	0	3
			11	0	22	14

Total Required Credits..... 117

Co-op Option: Qualified students may elect to take up to three (3) credit hours of Cooperative Education in place of three (3) hours of electives provided he/she acquires the approval of the Co-op Director and Department Chairperson.

FOODSERVICE SPECIALIST V-053

The Foodservice Specialist curriculum trains students in the art and science of quantity food preparation with particular emphasis on institutional foodservice. Using a career ladder concept, it is an open-ended curriculum allowing students more flexibility in their training. In addition to development of knowledge and skills in the art and science of food preparation, the student must develop an understanding and appreciation of food and equipment purchasing, financial control, recordkeeping, basic nutrition and menu planning, and supervision.

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

Foodservice Specialist

			Class	Lab	Clinic	Quarter Hours Credit
FIRST QUARTER						
ENG	101	Grammar	3	0	0	3
FSO	101	Orientation to Foodservice	2	0	0	2
FSO	102X	Food Preparation I	3	0	0	3
FSO	102Y	FSO-102 Lab	0	0	6	2
FSO	103X	Equipment Layout & Design	3	0	0	3
FSO	103Y	FSO-103 Lab	0	2	0	1
FSO	104	Sanitation & Safety	3	0	0	3
FSO	107X	Baking	2	0	0	2
FSO	107Y	FSO-107 Lab	0	0	6	2
			16	2	12	21
SECOND QUARTER						
ENG	102	Composition	3	0	0	3
FSO	115	Cake Decorating	2	0	6	4
FSO	106	Nutrition & Menu Planning	4	0	0	4
FSO	112X	Food Preparation II	3	0	0	3
FSO	112Y	FSO-112 Lab	0	0	6	2
FSO	113	Dining Room Service	4	0	0	4
BUS	109	Desktop Computers	0	0	3	1
			16	0	15	21
THIRD QUARTER						
MAT	110	Business Math	5	0	0	5
FSO	108	Foodservice Personnel & Production Management	3	0	0	3
FSO	114	Garnishing	1	0	3	2
FSO	117X	Advanced Baking	2	0	0	2
FSO	117Y	FSO-117 Lab	0	0	9	3
FSO	122X	Food Preparation III	2	0	0	2
FSO	122Y	FSO-122 Lab	0	0	9	3
			13	0	21	20
SUMMER QUARTER						
SOC	105	Social Culture	3	0	0	3
FSO	110	Foodservice Internship I	0	0	20	2
FSO	111	Seminar	1	0	0	1
___	___	Major Course(s)	2	0	0	2
			6	0	20	8

Total Required Credits..... 70

FUNERAL SERVICE EDUCATION T-057

The Funeral Service Education curriculum provides students with the opportunity to acquire the funeral service education necessary to become proficient in basic funeral service skills. In addition to the general education courses offered in the curriculum, technical courses, such as human anatomy and physiology, funeral law, embalming theory and practice, restorative arts, and funeral home operation are taught.

Graduates of the curriculum will be qualified for employment as embalmers and funeral directors, and as sales representatives for equipment firms.

Funeral Service Education

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ENG	104	Usage & Composition I	3	0	0	3
BIO	103X	Human Structure/Function I	3	0	0	3
BIO	103Y	BIO-103 Lab	0	4	0	2
FSE	101	Introduction to Funeral Service	3	0	0	3
BUS	115	Business Law I	4	0	0	4
CHM	101X	Chemistry	3	0	0	3
CHM	101Y	CHM-101 Lab	0	2	0	1
			16	6	0	19
SECOND QUARTER						
ENG	105	Usage & Composition II	3	0	0	3
BIO	104X	Human Structure/Function II	3	0	0	3
BIO	104Y	BIO-104 Lab	0	4	0	2
BUS	116	Business Law II	4	0	0	4
FSE	121	Funeral Svc. Practices	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
			16	4	0	18
THIRD QUARTER						
BIO	105X	Basic Microbiology	3	0	0	3
BIO	105Y	BIO-105 Lab	0	2	0	1
BUS	150	Financial Accounting	4	2	0	5
FSE	209	Introduction to Embalming Practice	3	0	0	3
SOC	101	Introduction to Sociology	3	0	0	3
		English Course	3	0	0	3
			16	4	0	18
SUMMER QUARTER						
BUS	109	Desktop Computers	0	0	3	1
FSE	115	Funeral Law	3	0	0	3
FSE	206	Embalming Chemistry	3	2	0	4
SOC	203	Sociology of Death & Dying	3	0	0	3
		Elective	3	0	0	3
			12	2	3	14
FOURTH QUARTER						
FSE	210	Embalming Theory I	3	0	0	3
FSE	214	Restorative Arts I	2	4	0	4
ENG	204	Oral Communications	3	0	0	3
FSE	212	Embalming Practice I	0	0	10	1
PSY	208	Grief Psychology	3	0	0	3
FSE	257	Pathology I	3	0	0	3
			14	4	10	17
FIFTH QUARTER						
FSE	211	Embalming Theory II	3	0	0	3
FSE	224	Funeral Home Operation	4	0	0	4
FSE	215	Restorative Arts II	2	4	0	4
FSE	213	Embalming Practice II	0	0	10	1
FSE	258	Pathology II	3	0	0	3
			12	4	10	15
SIXTH QUARTER						
FSE	225	Research in Funeral Svc.	1	4	0	3
FSE	280	Professional Practicum	0	0	20	2
FSE	282	Seminar	5	0	0	5
FSE	268	Funeral Counseling	3	0	0	3
			9	4	20	13

Total Required Credits.....114

Co-op Option: Qualified students may elect to take up to three (3) credit hours of Cooperative Education in place of three (3) credit hours of electives provided approval is obtained from the Department Chairperson and Co-op Director.

FUNERAL SERVICE EDUCATION
N.C. Funeral Director Certificate Program

The Funeral Director Certificate Program provides students with the opportunity to acquire the funeral directing education necessary to become proficient in basic funeral directing skills.

Graduates of the certificate program will qualify to take the North Carolina Funeral Director's Examination; and if successful, following a one-year internship at a North Carolina funeral home, will be awarded a North Carolina Funeral Director's license.

Upon completion of the program, the student will receive a Certificate of Achievement.

			Class	Lab	Clinic Shop	Quarter Hours Credit
FALL QUARTER						
FSE	101	Introduction to Funeral Service	3	0	0	3
BUS	115	Business Law	4	0	0	4
ENG	204	Oral Communications	3	0	0	3
FSE	257	Pathology I	3	0	0	3
			13	0	0	13
WINTER QUARTER						
FSE	121	Funeral Service Practices	3	0	0	3
BUS	116	Business Law II	4	0	0	4
PSY	101	Introduction to Psychology	3	0	0	3
FSE	224	Funeral Home Operations	4	0	0	4
			14	0	0	14
SPRING QUARTER						
BUS	150	Accounting	4	2	0	5
FSE	268	Funeral Counseling	3	0	0	3
FSE	225	Research in Funeral Service	1	4	0	3
SOC	101	Introduction to Sociology	3	0	0	3
			11	6	0	14
SUMMER QUARTER						
FSE	115	Funeral Service Law	3	0	0	3
PSY	208	Grief Psychology	3	0	0	3
SOC	203	Sociology of Death and Dying	3	0	0	3
			9	0	0	9

Total Required Credits....50

The General Education curriculum program consists of basic course work in English, literature, fine arts, philosophy, social science, science, and mathematics leading to an Associate in General Education Degree (A.G.E.). It is designed principally for students who desire two years of general education beyond the high school level.

General Education

			Lecture	Lab	Clinic Shop	Credits
FIRST QUARTER						
ENG	121	English Composition	5	0	0	5
MAT	131	College Mathematics				
OR						
MAT	132	College Algebra	5	0	0	5
HIS	121	Western Civilization I	5	0	0	5
			15	0	0	15
SECOND QUARTER						
ENG	122	English Composition and Literature	5	0	0	5
HIS	122	Western Civilization II	5	0	0	5
PSY	121	General Psychology	5	0	0	5
			15	0	0	15
THIRD QUARTER						
BIO	121X	General Biology I	5	0	0	5
BIO	121Y	General Biology I Lab	0	2	0	1
ENG	131	Oral Communications	5	0	0	5
SOC	121	General Sociology	5	0	0	5
			15	2	0	16
FOURTH QUARTER						
ART	221	Art Appreciation				
OR						
MUS	221	Music Appreciation	5	0	0	5
CHM	221X	General Chemistry I				
CHM	221Y	General Chemistry I Lab				
OR						
PHY	221X	General Physics I	5	0	0	5
PHY	221Y	General Physics I Lab	0	2	0	1
POL	221	American Government	5	0	0	5
			15	2	0	16

FIFTH QUARTER

ENG 241	World Literature I	5	0	0	5
	Humanities/Fine Arts Elective	5	0	0	5
	Major Electives	9	0	0	9
		19	0	0	19

SIXTH QUARTER

ENG 242	World Literature II	5	0	0	5
	Social/Behavioral Science Elective	5	0	0	5
	Major Electives	5	0	0	5
		15	0	0	15

Total Required Quarter Hours.....96

The General Occupational Technology curriculum is designed to meet the needs of full-time and/or part-time employees in business and industry. This program of study provides these individuals with an opportunity to upgrade their skills and/or to earn an associate degree by taking courses suited to their occupational needs. The curriculum consists of a basic core of courses in communication, mathematics, and social science. The balance of the curriculum consists of a sequence of technical courses individually tailored to satisfy the requirements of the student and/or the student's employer.

General Occupational Technology

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
ENG 101	Grammar				
OR					
ENG 104	Usage & Composition I	3	0	0	3
MAT ___	Mathematics Elective	5	0	0	5
___ ___	Major Course	3	0	0	3
___ ___	Major Course	3	0	0	3
___ ___	Major Course	3	0	0	3
		17	0	0	17
SECOND QUARTER					
ENG 102	Composition				
OR					
ENG 105	Usage & Composition II	3	0	0	3
MAT ___	Mathematics Elective	5	0	0	5
___ ___	Major Course	3	0	0	3
___ ___	Major Course	3	0	0	3
___ ___	Major Course	3	0	0	3
		17	0	0	17
THIRD QUARTER					
ENG 103	Report Writing				
OR					
ENG 108	Usage & Composition III	3	0	0	3
SOC 101	Introduction to Sociology	3	0	0	3
___ ___	Major Course	3	0	0	3
___ ___	Major Course	3	0	0	3
___ ___	Major Course	3	0	0	3
___ ___	Related Course	3	0	0	3
		18	0	0	18

FOURTH QUARTER

___	___	Major Course	3	0	0	3
___	___	Related Course	3	0	0	3
			6	0	0	6

FIFTH QUARTER

PSY	101	Introduction to Psychology	3	0	0	3
___	___	Science Elective	5	0	0	5
___	___	Major Course	3	0	0	3
___	___	Major Course	3	0	0	3
___	___	Major Course	3	0	0	3
			17	0	0	17

SIXTH QUARTER

___	___	Major Course	3	0	0	3
___	___	Major Course	3	0	0	3
___	___	Major Course	3	0	0	3
___	___	Major Course	3	0	0	3
___	___	Related Elective	3	0	0	3
___	___	Related Elective	3	0	0	3
			18	0	0	18

SEVENTH QUARTER

BUS	109	Desktop Computers	0	0	3	1
___	___	Major Course	3	0	0	3
___	___	Major Course	3	0	0	3
___	___	Major Course	3	0	0	3
___	___	Related Course	3	0	0	3
___	___	Social Science or Humanities Elective	3	0	0	3
			15	0	3	16

Total Required Credits.....109

Co-op Option: Qualified students may elect to take up to four (4) credit hours of Cooperative Education in place of four (4) credit hours of major or related electives provided he/she acquires the approval of the Co-op Director and Department Chairperson.

GENERAL OFFICE T-033

The purposes of the General Office curriculum are to: (1) prepare the individual to enter clerical-office occupations, (2) provide an educational program for individuals wanting education for upgrading (moving from one position to another) or retraining (moving from present position to a clerical position), and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in the areas of typewriting, filing, and business machines. Through these skills and through development of personal competencies and qualities, the individual will be able to function effictively in office-related activities.

General Office

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
*BUS	191	Keyboarding Skills I				
	OR					
BUS	192	Keyboarding Skills II	2	0	3	3
BUS	248	Insurance Principles & Procedures	4	0	0	4
ENG	101	Grammar	3	0	0	3
MAT	110	Business Math	5	0	0	5
		Social Science or Humanities Elective	3	0	0	3
		Social Science or Humanities Elective	3	0	0	3
			20	0	3	21

SECOND QUARTER

BUS	104	Keyboarding III	2	0	3	3
BUS	110	Business Math w/Calculators	2	0	3	3
BUS	183	Terminology & Vocabulary I	5	0	0	5
ENG	102	Composition	3	0	0	3
		Social Science or Humanities Elective	3	0	0	3
			15	0	6	17

THIRD QUARTER

BUS	105	Keyboarding IV	2	0	3	3
BUS	210	Information Processing Concepts	2	0	3	3
BUS	261	Machine Transcription I	1	0	6	3
ENG	110	Business English	3	0	0	3
		Related Elective	3	0	0	3
			11	0	12	15

SUMMER QUARTER

BUS	112	Records Management	4	0	0	4
BUS	131	Microcomputer Office App.	1	0	3	2
BUS	262	Machine Transcription II	2	0	3	3
			7	0	6	9

FOURTH QUARTER

BUS	184	Terminology & Vocabulary II	5	0	0	5
BUS	211	Information Processing Applications I	4	0	3	5
ENG	204	Oral Communications	3	0	0	3
ENG	207	Business Communications for Word Processors	5	0	0	5
		Related Elective	1	0	3	2
			18	0	6	20

FIFTH QUARTER

BUS	130	Microcomputer Data Management	1	0	3	2
BUS	150	Financial Accounting	4	2	0	5
BUS	204	Information Processing Applications II	4	0	3	5
BUS	214	Secretarial Procedures	3	2	0	4
			12	4	6	16

SIXTH QUARTER

BUS	133	Microcomputer Disk Operating System	1	0	3	2
BUS	134	Integrated Software Applications	1	0	3	2
BUS	205	Information Processing Applications III	2	0	3	3
BUS	270	Office Practice Seminar	3	0	0	3
BUS	290	Internship	0	0	10	1
			7	0	19	11

Total Required Credits.....109

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

Co-op Option: Qualified students may elect to take up to three (3) credit hours of Cooperative Education in place of BUS 191 or 192 provided he/she acquires approval from the Co-op Director and the Department Chairperson.

Microcomputer Specialist Certificate Programs

The General Office Technology Certificate Program provides students with the opportunity to enhance basic office skills by developing word processing, data base, spreadsheets, desktop publishing, and microcomputer skills. Students may use these new found skills for employment or transfer the course credits to the General Office Technology program for an Associate of Applied Science degree.

EVENING CLASSES
(Three Options)

OPTION ONE - THREE QUARTERS:

Fall Quarter		Lecture	Lab	Clinic Shop	Credits
BUS 191 or BUS 192	Keyboarding Skills I or Keyboarding Skills II	2	0	3	3
BUS 210	Information Processing Concepts	2	0	3	3
BUS 118	WP on Microcomputers	1	2	0	2
ENG 101	Grammar	3	0	0	3
		8	2	6	11
Winter Quarter					
BUS 131	Microcomputer Office Applications	1	0	3	2
BUS 110	Business Math with Calculators	2	0	3	3
BUS 130	Microcomputer Data Management	1	0	3	2
		4	0	9	7
Spring Quarter					
BUS 136	Desktop Publishing	1	0	3	2
BUS 193	Keyboard Skillbuilding	2	0	3	3
BUS 133	Microcomputer Disk Operating Sys	1	0	3	2
		4	0	9	7

Total Required Credits.....25

OPTION TWO - FIVE QUARTERS:

Fall Quarter					
BUS 191 or BUS 192	Keyboarding Skills I or Keyboarding Skills II	2	0	3	3
BUS 210	Information Processing Concepts	2	0	3	3
		4	0	6	6
Winter Quarter					
BUS 131	Microcomputer Office Applications	1	0	3	2

BUS 110 Business Math with Calculators	2	0	3	3
	3	0	6	5
Spring Quarter				
BUS 136 Desktop Publishing	1	0	3	2
BUS 193 Keyboard Skillbuilding	2	0	3	3
	3	0	6	5
Summer Quarter				
BUS 130 Microcomputer Data Management	1	0	3	2
BUS 118 WP on Microcomputers	1	2	0	2
	2	2	3	4
Fall Qusrter				
BUS 133 Microcomputer Disk Operating Sys	1	0	3	2
ENG 101 Grammar	3	0	0	3
	4	0	3	5

Total Required Credits.....25

OPTION THREE - EIGHT QUARTERS:

Fall Quarter				
BUS 210 Information Processing Concepts	2	0	3	3
Winter Quarter				
BUS 191 Keyboarding Skills I or BUS 192 Keyboarding Skills II	2	0	3	3
Spring Quarter				
BUS 193 Keyboarding Skillbuilding	2	0	3	3
Summer Quarter				
BUS 118 WP on Microcomputers	1	2	0	2
Fall Quarter				
BUS 133 Microcomputer Disk Operating Sys	1	0	3	2
ENG 101 Grammar	3	0	0	3
	4	0	3	5
Winter Quarter				
BUS 131 Microcomputer Office Applications	1	0	3	2
BUS 110 Business Math with Calculators	2	0	3	3
	3	0	6	5
Spring Quarter				
BUS 136 Desktop Publishing	1	0	3	2
Summer Quarter				
BUS 130 Microcomputer Data Management	1	0	3	2

Total Required Credits.....25

*BUS 118, BUS 130, BUS 133, BUS 191, BUS 192, and ENG 101 are offered every quarter.

HORTICULTURE BUSINESS TECHNOLOGY T-131

The purpose of the Horticulture Business curriculum is to assist students in acquiring the knowledge, skills, and attitudes to be successful in the production, operation, and sales of horticulture plants. The curriculum combines technical horticulture courses with business, accounting, supervision, and sales principles.

Upon completion of this curriculum, graduates are qualified for employment opportunities in the greenhouse production of horticulture plants, greenhouse management, operation of garden shops and limited horticulture service activities such as lawn and garden establishments and maintenance.

Horticulture Business Technology

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
ENG 101	Grammar	3	0	0	3
HOR 120	Plant Materials I	4	2	0	5
HOR 135	Plant Science	5	2	0	6
MAT 110	Business Math	5	0	0	5
		17	4	0	19
SECOND QUARTER					
BUS 115	Business Law I	4	0	0	4
ENG 102	Composition	3	0	0	3
HOR 110	Soil Science and Fertilizer	4	2	0	5
HOR 130	Introduction to Agricultural Economics	3	2	0	4
HOR 153	Greenhouse Management	3	2	0	4
		17	6	0	20
THIRD QUARTER					
BUS 150	Financial Accounting	4	2	0	5
ENG 103	Report Writing	3	0	0	3
HOR 121	Plant Materials II	4	2	0	5
HOR 204	Plant Management Practices	4	2	0	5
HOR 210	Veg. and Fruit Production	3	2	0	4
		18	8	0	22
SUMMER QUARTER					
AGR 201	Agricultural Chemicals	5	2	0	6
	Social Science or Humanities Elective	3	0	0	3
		8	2	0	9
FOURTH QUARTER					
ENG 204	Oral Communications	3	0	0	3
HOR 200	Landscape Horticulture I	3	4	0	5
HOR 228	Plant Diseases & Parasites	3	2	0	4
HOR 254	Plant Propagation	3	2	0	4
	Social Science or Humanities Elective	3	0	0	3
		15	8	0	19
FIFTH QUARTER					
AGR 157	Small Equip. Operation, Repair, and Maintenance	1	4	0	3
BUS 123	Business Finance I	2	2	0	3
HOR 201	Landscape Horticulture II	3	4	0	5
HOR 205	Horticulture Marketing	3	2	0	4
	Elective	3	0	0	3
		12	12	0	18
SIXTH QUARTER					
HOR 258	Turf Management	3	2	0	4
HOR 299	Internship	0	0	20	2
MKT 285	Salesmanship	5	0	0	5
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
		14	2	20	17

Total Required Credits.....124

*Co-op Option: Qualified students may elect to take up to six (6) hours of Cooperative Education in place of HOR 299 and/or four (4) hours of additional horticulture courses provided he/she acquires approval from the Co-op Director and Department Chairperson.

INDUSTRIAL MANAGEMENT T-049

The Industrial Management curriculum is designed to provide an individual with the ability to function effectively in supervisory and middle-management positions in industry. This program emphasizes study and application in areas such as business and industrial management, production methods and schedules, inventory control, work analysis, motivation techniques, and human relations.

This curriculum is designed to prepare the individual to enter supervisory or middle-management positions, to provide an educational program for upgrading or retraining, and to provide an opportunity for the individual wanting to fulfill professional or general interest needs.

Industrial Management

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
ENG 101	Grammar				
OR					
ENG 104	Usage & Composition I	3	0	0	3
MAT 100	Technical Algebra I	5	0	0	5
BUS 101	Introduction to Business	3	0	0	3
ECO 102	Macroeconomics	3	0	0	3
ISC 120	Principles of Industrial Management	3	0	0	3
		17	0	0	17
SECOND QUARTER					
ENG 102	Composition				
OR					
ENG 105	Usage & Composition II	3	0	0	3
EDP 103	Intro. to Programming	3	0	0	3
MAT 104	Technical Algebra II	5	0	0	5
ISC 140	Manufacturing Processes	3	0	0	3
BUS 191	Keyboarding Skills I				
OR					
BUS 192	Keyboarding Skills II	2	0	3	3
	Social Science	3	0	0	3
		19	0	3	20
THIRD QUARTER					
ENG 103	Report Writing				
OR					
ENG 108	Usage & Composition III	3	0	0	3
BUS 282	Business Statistics	4	0	0	4
EDP 116	BASIC Language	3	2	0	4
BUS 233	Personnel Management	3	0	0	3
	Social Science	3	0	0	3
		16	2	0	17
SUMMER QUARTER					
ISC 204	Value Analysis	2	2	0	3
ISC 252	Material Handling	3	0	0	3
		5	2	0	6
FOURTH QUARTER					
ENG 204	Oral Communications	3	0	0	3
BUS 150	Financial Accounting	4	2	0	5
ISC 202	Quality Control	3	0	0	3
ISC 236	Management Science	2	2	0	3
ISC 102	Industrial Safety	2	2	0	3
		14	6	0	17
FIFTH QUARTER					
ISC 251	Organizational Effectiveness	3	0	0	3
ISC 201	Production and Inventory Control	2	2	0	3
ISC 221	Introduction to Industrial Engineering	3	2	0	4
BUS 151	Managerial Accounting	4	2	0	5
	Elective	3	0	0	3
		15	6	0	18
SIXTH QUARTER					
ISC 205	Purchasing	3	0	0	3
ISC 234	Industrial Management Seminar	1	0	0	1
ISC 241	Industrial Training	3	0	0	3
ISC 250	Computer Aided Manufacturing	3	4	0	5
ISC 235	Industrial Management Practicum	0	0	10	1
	Elective	3	0	0	3
		13	4	10	16

Total Required Credits..... 111

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) credit hours of electives provided he/she acquires the approval of the Co-op Director and Department Chairperson.

INDUSTRIAL MECHANICS V-033

The curriculum in Industrial Mechanics prepares students with a broad background in industrial skills required by industry for its mechanics. The individual develops skills in the repair and maintenance of industrial equipment, basic welding and cutting, refrigeration and air conditioning, direct and alternating current, machines and their controls, and related courses.

Industrial Mechanics

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
ELC 1104	Introduction to Electricity	3	0	3	4
ENG 1101	Grammar	3	0	0	3
MAT 1101	Vocational Math I	3	2	0	4
PLU 1110	Plumbing Pipework	5	0	15	10
OR					
PLU 1110A	Plumbing Pipework	3	0	3	4
AND					
PLU 1110B	Plumbing Pipework	1	0	6	3
AND					
PLU 1110C	Plumbing Pipework	1	0	6	3
		14	2	18	21
SECOND QUARTER					
DFT 1113	Blueprint Reading: Electrical	1	2	0	2
ELC 1105	Introduction to Industrial Wiring	2	0	3	3
ENG 1102	Vocational Communications	3	0	0	3
WLD 1120	Oxyacetylene Welding	3	0	12	7
OR					
WLD 1120A	Oxyacetylene Welding	2	0	6	4
AND					
WLD 1120B	Oxyacetylene Welding	1	0	6	3
		9	2	15	15
THIRD QUARTER					
ELC 1106	Industrial Electrical Maintenance	2	0	3	3
PME 1158	Hydraulics & Pneumatics	3	0	3	4
WLD 1121	Arc Welding	3	0	15	8
OR					
WLD 1121A	Arc Welding	2	0	6	4
AND					
WLD 1121B	Arc Welding	1	0	9	4
		8	0	21	15
FOURTH QUARTER					
AHR 1120	Air Conditioning, Heating Maintenance	3	0	9	6
OR					
AHR 1120A	Air Conditioning, Heating Maintenance	2	0	3	3
AND					
AHR 1120B	Air Conditioning, Heating Maintenance	1	0	6	3
ELC 1107	Electric Control & Motors	4	0	6	6
MEC 1112	Machine Shop Process	1	0	6	3
PHY 1101X	Properties of Matter-heat Energy	3	0	0	3
PHY 1101Y	PHY-1101 Lab	0	2	0	1
		11	2	21	19

Total Required Credits.....70

INSURANCE T-128

The Insurance curriculum is designed to prepare an individual for entry into the insurance field. Objectives of this curriculum are to provide the individual with knowledge and skills in the principles of life and health insurance, social insurance, property and liability insurance, governmental influence of the insurance industry on the economy, and organization and management in business operations.

Employment opportunities are available in areas such as insurance sales agent, claims adjuster, special agent, claims examiner, and rate clerk.

Insurance

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
BUS 101	Introduction to Business	3	0	0	3
BUS 191	Keyboarding Skills I				
OR					
BUS 192	Keyboarding Skills II	2	0	3	3
ECO 102	Macroeconomics	3	0	0	3
EDP 104	Introduction to EDP	3	0	0	3
ENG 101	Grammar	3	0	0	3
MAT 110	Business Math	5	0	0	5
		19	0	3	20
SECOND QUARTER					
BUS 115	Business Law I	4	0	0	4
BUS 234	Business Management	3	0	0	3
ECO 104	Microeconomics	3	0	0	3
ENG 102	Composition	3	0	0	3
MAT 131	College Mathematics	5	0	0	5
	Related Elective	3	0	0	3
		21	0	0	21
THIRD QUARTER					
BUS 109	Desktop Computers	0	0	3	1
BUS 116	Business Law II	4	0	0	4
ENG 103	Report Writing	3	0	0	3
MKT 239	Marketing	5	0	0	5
	Social Science	3	0	0	3
	Related Elective	3	0	0	3
		18	0	3	19
SUMMER QUARTER					
INS 220	Financial Services: Environment & Professions	2	2	0	3
	Major Elective				5
					8
FOURTH QUARTER					
INS 221	Income Taxation	2	2	0	3
INS 222	Economics	2	2	0	3
INS 223	Financial Statement Analysis/ Individual Insurance Benefits	2	2	0	3
	Social Science	3	0	0	3
	Elective	3	0	0	3
	Related Elective	3	0	0	3
		15	6	0	18
FIFTH QUARTER					
*For CLU Students					
INS 224	Insurance Environment and Operations	2	2	0	3
INS 225	Group Benefits & Social Insurance	2	2	0	3
INS 226	Pensions & Other Retirement Plans	2	2	0	3
OR					
INS 235	Personal Risk Mgmt. & Insurance I	2	2	0	3
INS 236	Personal Risk Mgmt. & Insurance II	2	2	0	3
INS 237	Multi-line Insurance Laws & Operations	2	2	0	3
	Social Science	3	0	0	3
	Related Elective	6	0	0	6
		15	6	0	18
OR					
** For ChFC Students					
INS 227	Employee Benefits	2	2	0	3
INS 229	Wealth Accumulation Planning	2	2	0	3
INS 232	Financial and Estate Planning Applications	2	2	0	3
	Social Science	3	0	0	3
	Related Elective	6	0	0	6
		15	6	0	18

SIXTH QUARTER

INS	228	Investments	2	2	0	3
INS	230	Estate & Gift Tax Planning	2	2	0	3
INS	231	Planning for Business Owners Professionals	2	2	0	3
		Elective	3	0	0	3
		Related Elective	3	0	0	3
			12	6	0	15

Total Required Credits....119

*CLU - Chartered Life Underwriters
**ChFC - Chartered Financial Consultant

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) hours of elective credits provided approval is obtained from the Co-op Director and the Department Chairperson.

MACHINIST TECHNOLOGY T-121

The Machinist Technology curriculum is a comprehensive program designed to provide an opportunity for persons interested in machining and production work to develop skill in the theory and use of the wide range of hand and power machine tools used in industry. The curriculum offers basic skill development courses in the first half of the program with a concentration on shop practices and metal properties to provide employable skills. Those students desiring an indepth study of machine technology can continue their studies with a concentration on mathematics, advanced machine theory, graphics, and humanity electives.

Employment opportunities in this field exist for general machinist, tool and die makers, set-up persons, layout persons, and supervisors or foremen.

Machinist Technology

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
ENG	101	Grammar	3	0	0	3
DFT	101	Technical Drafting I	0	6	0	3
MAT	100	Technical Algebra I	5	0	0	5
MEC	151X	Theory and Practice I	3	0	0	3
MEC	151Y	MEC-151 Lab	0	0	12	4
			11	6	12	18
SECOND QUARTER						
DFT	102	Technical Drafting II	0	6	0	3
DFT	161	CAD I	0	0	3	1
MAT	104	Technical Algebra II	5	0	0	5
MEC	152X	Theory and Practice II	3	0	0	3
MEC	152Y	MEC-152 Lab	0	2	6	3
PHY	130X	Physics I	3	0	0	3
PHY	130Y	PHY-130 Lab	0	2	0	1
			11	10	9	19
THIRD QUARTER						
ENG	102	Composition	3	0	0	3
MAT	150	Functional Geometry	5	0	0	5
MEC	153X	Theory and Practice III	3	0	0	3
MEC	153Y	MEC-153 Lab	0	2	6	3
PSY	206	Applied Psychology	3	0	0	3
PHY	131X	Physics II	3	0	0	3
PHY	131Y	PHY-131 Lab	0	2	0	1
			17	4	6	21

FOURTH QUARTER

ECO	205	Applied Economics	3	0	0	3
MEC	107X	Numerical Control & Computer Numerical Control in Mfg. I	2	0	0	2
MEC	107Y	MEC-107 Lab	0	0	3	1
PHY	132X	Physics III	3	0	0	3
PHY	132Y	PHY-132 Lab	0	2	0	1
			8	2	3	10

FIFTH QUARTER

MAT	151	Trigonometry for the Machinist	5	0	0	5
MEC	160	Industrial Specifications	3	0	0	3
MEC	108X	Numerical Control & Computer Numerical Control in Mfg. II	2	0	0	2
MEC	108Y	MEC-108 Lab	0	4	6	4
MEC	154X	Theory and Practice IV	3	0	0	3
MEC	154Y	MEC-154 Lab	0	0	9	3
			13	4	15	20

SIXTH QUARTER

DFT	212	Jig and Fixture Design	2	4	0	4
MEC	210	Physical Metallurgy	3	2	0	4
MEC	252	Precision Machines	3	0	9	6
WLD	106	Techniques of Welding	1	0	6	3
		Elective	3	0	0	3
			12	6	15	20

SEVENTH QUARTER

ENG	103	Report Writing	3	0	0	3
ENG	204	Oral Communications	3	0	0	3
MEC	182	Jig and Fixture Making	3	0	9	6
MEC	183	Machine Repair	2	0	3	3
MEC	253	Advanced Machine Processes	3	0	6	5
			14	0	18	20

Total Required Credits.....128

*Co-op Option: Qualified students may elect to take up to three (3) credit hours of Cooperative Education in place of three (3) hours of elective credits provided he/she acquires approval from the Co-op Director and Department Chairperson.

MARKETING AND RETAILING T-020

The Marketing and Retailing curriculum is designed to prepare the individual for entry into middle-management positions in various marketing and retailing businesses and industries. This purpose will be fulfilled through study and application in areas such as marketing and merchandising techniques, management, selling, advertising, retailing, and credit and collection procedures.

Through knowledge and skills, the individual will be able to perform marketing and distribution activities and through the development to personal competencies and qualities will be provided the opportunity to enter an array of marketing and distribution jobs.

Marketing and Retailing

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
BUS 101	Introduction to Business	3	0	0	3
BUS 191	Keyboarding Skills I				
OR					
BUS 192	Keyboarding Skills II	2	0	3	3
ENG 101	Grammar				
OR					
ENG 104	Usage & Composition I	3	0	0	3
MAT 110	Business Math	5	0	0	5
MKT 239	Marketing	5	0	0	5
		18	0	3	19
SECOND QUARTER					
BUS 109	Desktop Computers	0	0	3	1
BUS 115	Business Law I	4	0	0	4
ECO 102	Macroeconomics	3	0	0	3
ENG 102	Composition				
OR					
ENG 105	Usage & Composition II	3	0	0	3
MAT 210	Business Math Applications	5	0	0	5
MKT 251	Consumer Behavior	3	0	0	3
		18	0	3	19
THIRD QUARTER					
BUS 116	Business Law II	4	0	0	4
COE 101	Personal Development and Communication	3	0	0	3
ENG 204	Oral Communications	3	0	0	3
MKT 245	Retailing	5	0	0	5
MKT 254	Promotion	3	0	0	3
		18	0	0	18

SUMMER QUARTER					
BUS 234	Management	3	0	0	3
MKT 243	Advertising	5	0	0	5
		8	0	0	8
FOURTH QUARTER					
BUS 150	Financial Accounting	4	2	0	5
ENG 103	Report Writing				
OR					
ENG 108	Usage & Composition III	3	0	0	3
MKT 241	Marketing Research	2	2	0	3
MKT 285	Salesmanship	5	0	0	5
		14	4	0	16
FIFTH QUARTER					
BUS 123	Business Finance I	2	2	0	3
BUS 233	Personnel Management	3	0	0	3
ENG 206	Business Communications	3	0	0	3
MKT 255	Public Relations	3	0	0	3
	Elective or Work Experience	3	0	0	3
	Major Elective	3	0	0	3
		17	2	0	18
SIXTH QUARTER					
MKT 240	Advanced Marketing	2	2	0	3
MKT 249	Buying and Merchandising	1	4	0	3
MKT 256	Business Leadership				
OR					
MKT 237	Women in Management	3	0	0	3
PSY 206	Applied Psychology	3	0	0	3
	Social Science	3	0	0	3
	Elective or Work Experience	3	0	0	3
		15	6	0	18

Total Required Credits.....116

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) hours of elective credits provided he/she acquires approval from the Co-op Director and Department Chairperson.

The Masonry curriculum prepares individuals to work in the construction industry as bricklayers and masons. The mason must have a knowledge of basic mathematics, blueprint reading, and must also know the methods used in laying out a masonry job for residential, commerical, and industrial construction.

Masons are employed by contractors in the building construction field to lay brick and blocks made of tile, concrete, glass, gypsum, or terra cotta. The mason is also capable of constructing or repairing walls, partitions, arches, sewers, furnaces, and other masonry structures.

Masonry

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
DFT 1110	Blueprint Reading: Building Trades	1	2	0	2
ENG 1101	Communicative Skills: Grammar	3	0	0	3
MAS 1100	Introduction to Bricklaying	2	0	6	4
MAS 1101	Masonry Concepts	2	0	6	4
MAS 1102	Fundamentals of Bricklaying I	2	0	6	4
MAT 1110	Math for Building Trades	5	0	0	5
		15	2	18	22
SECOND QUARTER					
BMS 1101	Masonry Estimating	3	0	0	3
MAS 1107	Fundamentals of Bricklaying II	4	0	18	10
OR					
MAS 1107A	Fundamentals of Bricklaying II	2	0	6	4
AND					
MAS 1107B	Fundamentals of Bricklaying II	1	0	6	3
AND					
MAS 1107C	Fundamentals of Bricklaying II	1	0	6	3
MAS 1113	Building Codes and Laws	4	0	0	4
PHY 1103X	Work, Energy, Power	3	0	0	3
PHY 1103Y	PHY-1103 Lab	0	2	0	1
		14	2	18	21
THIRD QUARTER					
ENG 1102	Vocational Communications	3	0	0	3
MAS 1108	Fundamentals of Masonry I	6	0	18	12
OR					
MAS 1108A	Fundamentals of Masonry I	2	0	6	4
AND					
MAS 1108B	Fundamentals of Masonry I	2	0	6	4
AND					
MAS 1108C	Fundamentals of Masonry I	2	0	6	4
		9	0	18	15

FOURTH QUARTER

BUS 1103	Small Business Operations	3	0	0	3
MAS 1109	Fundamentals of Masonry II	6	0	18	12
OR					
MAS 1109A	Fundamentals of Masonry II	2	0	6	4
AND					
MAS 1109B	Fundamentals of Masonry II	2	0	6	4
AND					
MAS 1109C	Fundamentals of Masonry II	2	0	6	4
		9	0	18	15

Total Required Credits.....73

NURSING ASSISTANT V-072

The Nursing Assistant curriculum prepares graduates to assist registered and practical nurses and physicians in carrying out nursing care and services to patients. The nursing assistant performs simple health care procedures such as bathing and feeding patients, providing comfort measures, positioning patients, preparing patients for physical examinations and special tests, observing and recording vital signs, admitting, transferring and discharging patients, and collecting specimens.

Graduates may be employed in hospitals, clinics, doctors' offices, nursing homes, and extended care facilities.

Individuals desiring a career in nursing assistant should, if possible, take English, biology, and social science courses prior to entering the program.

Nursing Assistant

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
NUR 1101	Fundamentals of Nursing Assistant	2	0	12	6
NUR 1102	Basic Anatomy and Physiology	3	0	0	3
		5	0	12	9
SECOND QUARTER					
NUR 1103	Medical Management	3	0	12	7
NUR 1104	Nutrition	2	0	0	2
		5	0	12	9

Total Required Credits.....18

PARALEGAL TECHNOLOGY T-120

The Paralegal Technology curriculum trains individuals to work under the general direction of lawyers, to relieve lawyers of routine matters, and to assist them in the conduct of more complicated and difficult tasks. The legal technician should be capable of doing independent legal work under the supervision of a lawyer, supervise secretaries in their work for the lawyer, and search out information and court facts for the lawyer. Training will include general subjects such as English, Accounting and Psychology, as well as specialized legal courses such as Legal Definitions, Court Systems, Laws and Techniques of Investigation.

Graduates of the Paralegal Technology curriculum should be able to directly assist a lawyer or group of lawyers in most facets of law, but they must always work under the supervision of a lawyer. The legal technician will not be qualified to give legal advice, enter into courtroom procedure, or be involved in litigation except as an assistant to the lawyer. Paralegal graduates will be able to assist in work on probate matters, conducting investigations, searching public records, preparation of tax forms, serving and filing legal documents, bookkeeping, library research, and providing office management assistance. Employment opportunities are available in public and private law firms and with individual lawyers.

Paralegal Technology

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ENG	101	Grammar	3	0	0	3
LEG	101	Intro. to Paralegalism	3	0	0	3
LEG	115	Contract Law and the UCC	3	0	0	3
LEG	135	Civil Litigation I	5	0	0	5
MAT	110	Business Math	5	0	0	5
			19	0	0	19
SECOND QUARTER						
BUS	150	Financial Accounting	4	2	0	5
ENG	102	Composition	3	0	0	3
LEG	130	Legal Research	4	2	0	5
LEG	136	Civil Litigation II	3	0	0	3
PHI	102	Introduction to Logic	3	0	0	3
			17	4	0	19
THIRD QUARTER						
BUS	191	Keyboarding Skills I				
	or					
BUS	192	Keyboarding Skills II	2	0	3	3
ENG	103	Report Writing	3	0	0	3
LEG	105	Partnership & Corporate Law	3	0	0	3
LEG	113	Family Law	3	2	0	4
LEG	117	Tort Law	3	0	0	3
LEG	131	Legal Writing	2	4	0	4
			16	6	3	20
SUMMER QUARTER						
LEG	118	Elements of Criminal Law	2	0	0	2
LEG	204	Investigation	4	0	0	4
LEG	225	Law Office Management	2	0	0	2
		Elective	3	0	0	3
			11	0	0	11
FOURTH QUARTER						
BUS	114	Word Processing Operator				
	OR					
BUS	118	Word Processing on Microcomputers	1	2	0	2
ENG	204	Oral Communications	3	0	0	3
LCJ	110	Investigative Photography	1	4	0	3
LEG	119	Criminal Procedure	3	0	0	3
LEG	214	Property I: Real Estate Law	4	0	0	4
LEG	224	Wills, Trusts, & Estates	4	2	0	5
			16	8	0	20
FIFTH QUARTER						
BUS	135	Law Office Computer Use	2	0	3	3
LEG	220	Remedies	3	0	0	3
LEG	140	Bankruptcy & Collections	2	2	0	3
LEG	215	Property II: Title Search	2	4	0	4
		Social Science or Humanities	3	0	0	3
		Social Science or Humanities	3	0	0	3
		Related Course	3	0	0	3
			18	6	3	22
SIXTH QUARTER						
LEG	216	Property III: Real Estate Closings & Intellectual Property	3	0	0	3
LEG	290	Internship	0	0	30	3
LEG	291	Paralegal Seminar	3	0	0	3
		Major Course	3	0	0	3
			9	0	30	12

Total Required Credits.....123

Co-op Option: Qualified students may elect to take up to three (3) credit hours of Cooperative Education in place of three (3) hours of elective credits provided approval is obtained from the Co-op Director and the Department Chairperson.

PHARMACY TECHNOLOGY T-161

The Pharmacy Technology currriculum prepares pharmacy technicians to transcribe physicians' medication orders, fill orders to be checked by pharmacists, deliver orders, prepare admixtues of intraveneous solutions, maintain control drug distribution, price and order drugs, prepare bulk formulations, replenish pharmaceutical supplies and medications on patient care units, file prescriptions, maintain patient profile records, and perform clerical duties.

Graduates may be employed in hoapital and nursing home pharmacies, in private and chain drug stores, by drug manufacturers, and in wholesale drug companies.

Individuals desiring a career in pharmacy technology should, if possible, take biology, algebra, chemistry, and typing courses prior to entering the program.

Pharmacy Technology

FIRST QUARTER		Class	Lab	Clinic Shop	Quarter Hours Credit
BUS 109	Desktop Computers	0	0	3	1
BUS 191	Keyboarding Skills I				
OR					
BUS 192	Keyboarding Skills II	2	0	3	3
ENG 104	Usage and Composition I	3	0	0	3
PHM 101	Introduction to Pharmacy	5	0	0	5
PHM 109X	Hospital Pharmacy	3	0	0	3
PHM 109Y	PHM-109 Lab	0	0	3	1
PHM 110	Pharmaceutical Calculations	5	0	0	5
		18	0	9	21
SECOND QUARTER					
BIO 200X	Human Biology	4	0	0	4
BIO 200Y	BIO-200 Lab	0	2	0	1
PHM 102	Pharmacology I	5	0	0	5
PHM 104	Pharmaceutical Preparations I	3	4	0	5
PHM 200	Hospital Clinical I	0	0	20	2
		12	6	20	17
THIRD QUARTER					
BIO 105X	Microbiology	3	0	0	3
BIO 105Y	BIO-105 Lab	0	2	0	1
PHM 103	Pharmacology II	5	0	0	5
PHM 105	Pharmaceutical Preparations II	3	4	0	5
PHM 210	Hospital Clinicsl II	0	0	20	2
PSY 206	Applied Psychology	3	0	0	3
		14	6	20	19
FOURTH QUARTER					
ENG 204	Oral Communications	3	0	0	3
PHM 107	Community Pharmacy	3	0	6	5
PHM 111	Pharmacy Seminar	2	0	0	2
SOC 101	Introduction to Sociology	3	0	0	3
		11	0	6	13

Total Required Credits.....70

PHYSICAL THERAPIST ASSISTANT T-062

The Physical Therapist Assistant curriculum prepares the graduate to assist the professional physical therapist in a variety of direct patient care services, delegated by the supervising therapist, to restore function by alleviation or prevention of physical impairment and other activities essential to the operation of a physical therapy service. The graduate is eligible to take the licensing examination given by the North Carolina Board of Physical Therapy Examiners.

Employment opportunities are available in general hospitals, rehabilitation centers, extended care facilities, specialty hospitals, home health agencies, private clinics, and public school systems.

Suggested preparatory courses for individuals desiring a career in physical therapy assisting would include biology, algebra, and possibly chemistry.

Physical Therapist Assistant

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
ENG	104	Usage & Composition I	3	0	0	3
BIO	103X	Human Structure & Function I	3	0	0	3
BIO	103Y	BIO-103 Lab	0	4	0	2
ENG	115	Medical Terminology & Vocabulary	3	0	0	3
PTH	101	Introduction to Physical Therapy	3	0	3	4
BUS	191	Keyboarding Skills I				
	OR					
BUS	192	Keyboarding Skills II	2	0	3	3
			14	4	6	18
SECOND QUARTER						
PSY	101	Introduction to Psychology	3	0	0	3
BIO	104X	Human Structure & Function II	3	0	0	3
BIO	104Y	BIO-104 Lab	0	4	0	2
ENG	105	Usage & Composition II	3	0	0	3
PTH	102	Physical Therapy Procedures I	3	0	6	5
			12	4	6	16
THIRD QUARTER						
SOC	101	Introduction to Sociology	3	0	0	3
PTH	103	Physical Therapy Procedures II	3	0	6	5
PTH	110	Therapeutic Exercise	3	0	6	5
REC	101	First Aid and Safety	3	2	0	4
ENG	103	Report Writing	3	0	0	3
			15	2	12	20
SUMMER QUARTER						
PTH	201	Path-Physiology for PT Assistants	4	0	0	4
PTH	202	Functional Anatomy	2	2	0	3
			6	2	0	7
FOURTH QUARTER						
PSY	202	Psychology (Human Growth and Development)	3	0	0	3
MAT	131	College Mathematics	5	0	0	5
PTH	104	Physical Therapy Procedures	3	0	9	6
PTH	210	Psychology of Adjustment (PT)	3	0	0	3
			14	0	9	17
FIFTH QUARTER						
ENG	204	Oral Communications	3	0	0	3
PSY	210	Human Relations	3	0	0	3
PTH	105	Physical Therapy Procedures IV	3	0	12	7
PTH	215	Community Health & Welfare	3	0	0	3
		Elective	0	0	0	1
			12	0	12	17
SIXTH QUARTER						
PTH	106	Seminar in Physical Procedures	3	0	0	3
PTH	298	Clinical Education	4	0	30	14
			7	0	30	17

Total Required Credits.....112

PLUMBING AND PIPEFITTING V-037

The Plumbing and Pipefitting curriculum is designed to train individuals to repair or install plumbing systems in residences and small commercial buildings. Courses in plumbing practices and pipefitting are included to provide practical experience as well as courses in theory that one must know to advance and keep up to date with new innovations. Other courses in communications skills, physics, human relations, and business operations are provided to assist the individual in occupational growth.

Plumbers are employed by contractors in the building construction fields to install pipe systems which carry water, steam, air or other liquids or gasses for sanitation, heating, industrial production, and various other uses. They also alter and repair existing pipe systems and install plumbing fixtures, appliances, and heating and refrigeration units.

Plumbing and Pipefitting

			Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER						
DFT	1110	Blueprint Reading: Building Trades	1	2	0	2
ENG	1101	Communicative Skills: Grammar	3	0	0	3
MAT	1116	Mathematics for Plumbers	3	2	0	4
PLU	1110	Plumbing Pipework	5	0	15	10
			12	4	15	19
SECOND QUARTER						
BMS	1134	Plumbing Codes & Laws	4	0	0	4
DFT	1115	Blueprint Reading: Plumbing Trades	1	2	0	2
ENG	1102	Vocational Communications	3	0	0	3
PLU	1111	Domestic Water Systems	2	0	9	5
PLU	1120	Low Pressure Steam Systems	2	0	6	4
			12	2	15	18
THIRD QUARTER						
PLU	1112	Installation of Plumbing Fixtures	3	0	9	6
PLU	1121	High Pressure Steam Systems	3	0	9	6
WLD	1180	Basic Welding	1	0	6	3
		Related Elective				3
			10	0	24	18
FOURTH QUARTER						
PLU	1123	Hot Water & Panel Heating	3	0	6	5
PLU	1125	Industrial Piping	3	0	6	5
PLU	1127	Plumbing Estimating	2	0	3	3
WLD	1181	Welding - Mig & Tig	1	0	6	3
			9	0	21	16

Total Required Credits.....71

POSTAL SERVICE TECHNOLOGY T-141

The Postal Service Technology curriculum is designed to provide opportunities for advancement for present and future employees of the U.S. Postal Service. Graduates of the program will be prepared to work in a variety of positions.. The course of study includes: postal organization, mail processing, employee and customer services, mail delivery and collection, problem analysis, related business/management subjects, and general education courses.

Postal Service Technology

		Class	Lab	Clinic Shop	Quarter Hours Credit
FIRST QUARTER					
ENG 101	Grammar	3	0	0	3
ECO 102	Macroeconomics	3	0	0	3
POS 101	Postal History and Organization	3	0	0	3
BUS 101	Introduction to Business	3	0	0	3
POS 103	Postal Mail Processing I	3	0	0	3
EDP 104	Introduction to EDP	3	0	0	3
		18	0	0	18
SECOND QUARTER					
ENG 102	Composition	3	0	0	3
ECO 104	Microeconomics	3	0	0	3
POS 105	Postal Mail Processing II	3	0	0	3
PSY 206	Applied Psychology	3	0	0	3
BUS 272	Supervision	3	0	0	3
	Elective	3	0	0	3
		18	0	0	18
THIRD QUARTER					
MAT 110	Business Math	5	0	0	5
ENG 103	Report Writing	3	0	0	3
POS 201	Postal Service Labor Relations	3	0	0	3
BUS 191	Keyboarding Skills I	2	0	3	3
BUS 260	Business and Government	3	0	0	3
		16	0	3	17
FOURTH QUARTER					
BUS 150	Financial Accounting	4	2	0	5
ENG 204	Oral Communications	3	0	0	3
BUS 115	Business Law I	4	0	0	4
POS 202	Postal Service Finance	3	0	0	3
	Elective	3	0	0	3
		17	2	0	18
FIFTH QUARTER					
BUS 116	Business Law II	4	0	0	4
BUS 151	Management Accounting	4	2	0	5
POS 203	Postal Window Services	3	0	0	3
POS 205	Postal Service Delivery & Collection	3	0	0	3
	Elective	3	0	0	3
		17	2	0	18
SIXTH QUARTER					
BUS 234	Business Management	3	0	0	3
POS 207	Postal Service Employee Relations	3	0	0	3
POS 208	Postal Problem Analysis	3	0	0	3
PSY 210	Human Relations	3	0	0	3
REC 101	First Aid and Safety	3	2	0	4
	Elective	3	0	0	3
		18	2	0	19

Total Required Credits.....108

Co-op Option: Qualified students may elect to take up to twelve (12) credit hours of Cooperative Education in place of twelve (12) hours of elective credits provided he/she acquires approval from the Co-op Director and Department Chairperson.

PRACTICAL FOODSERVICE V-158

Practical Foodservice is a program of study designed to provide training for basic entry level jobs in institutional and commercial foodservice. The student develops the necessary knowledge and skills through the study of basic food preparation, sanitation, and safety. The program also includes the study of developmental subjects. This provides the student with the opportunity to improve reading ability, spelling, basic communication skills, basic mathematics, personal development, and human relation skills.

Job opportunities for graduates of this program are available as cooks' helpers, bakers' helpers, or breakfast cooks in restaurants, hospitals, schools, nursing homes, and other foodservice operations.

Practical Foodservice

				Class	Lab	Shop	Credits
First Quarter	ENG	1101	Communicative Skills: Grammar	3	0	0	3
	FSO	105	Sanitation and Equipment	3	2	0	4
	FSO	109	Principles of Food Prep	3	0	12	7
				9	2	12	14
Second Quarter	COE	101	Personal Development & Communications	3	0	0	3
	BUS	109	Desktop Computers	0	0	3	1
	ENG	1102	Vocational Communications	3	0	0	3
	FSO	101	Introduction to Foodservice	2	0	0	2
	FSO	113	Dining Room Service	4	0	0	4
	MAT	1101	Vocational Mathematics I	3	2	0	4
				15	2	3	17
Third Quarter	ENG	204	Oral Communications	3	0	0	3
	FSO	122X	Food Preparation III	2	0	0	2
	FSO	122Y	Food Preparation III - Lab	0	0	9	3
	PSY	1101	Human Relations	3	0	0	3
	SOC	105	Social Culture	3	0	0	3
				11	0	9	14

Total Required Credits: 45

PRACTICAL NURSING V-038

The Practical Nursing curriculum graduates are prepared to take the National Council Licensure Examination required to practice as a licensed practical nurse. The Practical Nursing curriculum is designed to develop competencies in practicing the following five components of practice as defined by the North Carolina Nursing Practice Act, 1981:
(1) participating in assessing the client's physical and mental health including the client's reaction to illnesses and treatment regimens;
(2) recording and reporting the results of the nursing assessment;
(3) participating in implementing the health care plan developed by the registered nurse and/or prescribed by any person authorized by State law to prescribe such a plan, by performing tasks delegated by and performed under the supervision or under orders or directions of a registered nurse, physician licensed to practice medicine, dentist, or other person authorized by State law to provide such supervision; (4) reinforcing the teaching and counseling of a registered nurse, physician licensed to practice medicine in North Carolina, or dentist; and (5) reporting and recording the nursing care rendered and the client's response to that care.

Licensed practical nurses may be employed in hospitals, nursing homes, clinics, doctors' offices, industry, and public health agencies.

Individuals desiring a career in practical nursing should be encouraged to take math and science courses in high school.

Practical Nursing

FIRST QUARTER			Class	Lab	Clinic	Quarter Hours Credit
BIO	1101	Body Structure & Function	7	0	0	7
ENG	1101	Communicative Skills: Grammar	3	0	0	3
MAT	1105	Mathematics for Nurses	3	0	0	3
PNE	1103X	Nursing Skills I	4	0	0	4
PNE	1103Y	PNE-1103 Lab	0	6	6	5
			17	6	6	22
SECOND QUARTER						
NUT	1101	Nutrition & Diet	3	0	0	3
PNE	1106X	Nursing Skills II	3	0	0	3
PNE	1106Y	PNE-1106 Lab	0	4	0	2
PNE	1107	Medical & Surgical Nursing I	5	0	15	10
PNE	1111	Drugs & Administration	3	0	0	3
			14	4	15	21

THIRD QUARTER

ENG	1102	Vocational Communications	3	0	0	3
PNE	1108	Nursing Care of Children	3	4	3	6
PNE	1109	Nursing Care of Mother	3	4	3	6
PNE	1115	Mental Health	3	0	0	3
			12	8	6	18

FOURTH QUARTER

PNE	1110	Medical & Surgical Nursing II	5	0	21	12
PNE	1116	Vocational Development	4	0	0	4
			9	0	21	16

Total Required Credits..... 77

PUBLIC ADMINISTRATION

The Public Administration curriculum is designed to prepare the individual for entry into middle-management positions in state and local governments and non-profit organizations.

The purposes of the Public Administration curriculum are to: (1) prepare the individual for entry into middle-management positions in state and local government and non-profit organizations, (2) provide an inservice educational program for individuals currently employed, and (3) provide a program designed to inform concerned citizens about how government functions.

These purposes will be fulfilled through study and application in areas such as practice and practical relationships in public administration, budgetary functions, and public policy. Through knowledge and skills, the individual will be able to perform governmental activities and through the development of personal competencies and qualities will be provided the opportunity to enter the public administration professions.

Public Administration

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
BUS	101	Intro. to Business	3	0	0	3
BUS	109	Desktop Computers	0	0	3	1
BUS	138	Intro. to Public Administration	3	0	0	3
ECO	102	Macroeconomics	3	0	0	3
ENG	101	Grammar	3	0	0	3
MAT	110	Business Math	5	0	0	5
			17	0	3	18

SECOND QUARTER

BUS	150	Financial Accounting	4	2	0	5
ECO	104	Microeconomics	3	0	0	3
EDP	104	Intro. to EDP	3	0	0	3
ENG	102	Composition	3	0	0	3
POL	103	National Government	3	0	0	3
			16	2	0	17

THIRD QUARTER

ACC	139	Governmental Accounting	4	2	0	5
ECO	201	Labor Economics	3	0	0	3
ENG	103	Report Writing	3	0	0	3
POL	102	State and Local Government	3	0	0	3
SOC	101	Introduction to Sociology	3	0	0	3
			16	2	0	17

SUMMER QUARTER

BUS	240	Public Finance	3	0	0	3
		Elective	3	0	0	3
			6	0	0	6

FOURTH QUARTER

BUS	115	Business Law I	4	0	0	4
BUS	234	Business Management	3	0	0	3
BUS	250	Public Budgeting	3	0	0	3
BUS	260	Government and Business	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
			16	0	0	16

FIFTH QUARTER

BUS	116	Business Law II	4	0	0	4
BUS	233	Personnel Management	3	0	0	3
BUS	238	Problems of Public Administration	3	0	0	3
PSY	210	Human Relations	3	0	0	3
		Elective	3	0	0	3
			16	0	0	16

SIXTH QUARTER

BUS	128	Spreadsheets	2	4	0	4
BUS	272	Supervision	3	0	0	3
BUS	295	Public Administration Seminar	1	0	0	1
BUS	296	Internship in Public Administration	0	0	10	1
ECO	276	Money and Banking	3	0	0	3
ENG	204	Oral Communications	3	0	0	3
			12	4	10	15

Total Required Credits....105

Co-op Option: Qualified students may elect to take up to seven (7) credit hours of Cooperative Education in place of seven (7) hours of electives and/or BUS 296 provided he/she acquires approval from the Co-op Director and Department Chairperson.

RADIOLOGIC TECHNOLOGY T-061

The Radiologic Technology curriculum prepares graduates to be competent Medical Radiographers. The radiographer is a skilled person qualified by technological education to provide patient services using imaging modalities (as directed by physicians qualified to order and/or perform radiologic procedures) by: (1) applying knowledge of the principles of radiation protection for the patient, self, and others; (2) applying knowledge of anatomy, positioning, and radiographic techniques to accurately demonstrate anatomical structures on a radiograph; (3) determining exposure factors to achieve optimum radiographic techniques with a minimum of radiation exposure to the patient; (4) examining radiographs for the purpose of evaluating techniques, positioning, and other pertinent technical qualities; (5) exercising discretion and judgment in the performance of medical imaging procedures; (6) providing patient care essential to radiologic procedures; and (7) recognizing emergency patient conditions and initiating life saving first aid.

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

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

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

Radiologic Technology

FIRST QUARTER			Class	Lab	Clinic	Quarter Hours Credit
BIO	103X	Human Structure & Func. I	3	0	0	3
BIO	103Y	BIO-103 Lab	0	4	0	2
OR						
BIO	106X	Human Anat. & Physiology I	5	0	0	5
BIO	106Y	BIO-106 Lab	0	0	3	1
PHY	101X	Properties of Matter	3	0	0	3
PHY	101Y	PHY-101 Lab	0	2	0	1
RDT	101	Radiologic Technology I	4	0	3	5
RDT	111	Clinical Education I	0	0	12	4
ENG	104	Usage & Composition I	3	0	0	3
			13	6	18	21

SECOND QUARTER

BIO	104X	Human Structure & Func. II	3	0	0	3
BIO	104Y	BIO-104 Lab	0	4	0	2
OR						

BIO	107X	Human Anat. & Physiology II	5	0	0	5
BIO	107Y	BIO-107 Lab	0	0	3	1
PHY	120	Radiographic Physics I	3	0	0	3
RDT	102	Radiologic Technology II	3	6	0	6
RDT	112	Clinical Education II	0	0	12	4
		Elective	3	0	0	3
			12	10	12	21

THIRD QUARTER

ENG	105	Usage & Composition II	3	0	0	3
RDT	103	Radiologic Technology III	3	6	0	6
RDT	113	Clinical Education III	0	0	15	5
PHY	121	Radiographic Physics II	3	0	0	3
REC	101	First Aid and Safety	3	2	0	4
			12	8	15	21

FOURTH QUARTER

RDT	114	Clinical Education IV	1	0	39	14
						14

FIFTH QUARTER

ENG	108	Usage & Composition III	3	0	0	3
RDT	204	Radiologic Technology IV	7	0	0	7
RDT	215	Clinical Education V	0	0	24	8
EDP	104	Intro. to EDP	3	0	0	3
			13	0	24	21

SIXTH QUARTER

ENG	204	Oral Communication	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
RDT	205	Radiologic Technology V	7	0	0	7
RDT	216	Clinical Education VI	0	0	24	8
			13	0	24	21

SEVENTH QUARTER

RDT	207	Pathology for Rad. Personnel	3	0	0	3
PSY	202	Human Growth & Development	3	0	0	3
RDT	217	Clinical Education VII	1	0	33	12
			7	0	33	18

EIGHTH QUARTER

RDT	218	Clinical Education VIII	0	0	30	10
RDT	206	Radiologic Technology VI	5	0	0	5
			5	0	30	15

Total Required Credits.....152

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

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

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

Real Estate

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
BUS	101	Introduction to Business	3	0	0	3
BUS	191	Keyboarding Skills I				
OR						
BUS	192	Keyboarding Skills II	2	0	3	3
ECO	102	Macroeconomics	3	0	0	3
ENG	101	Grammar	3	0	0	3
MAT	110	Business Math	5	0	0	5
			16	0	3	17

SECOND QUARTER

BUS	150	Financial Accounting	4	2	0	5
ECO	104	Microeconomics	3	0	0	3
ENG	102	Composition	3	0	0	3
RLS	202	Real Estate Mathematics	3	0	0	3
RLS	285	Real Estate Fundamentals (Salesman's Course)	4	2	0	5
			17	4	0	19

THIRD QUARTER

BUS	151	Management Accounting	4	2	0	5
EDP	104	Introduction to Data Processing	3	0	0	3
ENG	103	Report Writing	3	0	0	3
MKT	239	Marketing	5	0	0	5
		Social Science	3	0	0	3
			18	2	0	19

SUMMER QUARTER

BUS	272	Supervision	3	0	0	3
ENG	204	Oral Communications	3	0	0	3
PSY	101	Intro. to Psychology				
OR						
PSY	206	Applied Psychology	3	0	0	3
		Elective	3	0	0	3
			12	0	0	12

FOURTH QUARTER

ACC	229	Income Taxes	5	0	0	5
BUS	115	Business Law I	4	0	0	4
RLS	164	Real Estate Law	3	0	0	3
RLS	221	Real Estate Investments & Taxation	3	0	0	3
			15	0	0	15

FIFTH QUARTER

BUS	116	Business Law II	4	0	0	4
BUS	247	Business Insurance I	3	0	0	3
RLS	216	Real Estate Selling Techniques	3	2	0	4
RLS	292	(Intro) Real Estate Appraisal	4	2	0	5
			14	4	0	16

SIXTH QUARTER

		Major Elective				4
ENG	206	Business Communications	3	0	0	3
RLS	209	Real Estate Finance	3	2	0	4
RLS	231	Real Estate Brokerage	3	2	0	4
		Elective	3	0	0	3
						18

Total Required Credits....116

Co-op Option: Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of six (6) hours of elective credits provided he/she acquires approval from the Co-op Director and Department Chairperson.

RECREATION ASSOCIATE T-094

The Recreation Associate curriculum trains individuals to plan and direct recreational activities for all age groups. The program is divided to meet the needs of those who work with the following categories of people and facilities: pre-school, school-age, adults, senior citizens, and public and private recreational sites and facilities. Practical administration will be provided in all areas of instruction.

Employment opportunities for professionally trained leaders exist in: community programs, projects of local governments, YMCAs, YWCAs, Boys Clubs, Boy Scouts, Girl Scouts, hospitals, nursing homes, penal institutions, state parks, federal parks, industry, public and private resorts, summer camps, rehabilitation programs, and regional institutions.

Recreation Associate

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
ENG	101	Grammar				
OR						
ENG	104	Usage & Composition I	3	0	0	3
MAT	110	Business Math	5	0	0	5
REC	111	Introduction to Recreation	5	0	0	5
REC	112	Arts & Crafts I	1	0	3	2
REC	124	Fitness Management	3	2	0	4
			17	2	3	19

SECOND QUARTER

ENG	102	Composition				
OR						
ENG	105	Usage & Composition II	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
REC	119	Team Sports	2	4	0	4
REC	201	Group Leadership	3	0	0	3
REC	221	Individual Lifetime Rec. Activities	1	0	3	2
REC	236	Low Organized Games	1	0	3	2
			13	4	6	17

THIRD QUARTER

ENG	103	Report Writing				
OR						
ENG	108	Usage & Composition III	3	0	0	3
REC	101	First Aid & Safety	3	2	0	4
REC	202	Ill & Handicapped	5	0	0	5
		Major Elective	3	2	0	4
			14	4	0	16

SUMMER QUARTER

	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
		6	0	0	6

FOURTH QUARTER

BIO 200X	Human Biology	4	0	0	4
BIO 200Y	Lab	0	2	0	1
BUS 109	Desktop Computers	0	0	3	1
REC 109	Facility Management	3	0	0	3
REC 220	Camp Counseling	2	0	3	3
REC 250	Community Health Resources	3	0	0	3
REC 251	Gerontology	3	0	0	3
SOC 101	Introduction to Sociology	3	0	0	3
	Humanities Elective	3	0	0	3
		21	2	6	24

FIFTH QUARTER

REC 108	Maintenance in Recreation	2	0	3	3
REC 120	Cultural Arts	2	0	3	3
REC 122	Public Relations in Rec.	2	4	0	4
REC 212	Adaptive Recreation	3	2	0	4
REC 225	Scheduling Activities & Tournaments	3	0	0	3
	Major Elective	3	0	0	3
		15	6	6	20

SIXTH QUARTER

REC 121	Program Planning & Organization	5	0	0	5
REC 223	Folk, Square & Social Dance	1	4	0	3
REC 231	Social Recreation	1	4	0	3
	Major Elective	2	0	3	3
	Elective	3	0	0	3
		12	8	3	17

Total Required Credits....119

Co-op Option: Qualified students may elect to take up to three (3) credit hours of Cooperative Education in place of three (3) credit hours of electives provided he/she acquires the approval of the Co-op Director and Department Chairperson.

RESPIRATORY CARE TECHNOLOGY T-091

The Respiratory Care Technology curriculum offers career education options for respiratory therapists and/or respiratory therapy technicians.

The respiratory therapist specializes in the application of scientific knowledge and theory to practical, clinical problems of respiratory care. Knowledge and skills for performing these functions are usually achieved through two or more years of academic and clinical preparation. The respiratory therapist is qualified to assume primary clinical responsibility for all respiratory care modalities, including responsibilities involved in supervision of respiratory technician functions. The therapist is frequently required to exercise considerable independent, clinical judgment in the respiratory care of patients under the direct or indirect supervision of a physician. Further, the therapist is capable of serving as a technical resource person to the physician with regard to current practices in respiratory care and to the hospital staff as to effective and safe methods for administering respiratory care.

The technician's role does not require the exercising of independent, clinical judgment; however, the technician is expected to adjust or modify therapeutic techniques within well-defined procedures based on a limited range of patient responses. Therefore, the effective use of the technician, especially in the critical care setting, requires the supervision of a respiratory therapist or a physician experienced in respiratory care. Knowledge and skills for performing these functions are usually achieved through one or more years of academic and clinical preparation.

Graduates of the technician and therapist curricula are eligible to apply for admission to the Entry Level Respiratory Therapy Practitioner (CRTT) examination by the National Board for Respiratory Care. Graduates of the therapist level curriculum are eligible to apply for admission to the Advanced Respiratory Care Practitioner (RRT) examination.

Graduates may be employed in a wide variety of health related areas including hospitals (in respiratory therapy, special services, cardiopulmonary, anesthesiology, or pulmonary medicine departments), respiratory equipment sales and rental companies, rehabilitation centers, skilled nursing care facilities, and educational and research institutions.

Individuals desiring a career in respiratory care technology should take biology, algebra, and chemistry courses prior to entering the program.

Respiratory Care Technology

FIRST QUARTER		Class	Lab	Clinic	Quarter Hours Credit
BIO 106X	Anatomy & Physiology I	5	0	0	5
BIO 106Y	BIO-106 Lab	0	0	3	1
CHM 101X	Chemistry I	3	0	0	3

CHM	101Y	CHM-101 Lab	0	2	0	1
ENG	115	Medical Terminology	3	0	0	3
MAT	105	Algebra & Trigonometry	5	0	0	5
RTH	105	Introduction to Respiratory Therapy Theory & Equipment	1	0	3	2
			17	2	6	20

SECOND QUARTER

BIO	107X	Anatomy & Physiology II	5	0	0	5
BIO	107Y	BIO-107 Lab	0	0	3	1
BUS	109	Desktop Computers	0	0	3	1
ENG	104	Usage & Composition I	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
RTH	106	Theory & Equipment II	1	2	12	6
			12	2	18	19

THIRD QUARTER

BIO	108X	Microbiology	5	0	0	5
BIO	108Y	BIO-108 Lab	0	0	3	1
RTH	151	Pharmacology	3	0	0	3
RTH	111	Clinical Practice I	2	2	15	8
RTH	107	Respiratory Therapy Theory and Equipment III	1	4	0	3
			11	6	18	20

SUMMER QUARTER

RTH	112	Clinical Practice II	2	0	33	13

FOURTH QUARTER

RTH	208	Pulmonary Pathophysiology	3	0	0	3
RTH	242	Clinical Application I	1	2	15	7
RTH	243	Cardiopulmonary Evaluation	2	2	0	3
PHY	101X	Properties of Matter	3	0	0	3
PHY	101Y	PHY-101 Lab	0	2	0	1
ENG	105	Usage and Composition II	3	0	0	3
			12	6	15	20

FIFTH QUARTER

ENG	108	Usage & Composition III	3	0	0	3
SOC	101	Introduction to Sociology	3	0	0	3
RTH	241	Pediatrics (Including Perinatology)	2	2	0	3
RTH	251	Clinical Application II	2	2	15	8
			10	4	15	17

SIXTH QUARTER

ENG	204	Oral Communications	3	0	0	3
RTH	213	Clinical Practice III	3	0	33	14
RTH	252	Departmental Organization and Administration	2	0	0	2
			8	0	33	19

Total Required Credits..... 128

SURGICAL TECHNOLOGY V-071

The Surgical Technology curriculum prepares graduates to assist in the care of surgical patients in the operating room and functions of the surgical team by arranging supplies and instruments, maintaining aseptic conditions, preparing patients for surgery, and assisting the surgeon during operations in the use of materials and equipment. First assisting the surgeon by a surgical technologist is permitted only by individual hospital policy.

Graduates are eligible to take the certification examination for Certified Surgical Technologists given by the Association of Surgical Technologists, Inc. Surgical technologists may practice in the hospital's operating, emergency, labor and delivery rooms, central sterile processing department, ambulatory surgical services, and physicians' offices.

Individuals desiring a career in surgical technology should take biology and mathematics courses prior to entering the program.

Surgical Technology

FIRST QUARTER			Class	Lab	Clinic	Quarter Hours Credit
SUR	1090	Principles of Operating Room Technique	2	0	3	3
SUR	1080	Nursing Procedures	5	0	3	6
BIO	1091X	Anatomy & Physiology I	3	0	0	3
BIO	1091Y	BIO-1091 Lab	0	2	0	1
BIO	1092X	Microbiology	3	0	0	3
BIO	1092Y	BIO-1092 Lab	0	2	0	1
ENG	1101	Communicative Skills: Grammar	3	0	0	3
			16	4	6	20

SECOND QUARTER

BIO	1096X	Anatomy & Physiology II	3	0	0	3
BIO	1096Y	BIO-1096 Lab	0	2	0	1
SUR	1085	Surgical Pharmacology	3	0	0	3
SUR	1093	Theory Surgical Procedures I	4	4	0	6
SUR	1094	Clinical Practice I	0	0	15	5
SUR	1098	Seminar I	2	0	0	2
			12	6	15	20

THIRD QUARTER

PSY	1101	Human Relations	3	0	0	3
SUR	1097	Theory Surgical Procedures II	4	4	0	6
SUR	1095	Clinical Practice II	0	0	15	5
SUR	1099	Seminar II	2	0	0	2
			9	4	15	16

FOURTH QUARTER

SUR	1100	Theory Surgical Procedures III	4	0	0	4
SUR	1101	Clinical Practice III	0	0	24	8
SUR	1102	Seminar III	2	0	0	2
			6	0	24	14

Total Required Credits.....70

Students accepted for the V-048 Tool and Die Making curriculum must have completed the V-032 Machinist curriculum or be able to demonstrate Journeymen level machinist skills.

The Tool and Die Making curriculum prepares machinists for the machining of tools and dies for the mass production of parts. These parts may be produced by punching, stamping, or molding them into the required sizes and shapes. It is the responsibility of tool and die makers to produce the special tools and fixtures for these production operations. They may also produce the gauges and other inspection tools used in checking mass produced parts.

Students enrolling in the Tool and Die Making program should gain the necessary skills and related information to make it possible for them to obtain entry level employment in this field. Typical jobs which might be secured in the manufacturing field include: Toolmaker Trainee, Diemaker Trainee, Moldmaker Trainee, Tool Repairman, Tool (Set-up) and Tool Inspector. A tool and die maker analyzes a variety of specifications, lays out metal stock, and sets up and operates machine tools. They fit and assemble parts to make and repair metal working dies, cutting tools, jigs, fixtures, gauges, and machinists' hand tools. They compute dimensions, decide on machining to be done, and plan layout and assembly operations.

Tool and Die Making

FIRST QUARTER			Class	Lab	Shop	Quarter Hours Credit
ENG	101	Grammar	3	0	0	3
MEC	1151	Tool Making: Jigs & Fixtures	1	0	6	3
MEC	1154	Die Making I	2	0	6	4
MAT	1151	Mathematics: Trigonometry I	3	2	0	4
MEC	1158	Introduction to Plastic Molding	2	0	9	5
			11	2	21	19
SECOND QUARTER						
ENG	102	Composition	3	0	0	3
MEC	1155	Die Making II	2	0	9	5
MEC	1152	Gauges & Special Tools	2	2	0	3
MEC	1170	Mold Making I	2	0	9	5
MAT	1152	Mathematics: Trigonometry II	3	2	0	4
PHY	130X	Physics I	3	0	0	3
PHY	130Y	PHY-130 Lab	0	2	0	1
			15	6	18	24

THIRD QUARTER

MEC	1153	Tool Making II	3	0	6	5
MEC	1156	Die Making III	2	0	6	4
MEC	1171	Mold Making II	2	0	6	4
PHY	131X	Physics II	3	0	0	3
PHY	131Y	PHY-131 Lab	0	2	0	1
			10	2	18	17

SUMMER QUARTER

MEC	1159	Tool Making III	2	0	6	4
MEC	1172	Mold Making III	2	2	0	3
PHY	132X	Physics III	3	0	0	3
PHY	132Y	PHY-132 Lab	0	2	0	1
			7	4	6	11

Total Required Credits.....71

WASTE WATER TREATMENT PLANT OPERATOR V-087

The Waste Water Treatment Plant Operator curriculum is designed to provide essential training in the basic skills required in the operation of water and wastewater treatment plants. Practical applications are stressed using local treatment plant facilities. Mathematics, chemistry, wastewater characteristics and treatment, and treatment processes and operations are included in the program.

The graduate of the program may be employed as a waste water and water treatment plant operator, laboratory assistant, plant maintenance assiatant, and water quality analyst.

Waste Water Treatment Plant Operator

FIRST QUARTER			Class	Lab	Clinic Shop	Quarter Hours Credit
CHM	1101X	Chemistry	3	0	0	3
CHM	1101Y	CHM-1101 Lab	0	2	0	1
ENG	1101	Grammar	3	0	0	3
ENV	1100	Basic Biology	2	0	3	3
ENV	1110	Introduction to Ecology	2	0	3	3
MAT	1101	Vocational Math I	3	2	0	4
			13	4	6	17

SECOND QUARTER

ENG	1102	Vocational Communications	3	0	0	3
ENV	1102	Water Plant Operations	3	2	0	4
ENV	1104	Waste Plant Operations	3	2	0	4
ENV	1106	Environmental Microbiology	2	0	3	3
MAT	1102	Vocational Math II	3	2	0	4
			14	6	3	18

THIRD QUARTER

DFT	1180	Trade Drafting I	0	6	0	3
ENV	1101	Water Laboratory Control	2	0	6	4
ENV	1103	Waste Laboratory Control	2	0	6	4
ENV	1105	Maintenance	2	0	3	3
PSY	1101	Human Relations	3	0	0	3
			9	6	15	17

FOURTH QUARTER

ENV	1108	Control Systems	3	0	3	4
ENV	1109	Water and Waste Distribution	3	0	3	4
ENV	1111	Industrial Wastes	2	0	3	3
ENV	1180	Intermed. Plant Operations	2	0	6	4
___	___	Major Elective	___	___	___	3
						18

Total Required Credits.....70

WELDING V-050

The Welding curriculum gives students sound understanding of the principles, methods, techniques, and skills essential for successful employment in the welding field and metals industry. Welders join metals by applying intense heat and sometimes pressure to form a permanent bond between intersecting metals.

Welding offers employment in practically any industry; ship building, automotive, aircraft, guided missles, heavy equipment, railroads, construction, pipefitting, production shops, job shops, and many others.

Welding

			Class	Lab	Shop	Quarter Hours Credit
FIRST QUARTER						
WLD	1120	Oxyacetylene Welding & Cutting	3	0	12	7
	OR					
WLD	1120A	Oxyacetylene Welding & Cutting	2	0	6	4
	AND					
WLD	1120B	Oxyacetylene Welding & Cutting	1	0	6	3
MAT	1101	Vocational Mathematics I	3	2	0	4
DFT	1104	Blueprint Reading: Mechanical	1	2	0	2
MEC	1104	Structure of Metals	3	2	0	4
ENG	1101	Grammar	3	0	0	3
			13	6	12	20
SECOND QUARTER						
WLD	1121	Arc Welding	3	0	15	8
	OR					
WLD	1121A	Arc Welding	2	0	6	4
	AND					
WLD	1121B	Arc Welding	1	0	9	4
MAT	1103	Vocational Mathematics III	3	0	0	3
DFT	1117	Blueprint Reading: Welding	1	0	3	2
ELC	1180	Basic Electricity	3	0	0	3
ENG	1102	Vocational Communications	3	0	0	3
			13	0	18	19
THIRD QUARTER						
WLD	1123	Inert Gas Welding	1	0	3	2
WLD	1124	Pipe Welding	4	0	12	8
	OR					
WLD	1124A	Pipe Welding	2	0	6	4
	AND					
WLD	1124B	Pipe Welding	2	0	6	4
DFT	1118	Pattern Development & Layout	3	0	0	3
PSY	1106	Applied Psychology	3	0	0	3
			11	0	15	16
FOURTH QUARTER						
WLD	1112	Mechanical Testing and Inspection	1	2	3	3
WLD	1122	Commercial & Industrial Practice	2	0	9	5
WLD	1125	Certification Practices	3	0	6	5
MEC	1112	Machine Shop Proceases	1	0	6	3
			7	2	24	16

Total Required Credits. . . . 71

COURSE DESCRIPTIONS

ACC 120 **Accounting Principles I** 4 2 0 5

This course is an introduction to basic accounting principles and practices. Topics include journals and journal entries, the general ledger, work-sheets, statements, payroll systems, and voucher systems. Upon completion, students will be able to maintain a basic set of accounting records including payroll for a single proprietorship and pursue further accounting study. Prerequisites: None

ACC 121 **Accounting Principles II** 4 2 0 5

This course is an introduction to basic principles of internal control and partnership and corporate accounting procedures. Topics include receivables and payables, inventories, depreciation, partnerships and corporate capital transactions, and corporate investments. Upon completion, students will be able to do normal daily maintenance and year-end procedures on a set of books for any type of small business. Prerequisite: ACC 120

ACC 122 **Management Accounting** 4 2 0 5

This course is a survey of managerial accounting. Topics include statement of changes in financial position, cost accounting, budgets, standard costs, and financial analysis for decision making. Upon completion, students will be able to maintain a simple cost accounting system, perform financial analysis, and make management decisions based on their analysis. Prerequisite: ACC 121

ACC 139 **Governmental Accounting** 4 2 0 5

This course is a study of fund accounting for governmental units, colleges, hospitals, and other not-for-profit organizations. Topics include general and special fund procedures, enterprise funds, and fund group accounting. Upon completion, students will be able to record transactions using the fund accounting procedures of governmental units. Prerequisite: ACC 223 or BUS 150

ACC 221 **Intermediate Acct I** 5 0 0 5

This course includes a review of financial accounting functions and theory and a detailed study of the valuation and presentation of balance sheet current items. Topics include income statement and balance sheet, future and present value, cash, short-term investments, receivables, and inventories. Upon completion, students will be able to apply their understanding of the accounting standards related to these topics within private or public accounting settings. Prerequisite: ACC 121

ACC 222 **Intermediate Acct II** 5 0 0 5

This course includes in-depth studies of inventories, liabilities, long-term assets, stockholders' equity, and valuation procedures for balance sheet presentation. Topics include inventories, liabilities, income taxes, operational assets, stockholders' equity, and long-term investments in equity securities. Upon completion, students will be able to apply their understanding of the basics of these accounting methods and standards within private or public accounting settings. Prerequisite: ACC 221

ACC 223 **Intermediate Acct III** 5 0 0 5

This course includes concentrated studies of long-term debt, pensions, leases, revenue recognition, earnings per share, changes in financial position, and changing prices. Topics include long-term debt, pensions, leases, revenue recognition, earnings per share, changes in financial position, and changing prices. Upon completion, students will be able to apply their understanding of these accounting topics within public or private accounting settings. Prerequisite: ACC 222

ACC 224 **Advanced Accounting** 4 2 0 5

This course provides the student with an understanding of accounting theory, principles, and practices as they pertain to partnerships, consolidations, and governmental units. Emphasis is placed on accounting problems of partnerships, business combinations, accounting for investments, and general/special funds of governmental units. Upon completion, students will be able to apply their knowledge in the accomplishment of accounting tasks for larger business entities and governmental units. Prerequisite: ACC 223

ACC 225 **Cost Accounting** 4 2 0 5

This course covers the responsibilities of management and the procedures for three cost accounting systems. Topics include classification of costs, job order and process cost, and the use of standard cost procedures. Upon completion, students will be able to maintain a simple accounting system using any of the above cost accounting procedures. Prerequisite: ACC 122

ACC 227 **Managerial Accounting** 4 2 0 5

This course covers the use of accounting information for managerial planning, control, and decision making. Topics include budgeting, cost-volume-profit analysis, direct costing, and using standard cost data for decision making. Upon completion, students will be able to prepare budgets, analyze accounting data, and make recommendations based on that analysis. Prerequisite: ACC 225

ACC 229 Federal Income Tax 5 0 0 5

This course includes an overview of federal income taxes for individuals, partnerships, and corporations. Emphasis is placed on the application of Internal Revenue codes to preparation of tax returns for individuals, partnerships, and corporations. Upon completion, students will be able to complete federal tax returns for individuals, partnerships, and corporations. Prerequisite: ACC 121 or BUS 151

ACC 269 Auditing 5 0 0 5

This course includes an in-depth analysis of the philosophy and environment of auditing from practical and theoretical bases. Emphasis is placed on understanding and being able to re-state auditing standards and audit reports. Upon completion, students will be able to analyze audit cases by applying audit standards and write an audit report without assistance. Prerequisite: ACC 223

AGR 101 Farm Tractors I 1 0 3 2

This course covers farm tractors, including gas and diesel engines. Emphasis is placed on the electrical, fuel, lubrication, and cooling systems. Upon completion, students will be able to diagnose and make minor repairs and carry out maintenance procedures. Prerequisites: None

AGR 102 Farm Tractors II 1 0 3 2

This course is a continuation of Farm Tractors I which provides students with knowledge of farm tractors, including gas and diesel engines. Emphasis is placed on the power train, hydraulic systems, and brake systems. Upon completion, students will be able to diagnose problems and make minor repairs to the power train and hydraulic and brake systems. Prerequisite: AGR 101

AGR 108 Beef Cattle Production 2 0 0 2

This course covers the principles of selecting, feeding, breeding, and management of beef cattle. Emphasis is placed on cow-calf and feeder cattle operations. Upon completion, students will be able to evaluate and perform proper management practices with beef cattle. Prerequisites: None

AGR 112 Small Engine Repair 1 0 3 2

This course covers two- and four-cycle engines normally used on garden and lawn equipment. Emphasis is placed on preventive maintenance, trouble-shooting, and repairing small engines around the home and farm. Upon completion, students will be able to disassemble, dispense trouble, and perform simple maintenance on small engines. Prerequisites: None

AGR 114 Farm Electrification 2 0 0 2

This course covers the introduction to practical farm electric wiring and electrical activities that can be done by the individual. Emphasis is placed on the basic wiring techniques according to the electrical code and on practical activities. Upon completion, students will be able to do simple electrical wiring around the home and farm. Prerequisites: None

AGR 118 Feed Grain Crops 3 0 0 3

This course introduces the scientific methods and efficient production practices of corn, oats, barley, sorghum, and millet. Emphasis is placed on soils, cultivars, fertilization, cultivation, harvesting, and storage of small grain crops. Upon completion, students will be able to outline the proper produces and practices for efficient small grain production. Prerequisites: None

AGR 121 Weed Ident & Control 2 0 0 2

This course covers the identification and control of annual and perennial weeds of economic importance to North Carolina. Emphasis is placed on identification, methods used for elimination, and control of weeds. Upon completion, students will be able to identify and will have the basis for controlling weeds around the home and farm. Prerequisites: None

AGR 123 Farm Mach Repair & Maint 3 0 3 4

This course covers the proper care, service, and management of farm machinery. Emphasis is placed on a variety of machinery used on the farm and individual needs of the students. Upon completion, students will be able to do maintenance on, repair, and operate a variety of farm machinery. Prerequisites: None

AGR 124 Plant Reproduction 2 0 0 2

This course covers greenhouse and field plants using techniques that are accepted practices for propagation. Emphasis is placed on the different methods of propagation for crops on the farm and in greenhouse operations. Upon completion, students will be able to deal with the different methods of propagation and care of plants during growth. Prerequisites: None

AGR 126 Farm Forest Management 3 0 0 3

This course covers the fundamentals of forestry and forestry problems, including planting, trimming, and harvesting timber products. Emphasis is placed on the care and production of forestry products. Upon completion, students will be able to do maintenance jobs with trees, including pruning, fertilizing, and spraying. Prerequisites: None

AGR 127 Animal Nutrition 2 0 0 2

This course covers the composition of feeds, feed additives, and nutritional requirements of livestock. Emphasis is placed on feed formulations and nutritional requirements of monogastric and ruminant animals. Upon completion, students will be able to formulate feeds using the proper ingredients to provide a proper and balanced diet for livestock. Prerequisites: None

AGR 128 Farm & Home Construction 2 0 3 3

This course covers the fundamentals of farm building layout and selection of appropriately designed structures. Emphasis is placed on foundations, construction, pole-type structures, and fencing for farm use. Upon completion, students will be able to lay out, design, and construct farm buildings for general use. Prerequisites: None

AGR 131 Soybean Production 2 0 0 2

This course covers the study of crop characteristics, varieties, production practices, fertilizer, and pest control of soybeans. Emphasis is placed on cultural practices, spray techniques, and increasing the yield potential of soybeans. Upon completion, students will be able to put into practice the production and management aspects of soybean production. Prerequisites: None

AGR 133 Farm Water & Plumbing Sys 3 0 0 3

This course covers the water needs and means of waste disposal using water as a medium for sanitation. Emphasis is placed on planning and installing water systems and the proper care and maintenance of these systems. Upon completion, students will be able to apply the principles of providing water sources and will know how to use water effectively. Prerequisites: None

AGR 136 Agricultural Calculation 2 0 0 2

This course covers fundamental mathematical operations and their applications to farm problems and situations. Emphasis is placed on problems dealing with pricing, payroll, interest, discounts, commissions, and taxes. Upon completion, students will be able to use mathematical calculations to deal with farm problems. Prerequisites: None

AGR 137 Computer Use in Farm Mgmt 3 2 0 4

This course covers the development of skills and knowledge needed to use computers and software related to farm problems. Emphasis is placed on financing, recordkeeping, operations, production, enterprises, and taxes. Upon completion, students will be able to use a computer to deal with farm problems and to utilize techniques for improving farm enterprises. Prerequisites: None

AGR 143 Land Management Practices 3 0 3 4

This course covers the study of land management practices such as land measurement, land grading, and terracing. Emphasis is placed on the importance of proper management practices and methods for performing the functions of land management. Upon completion, students will be able to determine problem areas of the farm and practices that may be used to correct problems. Prerequisites: None

AGR 154 Swine Production 2 0 0 2

This course covers the scientific methods of selecting, breeding, feeding, and management of swine. Emphasis is placed on different methods of production, kinds of housing, and proper marketing of swine. Upon completion, students will be able to apply the principles of swine production and will be capable of managing a swine enterprise. Prerequisites: None

AGR 155 Plant Diseases 3 0 0 3

This course covers the nature and symptoms of diseases of crops and the characteristics, causal agents, identification, and control of diseases. Emphasis is placed on identifying symptoms and learning the disease organisms that attack plants. Upon completion, students will be able to identify plant diseases by using symptoms characteristics of certain pathogenes. Prerequisites: None

AGR 157 Sm Equip Oper Rep & Maint 1 4 0 3

This course covers repair of small engines, principles of operation, and maintenance of small gas powered equipment. Emphasis is placed on operations of types of small engines and attachments normally used in agriculture and horticulture. Upon completion, students will be able to disassemble and diagnose problems and repair and operate small equipment. Prerequisites: None

AGR 183 Poultry & Egg Production 3 0 0 3

This course covers various aspects of poultry production dealing with nutrition, marketing, and production. Emphasis is placed on care, marketing, and the nutritional requirements of laying flocks. Upon completion, students will be able to manage a poultry egg production operation effectively. Prerequisites: None

AGR 186 Soils & Fertilizers 5 0 0 5

This course covers soil types and the production capacity of different soil fertility levels. Emphasis is placed on the use of fertilizers, green manure crops, and proper care and maintenance of the soil. Upon completion, students will be able to apply the principles of soil conservation practices to improve fertility of soil. Prerequisites: None

AGR 190 Greenhouse Prod & Mgmt 3 2 0 4

This course covers bedding plants, house plants, vegetable plants, and crops produced in the greenhouse as a cash crop. Emphasis is placed on preparation of soil media, planting, fertilizing, watering, temperature, disease, and insect control. Upon completion, students will be able to operate the different areas of a greenhouse and produce greenhouse plants. Prerequisites: None

AGR 200 Chemical Pest Control 4 0 0 4

This course covers a study of pesticides: their formulations, ingredients, safety, and application methods used on the farm. (Night schedule only.) Emphasis is placed on safety, care, and methods of preparation and application of farm chemicals. Upon completion, students will be able to use farm chemicals and utilize proper precautions during the application of chemicals. Prerequisites: None

AGR 201 Agricultural Chemicals 5 2 0 6

This course covers a study of pesticides: their formulations, ingredients, safety, and application methods used on the farm. (Day schedule only.) Emphasis is placed on safety, care, and methods of preparation and application of farm chemicals. Upon completion, students will be able to understand the uses of farm chemicals and precautions that should be used during application. Prerequisites: None

AGR 208 Marketing Farm Products 3 0 0 3

This course covers the market structure of farm products including local, terminal, wholesale, and retail markets. Emphasis is placed on problems involved in the operation of marketing firms affecting grain, tobacco, and other farm products. Upon completion, students will be able to utilize the principles of marketing as applied to farm products for their individual needs. Prerequisites: None

AGR 213 Farm Enterprise Mgmt 4 0 0 4

This course covers the functions of manager production costs, length of production, and partial and complete budgeting of enterprises. Emphasis is placed on practices and development of skills in determining least cost and analysis of production to determine the most desirable enterprise. Upon completion, students will be able to distinguish between the different farm enterprises and determine the ones best fitted to a farm situation. Prerequisites: None

AGR 228 Stock Disease & Parasites 4 0 0 4

This course covers diseases and parasites of livestock and related sanitation practices and procedures. Emphasis is placed on the causes, symptoms, preventions, and treatment of diseases and parasites. Upon completion, students will be able to recognize disease symptoms and practice techniques of disease prevention. Prerequisites: None

AGR 238 Farm Mechanization 3 0 0 3

This course covers a study of farm machinery management, labor saving devices, and methods used in selecting and operating machinery. Emphasis is placed on the study and evaluation of feed grinders, mixers, storage facilities, harvesters, and material handling systems. Upon completion, students will be able to determine appropriate farm machinery for farming operations and provide maintenance for different farm machinery. Prerequisites: None

AGR 240 Fruit & Veg Production 4 0 0 4

This course covers the selection of fruit and vegetable enterprises as cash crops and includes cultivation, disease, and insect control of fruits and vegetables. Emphasis is placed on soil preparation, varieties, and marketing of cash crops. Upon completion, students will be able to identify different fruits and vegetables and apply recommended practices to production and harvesting. Prerequisites: None

AGR 243 Sources of Farm Income 2 0 0 2

This course covers the new areas of production that are not normally involved in the farming program. Emphasis is placed on different farm enterprises and how each enterprise can supplement the present farm income. Upon completion, students will be able to decide from the different enterprises the ones that may be appropriate for different circumstances. Prerequisites: None

AGR 245 Crop Insects 2 0 0 2

This course covers the common local crop insects: their identification, life cycles, and economic importance to farm enterprises. Emphasis is placed on the collecting and identifying of insects and on preparation of a tray consisting of the different insects. Upon completion, students will be able to identify the insects in different stages of growth and will become familiar with the control measures. Prerequisites: None

AGR 272 Tobacco Production 5 0 0 5

This course covers the production practices relevant to flue cured tobacco in North Carolina. Emphasis is placed on the tobacco plant and relevant practices: field production, cultivation, fertilizing, and harvesting. Upon completion, students will be able to identify tobacco production practices and will be familiar with necessary management skills. Prerequisites: None

AGR 274 Pasture & Forage Crops 5 0 0 5

This course covers the major economically important grasses and legumes utilized for pastures, hay, and silage. Emphasis is placed on establishing pastures in keeping with livestock needs and production of forage crops of high nutrient value. Upon completion, students will be able to establish pastures and use combinations of grasses for highest production. Prerequisites: None

AGR 296 Agri Programs & Agencies 3 0 0 3

This course covers the public agricultural programs and agencies that provide services, including financial aid. Emphasis is placed on the organization, objectives, functions, and services of these organizations. Upon completion, students will be able to identify the different public agricultural programs and agencies and determine how each applies to different situations. Prerequisites: None

AHR 101A Fundamentals of Refrigeration 3 0 3 4

This course introduces students to the fundamentals of refrigeration and to the hand tools used by refrigeration technicians. Emphasis is placed on terminology, principles of operation, the refrigerant cycle, and the safe use of tools. Upon completion, students will be able to explain the function of a compression refrigeration system, the pressure temperature relationship, and to safely use hand tools. Prerequisites: None

AHR 101B Fundamentals of Refrigeration 2 0 3 3

This course introduces students to the basic components of a refrigeration system and their operation. Emphasis is placed on components, materials and equipment, and the use of gauges, thermometers and electrical meters to evaluate systems. Upon completion, students will be able to transfer refrigerants to the system and evaluate the systems ability to move heat. Prerequisite: AHR 101A

AHR 101X Fund of Refrigeration 5 0 0 5

This course introduces the student to the fundamentals of basic refrigeration. Emphasis is placed on terminology, principles, systems, components, materials, equipment, and tools utilized in the trade today. Upon completion, students will be able to explain the function of a compression refrigeration system and to recognize all the major components therein. Prerequisites: None Corequisite: AHR 101Y

AHR 101Y AHR-101 Lab 0 0 6 2

This course introduces the student to the common hand tools required of a refrigeration technician when installations are made. Emphasis is placed on correct use of these tools with job proficiency and safety always the objective. Upon completion, students will be able to make flare joints, make soldered joints, transfer refrigerants to the systems, and explain pressure temperature relationships. Prerequisites: None Corequisite: AHR 101X

AHR 103X Commercial Refrig Systems 5 0 0 5

This course follows AHR 101 with greater depth and variety in the use of refrigeration theory and procedures. Emphasis is placed on commercial refrigeration systems with study devoted to low, medium, and high temperature installations. Upon completion, students will be able to install many of the common commercial units and to trouble-shoot them for solutions to mechanical and operational problems. Prerequisite: AHR 101 Corequisite: AHR 103Y

AHR 103Y AHR-103 Lab 0 0 6 2

This course provides more hands-on experience with the technician's tools and instruments applied to larger systems. Emphasis is placed on mastering the routine service and installation procedures made use of in the field. Upon completion, students will be able to diagnose problems and make necessary repairs in the areas of system leaks, component malfunction, and electrical controls. Prerequisite: AHR 101 Corequisite: AHR 103X

AHR 127 Equipment Applications 6 0 0 6

This course is designed to complement AHR 103 (Commercial Refrigeration). Emphasis is placed on commercial refrigeration equipment selection, location of system components, sizing pipe lines, and safety procedures. Upon completion, students will be able to calculate the heat load on small refrigeration boxes, use manufacturers' catalogs, and select equipment required. Prerequisite: AHR 103

AHR 135X Air Systems Fabrication I 1 0 0 1

This course provides training in air conditioning duct work, fitting, design, and layout. Emphasis is placed on determining the proper type fitting required for a given application and the layout procedure necessary to fabricate it. Upon completion, students will be able to lay out straight duct, elbows, offsets, transitions, Y joints, and all common air duct fittings. Prerequisites: None Corequisite: AHR 135Y

AHR 135Y AHR-135 Lab 0 2 0 1

This course provides hands-on training in the metal shop utilizing the proper tools and equipment for a particular sheet metal fitting. Emphasis is placed on the use of hand tools and shop equipment required to cut, form, and fabricate all common duct fittings. Upon completion, students will be able to lay out from a sketch on paper and to fabricate sheet metal elbows, offsets, transitions, and Y joints. Prerequisites: None Corequisite: AHR 135X

AHR 136X Air Systems Installation 2 0 0 2

This course is a follow-up course to AHR 135 providing additional practice with sheet metal duct and fittings. Emphasis is placed on learning and practicing the many installation procedures required to actually install a complete air distribution system. Upon completion, students will be able to make accurate sketches with all necessary views and dimensions of a given fitting required to build. Prerequisite: AHR 135 Corequisite: AHR 136Y

AHR 136Y AHR-136 Lab 0 0 3 1

This course devotes attention to field installations of various types of duct systems. Emphasis is placed on measuring, cutting, fitting, hanging, modifying, and adjusting all components of a system in the field. Upon completion, students will be able to remove an entire duct system from the shop and to install it as per plans and specifications.
Prerequisite: AHR 135 Corequisite: AHR 136X

AHR 145A Warm Air Systems I 3 0 3 4

This course introduces students to the fundamentals of warm air gas heat systems. Emphasis is place on terminology, principles of operations, theory, components, materials and equipment, and installation and service procedures. Upon completion, students will be able to explain the function of gas heat systems and to diagnose and repair mechanical and electrical problems.
Prerequisite: AHR 101 or AHR 103

AHR 145B Warm Air Systems I 2 0 3 3

This course introduces students to the fundamentals of warm air electric heat systems. Emphasis is placed on terminology, principles of operation, theory, components, materials and equipment, and installation and service procedures. Upon completion, students will be able to explain the function of electric heat systems and to diagnose and repair mechanical and electrical problems. Prerequisite: AHR 145A

AHR 145X Warm Air Systems I 5 0 0 5

This course introduces the student to the fundamentals of warm air heat. Emphasis is placed on terminology, principles, theory, components, materials, equipment, and tools utilized in the field today. Upon completion, students will be able to explain the function of a heating system and install and service those with gas and electric furnaces. Prerequisite: AHR 103
Corequisite: AHR 145Y

AHR 145Y AHR-145 Lab 0 0 6 2

This course provides hands-on practice with the components and controls of warm air systems. Emphasis is placed on installation and service procedures required of technicians involved with gas and electric equipment. Upon completion, students will be able to install gas and electric furnace systems and diagnose and repair mechanical and electrical problems.
Prerequisite: AHR 103 Corequisite: AHR 145X

AHR 146X Warm Air Systems II 5 0 0 5

This course is an extension of AHR 145 and introduces oil fired furnaces and air to air heat pumps. Emphasis is placed on the physical make-up of this equipment including controls and sequence of operation. Upon completion, students will be able to analyze operating difficulties with the use of special instruments and tools and suggest methods of repair.
Prerequisite: AHR 145 Corequisite: AHR 146Y

AHR 146Y AHR-146 Lab 0 2 0 1

This course provides hands-on training in installing and servicing oil furnaces and heat pumps. Emphasis is placed on setting equipment properly, running tubing in the most correct manner, and adjusting automatic controls. Upon completion, students will be able to install oil furnaces and heat pumps in the field and perform many trouble-shooting functions.
Prerequisite: AHR 145 Corequisite: AHR 146X

AHR 203X Principles of Air Cond 8 0 0 8

This course acquaints the student with comfort air conditioning, load calculations, types of units, refrigerating effects, and air flow principles. Emphasis is placed on associating certain equipment with certain building structures and duct system design procedure. Upon completion, students will be able to utilize the industry's manual and to accurately calculate the heat loss and gain of a building. Prerequisite: AHR 146 Corequisite: AHR 203Y

AHR 203Y AHR-203 Lab 0 0 3 1

This course provides practice with the use of air duct friction charts, refrigerant capacity charts, and heat load charts. Emphasis is placed on computing the actual work done by the air conditioning equipment and designing an air distribution system. Upon completion, students will be able to determine the heat being removed, the equipment required for a building, and the ducts needed. Prerequisite: AHR 146 Corequisite: AHR 203X

AHR 209X Air Cond System Design 4 0 0 4

This course acquaints the student with application engineering procedures used when designing small air conditioning systems. Emphasis is placed on heat loss and gain calculations using ACCA's Manual J and on duct system layout and sizing. Upon completion, students will be able to compute the heat gain and heat loss from a residential building and design a suitable system.
Prerequisite: AHR 203 Corequisite: AHR 209Y

AHR 209Y AHR-209 Lab 0 0 3 1

This course provides the student an opportunity to become familiar with engineering data and procedures. Emphasis is placed on using Manual J for load calculations and on the use of duct friction charts in designing a system. Upon completion, students will be able to follow the procedures outlined in Manual J to do a complete heat load and design an AC system.
Prerequisite: AHR 203 Corequisite: AHR 209X

AHR 210X Hydronic Systems 6 0 0 6

This course deals with hydronic systems, chill water, hot water, boilers, chiller system components, and piping designs. Emphasis is placed on the physical and mechanical make-up of the different systems used today and on the electric controls required. Upon completion, students will be able to identify, lay out, install, and trouble-shoot many of the smaller hot water and chilled water systems. Prerequisite: AHR 203 Corequisite: AHR 210Y

AHR 210Y AHR-210 Lab 0 0 3 1

This course provides hands-on training in erecting and installing small boilers, chillers, water towers, and piping systems. Emphasis is placed on proper use of tools and equipment necessary to install hydronic systems, water tower systems, boilers, and chillers. Upon completion, students will be able to install boilers, chillers, and piping systems as directed by engineering plans and specifications and to service same. Prerequisite: AHR 203
Corequisite: AHR 210X

AHR 216X Circuits and Controls 4 0 0 4

This course deals primarily with the electric controls that are so important to the required function of air conditioning systems. Emphasis is placed on both low and line voltage devices and the arrangement of same into automatically operating electric circuits. Upon completion, students will be able to specify certain controls for certain systems, make pictorial and schematic wiring diagrams, and test various circuits for proper operation.
Prerequisite: AHR 146 Corequisite: AHR 216Y

AHR 216Y AHR-216 Lab 0 0 3 1

This course provides hands-on experience mounting and arranging control components with specific machine functions as the objective. Emphasis is placed on recognizing the many different devices used in this industry and the purpose of each. Upon completion, students will be able to install electric controls on the appropriate equipment and adjust these controls for the required range and differential. Prerequisite: AHR 146
Corequisite: AHR 216X

AHR 217X Circuits and Controls II 3 0 0 3

This course continues with similar study to that of AHR 216, but with more involved and complicated circuitry. Emphasis is placed on the controls used in the larger commercial refrigeration, heating, and air conditioning systems. Upon completion, students will be able to design control systems for commercial installations and to make appropriate wiring diagrams for each. Prerequisite: AHR 216 Corequisite: AHR 217Y

AHR 217Y AHR-217 Lab 0 0 3 1

This course strengthens the students' capacity to use tools and instruments required when doing electric control work. Emphasis is placed on designing the necessary circuits, making the drawings, installing the controls, and trouble-shooting the systems. Upon completion, students will be able to read and comprehend many electrical control diagrams, make similar drawings themselves, and solve control problems. Prerequisite: AHR 216 Corequisite: AHR 217X

AHR 227 Estimating & Contracting 5 0 0 5

This course introduces the student to the many phases of estimating the cost of air conditioning jobs and conducting a mechanical contracting business. Emphasis is placed on reading mechanical blueprints and job specifications, taking off the material and equipment, and estimating labor costs. Upon completion, students will be able to do take-offs for small mechanical systems, assemble the costs of equipment, material, and labor, and determine job price. Prerequisite: AHR 146

AHR 256X Installation & Srvc Prob 4 0 0 4

This course provides review of procedures and practices the student has been acquainted with earlier in the program. Emphasis is placed on installation and service techniques utilized in the field of refrigeration, heating, and air conditioning equipment. Upon completion, students will be able to install equipment correctly and safely, diagnose and repair system malfunctions, and test for operating efficiency. Prerequisite: AHR 217 Corequisite: AHR 256Y

AHR 256Y AHR-256 Lab 0 0 3 1

This course provides more practice with tools, equipment, and instruments. Emphasis is placed on using the proper instrument to obtain desired results and using patience and skill when diagnosing problems. Upon completion, students will be able to make an informed assumption as to the underlying cause of erratic operation and make adjustments for correction. Prerequisite: AHR 217 Corequisite: AHR 256X

AHR 1120 Air Cond & Heating Maint 3 0 9 6

This course is designed to provide training in refrigeration, heating, and air conditioning as required in industrial maintenance. Emphasis is placed on fundamentals, system components, sequence of system operation, electricity, controls, and trouble-shooting. Upon completion, students will be able to diagnose mechanical and electrical malfunctions in mechanical systems and repair when possible or replace parts when necessary. Prerequisites: None

AHR 1120A Air Cond & Heating Maint 2 0 3 3

This course is designed to provide training in refrigeration, heating, and air conditioning as required in industrial maintenance. Emphasis is placed on terminology and theory of refrigeration and heating equipment and the components that make up various systems. Upon completion, students will be able to explain the function of a compression refrigeration unit, a convection heating system, and electric control circuits. Prerequisites: None

AHR 1120B Air Cond & Heating Maint 1 0 6 3

This course is a continuation of AHR 1120A and provides the student opportunity to apply theory and fundamentals. Emphasis is placed on the correct sequence of operation of a unit, diagnosing malfunctions, repairing, and replacing components. Upon completion, students will be able to trouble-shoot erratic systems, detect faulty operation, determine the responsible part, and repair same. Prerequisite: AHR 1120A

AIB 110 Teller Training 4 0 0 4

This course provides an overview of banking, teller operations, bank security, and customer relations and prepares the student for work as a bank teller. Topics include bank profitability, cash and cash handling, checks and other transactions, balancing and setting, and security threats and their detection. Upon completion, students will be able to discuss the components of teller performance and perform effectively as a teller after minimal on-the-job training. Prerequisites: None

AIB 123 Financial Bus Enterprises 4 0 0 4

This course consists of studies of the nature of financial management and analysis, investment decisions, and valuation from bankers' perspectives. Topics include analyzing financial statements and business plans, trends and ratio analysis, and evaluating sound business decisions. Upon completion, students will be able to interpret financial statements and analyze business plans and proposals. Prerequisite: BUS 150

AIB 202 Principles of Bank Oper 4 0 0 4

This course provides the foundation for many other banking courses and looks at all aspects of banking in an introduction to diversified services. Topics include the evolution of banking, customer relations, bank bookkeeping, bank investments, trust department operations, regulations, and examinations. Upon completion, students will be able to discuss many aspects of the banking industry and will have an adequate background for other banking courses. Prerequisites: None

AIB 203 Bank Investments 4 0 0 4

This course explains the nature of bank investments, factors influencing investment decisions, and the basic principles and strategies of investment account management. Topics include basic concepts of investment fundamentals and investment math, investment instruments, securities, markets, and investment portfolio management. Upon completion, students will be able to discuss bank investment portfolio management and achieve a beneficial, personal knowledge about investing. Prerequisites: None

AIB 204 Effective English 4 0 0 4

This course explains the need for effective communications skills; it provides an opportunity to practice principles of effective communication. Topics include principles and techniques of effective use of the English language. Upon completion, students will be able to communicate more effectively and present a better image of himself/herself and the banking industry. Prerequisites: None

AIB 205 Bank Management 4 0 0 4

This course introduces the formulation of management objectives and policies through a discussion of the bank's financial statement, resource management, cost and pricing, and organization. Topics include formulation, asset and liability management, sources and uses of funds, capital planning, and management. Upon completion, students will be able to explain bank organizations and the principles and development of bank management. Prerequisites: None

AIB 207 International Banking 4 0 0 4

This course presents international banking; it covers international agencies, foreign exchange activities, Edge Act corporations, and international lending and risk assessment. Topics include corresponding bank relationships, foreign exchange, the Eurodollar market, and developing international business. Upon completion, students will be able to discuss international banking, one of the fastest growing areas of banking business. Prerequisites: None

AIB 209 Consumer Lending 4 0 0 4

This course provides an overview of consumer credit operations and examines its role within banking operations. Topics include an overview of consumer credit, credit risks and policies, loan processing, servicing, collections, and marketing. Upon completion, students will be able to better understand the consumer credit functions and legal and regulatory issues affecting this vital area. Prerequisites: None

AIB 210 Money and Banking 4 0 0 4

This course takes an indepth look at money and the banking industry, instruments of monetary and fiscal policy, and trends in banking. Topics include money and economic activities, creation of money, bank operations, the Federal Reserve System, financial intermediaries, and banking regulations. Upon completion, students will be able to explain how the monetary economy functions. Prerequisites: None

AIB 211 Fed Regulation of Banking 4 0 0 4

This course offers a concise description of the nature and scope of the federal statutory and regulatory environment in which banking is conducted. Topics include bank regulating agencies, history of federal regulatory agencies, non-banking competition, and federal banking agencies' statistics. Upon completion, students will be able to explain banking regulations and the agencies that have administrative responsibilities over financial institutions. Prerequisites: None

AIB 212 Bank Cards 4 0 0 4

This course provides an overview on bank cards: their operational aspects, their interface with payments system, and their relationship to EFT technology. Topics include bank cards in the American economy, operations, payment and transfer system, competition, legal and regulatory issues. Upon completion, the student will be able to demonstrate an understanding of bank cards in the overall framework of the commercial bank's services and profitability. Prerequisites: None

AIB 213 Trust Function & Services 4 0 0 4

This course provides an overview of the trust department, the services it delivers, and the changing role of trust departments' responsibilities. Topics include assets and ownership, profitability and management issues, the various trust types, business development, and tax implication. Upon completion, students will be able to discuss trust department services and responsibilities and how these fit into the overall banking business. Prerequisites: None

AIB 214 Effective Speaking 4 0 0 4

This course provides an opportunity to study all phases of speech situations including organization and presentation of different topics in a banking context. Emphasis is placed on effective delivery of informative, persuasive, and argumentative presentations, highlighting speech material, production, functions, and situation. Upon completion, students will be able to be more comfortable presenting various ideas to their customers, fellow employees, and bank management personnel. Prerequisites: None

AIB 215 Mortgage Lending 4 0 0 4

This course covers all aspects of real estate financing and the various financial markets for real estate mortgages. Topics include conventional and government related real estate mortgages, contracts, financial markets, and qualifying the prospective loan customers. Upon completion, students will demonstrate a knowledge of real estate financing and the bankers responsibilities in these transactions. Prerequisites: None

AIB 216 Intro to Commercial Lend 4 0 0 4

This course explains the role of the commercial lending function within the banking industry and its importance in the total economy. Topics include those technical skills necessary for the successful commercial lender in today's competitive and complex environment. Upon completion, students will be able to explain the responsibilities of the commercial lending department and the loan officer. Prerequisites: None

AIB 217 Corporate Banking 4 0 0 4

This course provides a common sense approach to understanding the lending environment within banking and provides a foundation for sound lending practices. Emphasis is placed on the practical and technical aspects of corporate banking practices and the roles of the account officer. Upon completion, students will be able to discuss the functions and responsibilities of the corporate approach to lending and its importance to banking. Prerequisites: None

AIB 225 Home Mortgage Lending 4 0 0 4

This course concentrates on lending for purchase, covering underwriting processes, and consumer protection legislation, and offers an introduction to secondary money markets. Topics include real estate financing, real estate legislations, applications and processing, and lending policies. Upon completion, students will be able to apply the techniques and processes of mortgage lending. Prerequisites: None

AIB 233 Analyzing Financial Stmts 4 0 0 4

This course provides an opportunity for understanding financial statements and increases the ability to analyze and interpret them as a bank lender. Topics include the conceptual framework for analysis, basic analytical techniques, and practical case studies in an easy to understand format. Upon completion, students will be able to explain and interpret financial statements in order to make sound credit decisions. Prerequisite: BUS 150

AIB 239 Marketing for Banking 4 0 0 4

This course introduces marketing principles and fundamentals of market research and theory and their practical application to the banking industry. Topics include consumer motivation and buying behavior, marketing information and research, and public relations and communications. Upon completion, students will be able to discuss marketing concepts and practices and their contribution to the banking enterprise. Prerequisites: None

AIB 259 Law and Banking 4 0 0 4

This course provides an overview of the legal aspects of banking and the legal framework within which banks function. Topics include the court system, consumer protection, tangible and intangible property ownerships, and the legalities and regulations of bank transactions. Upon completion, students will be able to discuss the non-technical aspects of the legal system and how it affects the bank's organization and operation. Prerequisites: None

ARC 100 Sketching, Drawing, & Comp. 1 4 0 3

This course introduces free-hand sketching and drawing and the arrangement of design elements in a balanced composition. Emphasis is placed on developing a free-hand sketching style using pencils and felt tip pens. Upon completion, students will be able to exhibit basic sketching abilities using pencils and felt tip pens. Prerequisites: None

ARC 101 Arch Drafting & Dsgn I 2 0 6 4

This course introduces the student to the basic drawing systems of architectural drafting. Emphasis is placed on orthographic projection and axionometric and perspective drawings. Upon completion, students will be able to draw objects in orthographic projection and explain the basics of architectural perspective. Prerequisites: None

ARC 102 Arch Drafting & Dsgn II 2 0 6 4

This course is a continuation of ARC 101 and includes further development of orthographic drawing skills. Emphasis is placed on programming, design development drawing, and working drawing composition. Upon completion, students will be able to develop a program, layout design development drawings, and begin to layout working drawings. Prerequisite: ARC 101

ARC 103 Arch Drafting & Dsgn III 2 2 6 5

This course is a continuation of ARC 102 and includes further development of working drawings skills. Topics include working drawings, with emphasis on residential scale drawings. Upon completion, students will be able to develop a set of simple residential scale working drawings. Prerequisite: ARC 102

ARC 110 Intro to Architecture 2 0 3 3

This course is concerned with a morphological study of the essential elements of form and space as related to architectural design. Emphasis is placed on those principles that control the organization of form and space in an architectural context. Upon completion, students will be able to recognize concepts of form and space and to develop these into an architectural understanding of the built environment. Prerequisite: ARC 101

ARC 111 Materials & Methods I 2 2 3 4

This course is an introductory level course into the technical aspects of building materials and construction techniques. Topics include soils and basic building materials; field trips are taken to examine field construction methods and techniques. Upon completion, students will be able to discuss the basics of residential and small commercial building materials and construction techniques. Prerequisites: None

ARC 112 Materials & Methods II 3 4 0 5

This course is a continuation of ARC 111 and provides further development of building materials knowledge. Emphasis is placed on minor building materials, more complex construction techniques, and field trips. Upon completion, students will be able to explain construction techniques and materials and exhibit this understanding through design details.
Prerequisite: ARC 111

ARC 120 Codes/Specs/Contracts 2 2 0 3

This course provides the student with a basic understanding of N.C. Building Codes and their effect on contract documents and the design/contractual process. Topics include the N.C. Building Code, Residential Code, Zoning ordinances, organization of specifications, and contracts. Upon completion, students will be able to obtain information from the various codes, interpret the codes, and write an outline construction specification. Prerequisites: None

ARC 130 Architectural Estimating 3 4 0 5

This course covers several methods of architectural estimating. Topics include materials, equipment, and labor take-offs and an introduction to computer estimating. Upon completion, students will be able to do a quantity take-off of a building and determine the cost based on materials, equipment, and labor. Prerequisite: ARC 102 or employed in specialty

ARC 135 Intro to Computer Aided DFT 0 0 3 1

This course introduces the student to computer drafting and design. Topics include DOS, systems operations, and introduction to Versacad software. Upon completion, students will be able to save information on disk and draft basic drawings with the computer. Prerequisites: ARC 101 and 102

ARC 140 Computer Aided Drafting 2 4 0 4

This course introduces the student to the basics of computer-aided drafting and design. Topics include DOS, systems operation, disk initialization, CADD software, and other types of construction uses. Upon completion, students will be able to discuss the basics of a computer-aided drafting/design system and produce drawings using the system.
Prerequisite: ARC 102 or knowledge of drafting techniques and processes

ARC 140A Computer Aided Drafting 1 2 0 2

This course is an introduction to computer drafting and design. Topics include DOS, systems operation, and an introduction to VERSACAD software. Upon completion, students will be able to explain the basics of a computer-aided drafting/design system and will have basic knowledge of VERSACAD software.
Prerequisite: ARC 102 or knowledge of drafting techniques and processes

ARC 140B Computer Aided Drafting 1 2 0 2

This course is a continuation of ARC 140A and includes an introduction to AUTOCAD. Emphasis is placed on a skillful use of AUTOCAD software, plotting drawings, and other types of software. Upon completion, students will be able to apply the basics of a computer-aided drafting/design system and produce drawings using the system. Prerequisite: ARC 140A or Dept. Chrp. approval

ARC 201 Arch Drafting & Dsgn IV 2 2 6 5

This course is a continuation of ARC 103 and includes further development and refinement of working drawings skills. Topics include systems drafting and working drawings with emphasis on small commercial scale buildings. Upon completion, students will be able to develop a set of small commercial scale working drawings, part of which will be developed with CADD.
Prerequisites: ARC 103 and 140

ARC 202 Arch Drafting & Dsgn V 2 2 6 5

This course is a continuation of ARC 201 and includes further development of working drawings skills. Topics include systems drafting and working drawings with emphasis on larger commercial scale buildings. Upon completion, students will be able to develop a set of larger commercial scale working drawings, with partial drawings being developed with CADD.
Prerequisite: ARC 201

ARC 203 Arch Drafting & Dsgn VI 2 4 6 6

This course is a continuation of ARC 202 and includes refinement of working drawings skills. Topics include systems drafting with emphasis on the completion of a full set of working drawings. Upon completion, students will be able to develop a set of working drawings from design development concept sketches, with partial drawings being developed with CADD.
Prerequisite: ARC 202

ARC 210 Project Seminar 1 6 0 4

This course is advanced work to develop and complete a project in a specified area of architectural interest under the direction of Department Chairperson. Emphasis is placed on individual work methods within the field of construction or architecture. Upon completion, students will be able to demonstrate problem solving ability within an architectural/construction context. Prerequisites: ARC 202 and 140

ARC 211 Arch Presentations I 1 4 0 3

This course is an introduction to basic architectural presentation methods. Topics include use of colored pencils, markers, pen and ink, and reprographics in aspects of design development drawings. Upon completion, students will be able to produce design development presentation drawings using colored pencils, markers, and pen and ink. Prerequisite: ARC 103

ARC 212 Arch Presentations II 2 4 0 4

This course is a continuation of ARC 211 and includes further presentation skills development. Topics include pen and ink perspectives, pen and ink illustrations, and mixed media. Upon completion, students will be able to prepare pen and ink perspectives from working drawings and will have a basic skill level with mixed media. Prerequisite: ARC 211

ARC 220 Portfolio 1 4 0 3

This course is designed to prepare the graduating student for employment in the architectural/construction fields. Emphasis is placed on preparation of the student's portfolio and resume. Upon completion, students will be able to exhibit architectural/construction skills through visual skills of drawing and delineation. Prerequisites: ARC 202 and 212

ARC 221 Arch Environmental Sys I 1 2 3 3

This course introduces the student to the interrelationship of architecture, engineering, and environment. Topics include heating/cooling of a building, energy calculations, water distribution, and water systems. Upon completion, students will be able to calculate heat loss/gain and produce a plumbing riser diagram and will have an understanding of various environmental systems. Prerequisite: ARC 201

ARC 222 Arch Environment Sys II 1 2 3 3

This course is a continuation of ARC 221 and includes further development of mechanical systems knowledge. Topics include building electrical systems, lighting layout calculations, and air distribution systems. Upon completion, students will be able to lay out an electrical fixture layout drawing, calculate duct sizes, and lay out a standard duct system.
Prerequisite: ARC 221

ART 107 Watercolor I 1 2 0 2

This course provides an introduction to painting in transparent watercolor. Topics include tools, materials, stretching paper, varied painting techniques, and experiences in working from landscape, still life, and the figure. Upon completion, students will be able to apply their understanding of traditional techniques and methods as they continue to paint individually. Prerequisites: None

ART 221 Art Appreciation 5 0 0 5

This course provides a broad introduction to the visual arts and surveys painting, sculpture, and architecture from prehistoric times to the present. Emphasis is placed on major historical periods, styles, philosophies, and purposes; required slide lectures. Upon completion, students will be able to appreciate the relationships between art and man and discuss the various philosophies behind the development of style. Prerequisites: None

ART 231 Sculpture 5 0 0 5

This course provides an introduction to basic skills and techniques with emphasis on ceramic sculpture. Topics include shape, proportion, modeling, composition, carving, balance, light and shadow, and other aspects of three-dimensional form. Upon completion, students will be able to produce ceramic sculpture demonstrating a variety of surface treatments. Prerequisites: None

ART 241 Ceramics 5 0 0 5

This course is designed to introduce basic ceramic procedures and techniques. Topics include handbuilding, decoration, glazing, loading, and firing a kiln. Upon completion, students will be able to produce basic works in clay which may be both decorative and utilitarian. Prerequisites: None

ART 251 Pottery 5 0 0 5

This course provides an introduction to the use of the pottery wheel. Topics include wedging, centering, opening, pulling, trimming, slip stains, glazing, and types of kilns. Upon completion, students will be able to throw simple shapes and fire and glaze them. Prerequisites: None

AUT 101 Internal Comb Engines I 2 0 6 4

This course teaches the basic principles of the internal combustion engine. Topics include safety, use of measuring, hand tools, and principles of engine operation. Upon completion, students will be able to use measuring tools and hand tools and diagnose minor engine problems. Prerequisites: None

AUT 102 Internal Comb Engines II 2 0 6 4

This course, a continuation of AUT 101, provides the practical application of engine repairs. Topics include pistons, valves, and crankshafts. Upon completion, students will be able to recondition engines. Prerequisite: AUT 101

AUT 103 Electrical Systems I 2 0 6 4

This course provides the concepts of basic electricity and fundamentals of engine related electrical devices. Topics include how to make necessary repairs and service procedures of electrical devices. Upon completion, students will be able to trouble-shoot the procedures of the charging, ignition, and starting system. Prerequisites: None

AUT 104 Electrical Systems II 2 0 6 4

This course provides a thorough understanding of the operation and use of various test instruments, ohmmeters, voltmeters, ampmeters, and oscillioscopes. Topics include the basics of the function of the computer systems and methods of testing. Upon completion, students will be able to repair and service engine related electrical devices. Prerequisite: AUT 103

AUT 105 Auto Chassis & Suspen Sys 2 0 6 4

This course provides a thorough understanding of principles and functions of the components of automotive chassis and suspension systems. Topics include adjusting, repairing, and replacement of suspension and steering system components. Upon completion, students will be able to repair, service, and adjust suspension and steering systems. Prerequisite: AUT 101

AUT 106 Auto Power Train Sys I 2 0 6 4

This course provides a thorough understanding of the principles and functions of the automotive power train systems. Topics include clutches, transmissions, drive shaft assemblies, differentials, and transaxles. Upon completion, students will be able to perform the servicing and repair of automotive power train components. Prerequisite: AUT 101

AUT 107 Auto Power Train Sys II 2 0 6 4

This course covers the functions of and provides practical hands-on experience with adjustment and repair of suspension, steering, and brake systems. Topics include shock absorbers, springs, steering systems, steering linkage, wheel alignment, and braking systems. Upon completion, students will be able to service and repair suspension, steering, braking systems and do total wheel alignment. Prerequisite: AUT 106

AUT 108 Basic Auto Fuel Systems 2 0 6 4

This course covers principles of automotive fuel systems. Emphasis is placed on carburetors, fuel pumps, and intake systems. Upon completion, students will be able to disassemble and reassemble carburetors and make necessary repairs. Prerequisites: None

BUS 137 Advanced Micro Data Management 1 0 3 2

This course is a continuation of BUS 130. Topics include multi-dimensional and relational databases and advanced programming techniques. Upon completion, students will be able to develop complex databases and to construct programs to link and update multiple databases.
Prerequisite: BUS 130

BUS 138 Intro to Public Admin 3 0 0 3

This course includes an analysis of the role of the public administrator in government and an examination of the implementation of public policy. Topics include public personnel administration, decision making, public affairs, and budgetary functions within governmental agencies. Upon completion, students will be able to explain the role government plays in society and in the lives of people composing that society.
Prerequisites: None

BUS 139 Multidimensional Spreadsheets 1 0 3 2

This course is designed to teach multidimensional spreadsheet design and application. Emphasis is placed on linking and manipulating multiple spreadsheets. Upon completion, students will be able to design, implement and manipulate multidimensional spreadsheets. Prerequisite: BUS 128

BUS 150 Financial Accounting 4 2 0 5

This course is designed for non-accounting majors: it provides instruction in small business financial accounting relative to generally accepted accounting principles. Topics include basic principles of accounting, sales, cost of goods sold, special journals, payroll, and cash control. Upon completion, students will be able to utilize accounting statements and will know how the information they contain was generated.
Prerequisites: None

BUS 151 Management Accounting 4 2 0 5

This course covers accounting for inventories, operational assets and the use of accounting data for management planning, control and decision making. Topics include inventory valuation, operational assets and depreciation, cost accounting systems, budgeting, and analysis for decision making. Upon completion, students will be able to discuss inventory and operational asset valuation, the generation and use of cost information, budgeting and decision making processes. Prerequisite: BUS 150

BUS 183 Terminology & Vocab I 5 0 0 5

This course is designed to increase and improve the student's vocabulary and spelling ability for processing information with the business office. Emphasis is placed on business and professional vocabularies used in business and industry. Upon completion, students will be able to utilize and stimulate the development of a broad vocabulary for daily usage and future employment skills. Prerequisites: None

BUS 184 Terminology & Vocab II 5 0 0 5

This course is a continuation of the study to increase and improve the student's vocabulary and spelling ability for word processing. Emphasis is placed on a review of vocabulary and basic office concepts in preparation for employment testing. Upon completion, students will be able to improve their test-taking skills for employment in civil service, business, and industry.
Prerequisite: BUS 183

BUS 191 Keyboarding I 2 0 3 3

This course introduces the touch system of keyboarding on the typewriter and microcomputer. Topics include keyboard introduction, typing letters, memoranda, tables, and simple reports. Upon completion, students will be able to demonstrate the touch method of keyboarding by typing basic business correspondence on the typewriter and microcomputer. Prerequisites: None

BUS 192 Keyboarding II 2 0 3 3

This course develops speed and accuracy with further mastery of correct keyboarding techniques for all business, accounting, or paralegal students who have completed beginning typing. Emphasis is placed on typing letters, tabulations, manuscripts, and developing word processing skills on the microcomputer. Upon completion, students will be able to type mailable business correspondence on the typewriter and microcomputer.
Prerequisite: BUS 191 or Equivalent

BUS 193 Keyboard Skillbuilding 2 0 3 3

This course constitutes a complete speed-building and accuracy-development typing program using a scientific, individualized, diagnostic, prescriptive approach. Emphasis is placed on diagnostic tests to identify student's speed and accuracy problems with the utilization of corrective drills. Upon completion, students will be able to type rhythmically, improve proofreading skills, and develop typing techniques. Prerequisite: BUS 191 or BUS 192

BUS 204 Information Processing Applications II 4 0 3 5

This course provides instruction and hands-on experience on information processing equipment for general office and secretarial science students. Emphasis is placed on keyboarding letters, manuscripts, business forms, tabulations, and legal documents. Upon completion, students will be able to produce mailable copy using the microcomputer, the IBM Displaywriter, and electronic and electric typewriters. Prerequisite: BUS 211

BUS 205 Information Processing Applic III 2 0 3 3

This course teaches the student to set priorities and make formatting decisions necessary for producing mailable documents in a simulated office approach. Emphasis is placed on student's ability to make decisions, set priorities, and produce mailable documents on information processing equipment. Upon completion, students will be able to make wise decisions and produce attractive, mailable documents using information processing equipment. Prerequisite: BUS 204

BUS 206 Dict & Transcription II 3 2 0 4

This course is an advanced shorthand course designed to increase the student's dictation and transcription rate and word processing skills. Emphasis is placed on the transcription of mailable copy dictated at 50 to 60 wpm. Upon completion, students will be able to transcribe material dictated at 70 wpm for 5 minutes with 95 percent accuracy.
Prerequisites: BUS 105 and 107

BUS 207 Dict & Transcription III 3 2 0 4

This course is an advanced shorthand course designed to increase the student's dictation and transcription rate and word processing skills. Emphasis is placed on the transcription of mailable copy dictated at 60 to 70 wpm. Upon completion, students will be able to transcribe material dictated at 80 wpm for 5 minutes with 95 percent accuracy. Prerequisite: BUS 206

BUS 210 Info Processing Concepts 2 0 3 3

This course provides an overview of technologies associated with information processing and the impact of these technologies on the management of information. Emphasis is placed on information origination, document processing and storage, peripherals, records management, distribution, workstations, and career opportunities. Upon completion, students will be able to discuss the technologies associated with the information processing cycle and equipment, procedures, career opportunities, skills, and environment involved. Prerequisites: None

BUS 211 Information Processing Applic I 4 0 3 5

This course offers instruction on electronic typewriters, word processors, and mircocomputers. Emphasis in placed on hands-on experience utilizing word processing concepts in addition to a project involving reprographic methods and techniques. Upon completion, students will be able to manipulate information processing equipment to perform office tasks. Prerequisites: BUS 105 and 210

BUS 214 Secretarial Procedures 3 2 0 4

This course is designed to help the office assistant develop administrative and communication skills needed to become a more productive and valuable employee. Emphasis is placed on personality development and efficient work habits. Upon completion, students will be able to process office mail and use effectively postal, shipping, and telephone services and will understand the office environment. Prerequisite: BUS 211

BUS 228 Personal Income Taxes 3 0 0 3

This course includes an overview of federal income taxes for individuals. Emphasis is placed on the latest income tax information including changes legislated by Acts of 1981, 1983, 1984, 1985, and 1986. Upon completion, students will be able to prepare a federal individual income tax return based on Internal Revenue codes. Prerequisites: None

BUS 233 Personnel Management 3 0 0 3

This course provides an overview of the human resource manager's function. Topics include job analysis, selection, employee development, performance evaluation, labor relations, and wage and salary administration. Upon completion, students will be able to apply resource management principles to the manager's function. Prerequisites: None

BUS 234 Management 3 0 0 3

This course introduces students to the field of management and management practices. Topics include the origins of management, managerial functions of planning, organizing, leading, and controlling, influencing behavior, motivation, and communications. Upon completion, students will be able to identify different management practices and begin to form their own managerial style. Prerequisites: None

CHM 1101Y CHM-1101 Lab 0 2 0 1

This course is an introductory chemistry lab that supports the instruction of the concepts discussed in CHM 1101X. Emphasis is placed on safety and proper techniques as students perform selected experiments utilizing concrete examples of the CHM 1101X concepts. Upon completion, students will be able to apply the chemical concepts of water and wastewater analysis. Prerequisites: None Corequisite: CHM 1101X

CHM 90 Developmental Chem I 3 0 0 3

This course is an introductory chemistry course that discusses atomic structure, periodic classification, structure of compounds, inorganic nomenclature, and measurement. Emphasis is placed on atomic structure, the periodic table, chemical bonds, and nomenclature of acids, bases, and salts. Upon completion, students will be able to explain the structure of matter and how this affects some ordinary chemical reactions. Prerequisites: None Corequisite: Algebra

CHM 91X Developmental Chem II 3 0 0 3

This course is a continuation of CHM 90 with further study of chemical reactions. Emphasis is placed on chemical reactions, chemical equations, stoichiometry, gas laws, states of matter, and special properties of matter. Upon completion, students will be able to explain and apply their knowledge of chemical reactions and stoichiometry. Prerequisite: CHM 90 Corequisite: CHM 91Y

CHM 91Y CHM-91 Lab 0 2 0 1

This course is an introductory chemistry lab that supports the concepts discussed in CHM 91X. Emphasis is placed on safety and proper techniques as students perform selected experiments utilizing concrete examples of CHM 91X concepts. Upon completion, students will be able to apply the chemical concepts discussed in CHM 91X by observing concrete examples. Prerequisites: None Corequisite: CHM 91X

CHM 92X Developmental Chem III 3 0 0 3

This course is a continuation of CHM 91 with further study of chemical reactions and an introduction to organic chemistry. Emphasis is placed on solutions, acids, bases, salts, redox reactions, chemical equilibria, and organic nomenclature. Upon completion, students will be able to explain the factors that affect a chemical reaction and know how to name and identify certain organic compounds. Prerequisite: CHM 91 Corequisite: CHM 92Y

CHM 92Y CHM-92 Lab 0 2 0 1

This course is an introductory lab that supports the instructional material in CHM 92X. Emphasis is placed on scientific observations as students perform selected experiments utilizing concrete examples of CHM 92X concepts. Upon completion, students will be able to apply the chemical concepts discussed in CHM 92X by observing concrete examples. Prerequisite: CHM 91 Corequisite: CHM 92X

CIV 101 Surveying I 2 0 6 4

This course introduces the theory and practice of plane surveying and presents the basics associated with measuring angles and distances. Topics include care and use of instruments, taping, differential and profile leveling, transit, stadia, and transit-tape surveys. Upon completion, students will be able to apply the theory and practice of plane surveying to determine boundaries, areas, and volumes of land measurements. Prerequisites: None Corequisite: MAT 121 or 101

CIV 102 Surveying II 2 0 6 4

This course is a continuation of CIV 101 with advanced applications of the theory and practice of the principles of land surveying. Topics include triangulation of ordinary precision, use of plane table, topographic surveys, and mapping. Upon completion, students will be able to apply the theory and practice of plane surveying to more complicated and intricate land measurements. Prerequisite: CIV 101

CIV 103 Surveying III 2 0 6 4

This course covers the principles and techniques used in route surveying to determine the path of a continuing line. Topics include simple, compound, reverse, parabolic, and spiral curves as well as geometric design and layout of highway systems. Upon completion, students will be able to design and plan highway and utility line surveys and do cross-sections for layout and staking. Prerequisite: CIV 101

CIV 107 Civil Engr Computations 2 0 3 3

This course includes an introduction to microcomputers and computer software specifically geared to solving civil engineering problems. Emphasis is placed on practical application of civil engineering software by writing and using several problems to solve problems. Upon completion, students will be able to write simple programs as well as use complex software in the civil engineering field. Prerequisites: None

CIV 108 Hydraulics 4 0 3 5

This course includes an introduction to hydraulics and basic hydrology associated with civil engineering. Topics include precipitation and stream runoff, fluid statics and dynamics, flow measurement, pipe and open channel flow, and pump analysis. Upon completion, students will be able to perform basic analysis of hydrologic and hydraulic problems in the civil engineering field. Prerequisites: MAT 123 or 103 and PHY 102

CIV 110 Construction Methods 3 2 0 4

This course introduces construction planning and scheduling techniques and covers excavating methods and equipment used in building and highway construction. Topics include construction safety, operation analysis, project control and supervision, and costs and production of machinery. Upon completion, students will be able to apply the critical path methods for planning and scheduling and analyze the aspects of a construction operation. Prerequisites: None

CIV 112 Construction Estimates 2 0 6 4

This course presents the cost estimating aspects of material handling, earthwork, highways, pilings, concrete, interiors and exteriors, roofing, masonry, carpentry, plumbing, and electrical systems. Emphasis is placed on practical application by preparing a cost estimate using drawings of an actual construction project. Upon completion, students will be able to interpret drawings and specifications and to make cost estimates of construction projects. Prerequisites: MAT 122 or 102

CIV 114 Statics 5 0 0 5

This course presents an overview of basic principles (such as vectors, moments, and free-body diagrams) whereby internal (member forces within structures) may be determined. Topics include coplanar and noncoplanar systems, parallel and nonparallel forces, concurrent and nonconcurrent forces, and static and moving friction. Upon completion, students will be able to analyze simple structures and determine forces within internal members using free-body diagrams. Prerequisites: MAT 123 or 103

CIV 202 Properties of Soil 4 0 3 5

This course presents an overview of soil as a construction material using both analysis and testing procedures. Topics include index properties, classification, stress analysis, compressibility, compaction, dewatering, excavation, settlement, and foundations. Upon completion, students will be able to perform many basic soil tests and analyze engineering properties. Prerequisites: MAT 123 or 103 and PHY 101

CIV 204 Surveying IV 2 0 6 4

This course is a continuation of CIV 102 with advanced applications of electronic distance measuring devices and is designed to complete the series on surveying. Emphasis is placed on solar and stellar observations, study and application of state plane grid coordinate systems, and aerial surveys. Upon completion, students will be able to apply the principles of surveying to any situation involving the measurement and determination of points on the earth. Prerequisite: CIV 102

CIV 219 Strength of Materials 4 0 3 5

This course presents techniques used in the analysis and design of members within structures as well as structural testing. Topics include stress and strain, materials and their properties, joints, torsion, shear moment, deflection of beams, and beam design. Upon completion, students will be able to analyze the effect external forces have on the design of structural members such as trusses and beams. Prerequisite: CIV 114

CIV 221 Reinforced Concrete 5 0 0 5

This course is designed to familiarize the student with ultimate strength design techniques established by the American Concrete Institute. Emphasis is placed on analysis and design of reinforced concrete beams, joists, floor systems, walls, and columns. Upon completion, students will be able to design components of a building using reinforced concrete as a building material. Prerequisite: CIV 219

CIV 227 Subdivision Design 1 0 6 3

This course covers the planning aspects of a residential subdivision from analysis of owner requirements to plat layout and design. Emphasis is placed on street and lot layout, topographic platting, use of drafting equipment, and lettering techniques. Upon completion, students will be able to use the drafting machine and letter using Leroy equipment, interpret topographic fields notes, and prepare a subdivision plat. Prerequisite: CIV 107 Corequisite: CIV 271

CIV 229 Municipal Engineering 3 0 3 4

This course presents the basic engineering principles related to water supply and to the collection of storm and municipal waste water. Topics include quantity estimating, hydrology, groundwater, pipes and pipe flow, and design, construction, and maintenance of sewers. Upon completion, students will be able to design and make plan-profile drawings of water and sewer projects using appropriate engineering principles. Prerequisites: CIV 108 and 227

CIV 230 Dsgn of Roads & Pavement 3 0 3 4

This course presents an overview of street and highway design practices. Topics include driver, vehicle and traffic characteristics, highway capacity, sight distance, design of cross section and grade line, and drainage. Upon completion, students will be able to analyze traffic requirements, determine geometric design, and design drainage structures.
Prerequisites: CIV 103 and 202

CIV 231 Cement & Asphalt Concrete 3 0 3 4

This course covers the study and testing of the composition and properties of cement and asphalt concretes. Topics include cement, asphalt, admixtures, air entrainment, placing, curing, and standard control tests. Upon completion, students will be able to design and proportion cement concrete mixes and design and proportion asphalt concrete mixes.
Prerequisites: MAT 121 or 101

CIV 271 City & Regional Planning 3 0 0 3

This course presents and overview of the civil engineering aspects of urban planning. Topics include residential, commercial, and industrial land planning, community facilities planning, transportation planning, and capital improvements programs and financing. Upon completion, students will be able to better understand current urban and regional problems, as well as their role in the solution of these problems. Prerequistes: None
Corequisite: CIV 227

COE 101 Personal Develop & Comm 3 0 0 3

This course is designed to help the student develop good employability and communications skills in order to obtain and keep the desired job. Emphasis is placed on career planning, resume preparation, employment papers, selling oneself to the prospective employer, and interacting with people. Upon completion, students will be able to prepare a resume and demonstrate good interviewing and interpersonal relations skills.
Prerequisites: None

COE 111-124 Co-op Education Work Exper HRS ARR

This course is designed to enable qualified students to combine classroom learning with career-related work experience that is closely related to students' academic study. Emphasis is placed on parallel plans of school and work in business, industry, or government structured by measurable learning objectives. Upon completion, students will be able to locate permanent employment after graduation more readily because of their on-the-job work experience. Prerequisite: Completion of 6 credit hrs. (C-avg.)

COE 131-134 Co-op Education Work Exper HRS ARR

This course provides qualified students supervised work experience at automobile dealerships alternating quarters of school and work. Emphasis is placed on the application of specific automotive service and repair skills learned following each quarter of classroom instruction. Upon completion, students will possess extensive work experience as automotive service technicians facilitating employment after graduation. Prerequisites: Completion of prescribed quarterly classes.

COS 1101 Cosmetology Theory 3 0 0 3

This course introduces the student to the scientific study of skin and hair and methods of hair removal. Emphasis is placed on how the skin and hair are produced by the body and the layers and care of each. Upon completion, students will be able to describe the skin and hair and tell how the diet affects each. Prerequisites: None

COS 1102 Mannequin Practice 1 0 33 12

This course will enable the student to acquire a basic knowledge in hair styling, shaping, permanent waving, and scalp treatments. Emphasis is placed on demonstrating practical hairstyling skills along with shampooing, manicures, scalp treatments, and skin care. Upon completion, students will be able to set a basic hair style correctly, perform manicures, do a basic cut, wrap permanent waves, and give scalp treatments.
Prerequisite: Student must understand the basic theory in each area prior to performing services on patrons

COS 1103 Cosmetology Theory I 4 0 0 4

This course is designed to teach the basic theory of permanent waving, hair cutting, hair color, manicures, and facials. Emphasis is placed on the chemistry of permanent waves, hair color, manicures and facials, and cosmetics in relation to hair and skin chemistry. Upon completion, students will be able to explain the relation of hair and skin to the products used in perming, coloring, manicuring, and skin care. Prerequisite: COS 1101

COS 1104 Cosmetology Skills I 2 0 30 12

This course is a continuation and application of practical skills learned in COS 1102 along with advanced skills in permanent waving and hair color. Emphasis is placed on participation by the student on live models by performing permanent waves and hair color. Upon completion, students will be able to do a basic cut and set in several styles, give a professional facial and manicure, permanent wave, and virgin tint. Prerequisite: COS 1103

COS 1105 Cosmetology Theory II 3 0 0 3

This course is designed to provide theory in grooming, personal hygiene, and law and ethics pertaining to cosmetology. Topics include hair and disorders of the scalp and hair, hair cutting, hair styling, chemical relaxing, nail disorders, and cosmetology chemistry. Upon completion, students will be able to explain the basic principles in scalp and hair care and the chemistry of relaxers. Prerequisite: COS 1104

COS 1106 Cosmetology Skills II 1 0 33 12

This course is a continuation and application of practical skills learned in COS 1102 and COS 1104. Emphasis is placed on advanced techniques and professionalism. Upon completion, students will be able to master techniques learned and be able to relate to patrons in a professional manner.
Prerequisite: COS 1105

COS 1107 Adv Cosmetology Theory 4 0 0 4

This course is designed to introduce the student to the theory of superfluous hair removal, skin disorders, electricity and light therapy, and salon management. Emphasis is placed on reviewing theory in 1101, 1103, and 1105 and state board preparation. Upon completion, students will be able to explain their knowledge of hair removal, cells, skin, electricity, salon management, and can pass the state board exam.
Prerequisite: Students must have completed all required practical skills necessary to enter into 1107

COS 1108 Advanced Practice 1 0 24 9

This course is a continuation and application of practical skills learned in COS 1102, 1104, and 1106. Emphasis is placed on mastering techniques and professionalism. Upon completion, students will be able to perform any service related to cosmetology in a professional manner with patron satisfaction. Prerequisites: COS 1101-1107

DEN 109 Dental Computers 0 0 3 1

This course is designed to provide hands-on experience in the use of microcomputers as tools used in dental offices. Emphasis is placed on how to operate a microcomputer and use an integrated system of software applicable to dental offices. Upon completion, students will be able to utilize dental management software. Prerequisites: None

DEN 111X Dental Hygiene I 4 0 0 4

This course introduces the basic theories and techniques of instrumentation and oral prophylaxis. Topics include prevention of disease transmission and aspects of patient evaluation to include oral inspections, medical histories, and plaque control. Upon completion, students will be able to state the importance of equipment care, patient evaluation, and procedures leading to the oral prophylaxis. Prerequisites: None
Corequisite: DEN 111Y

DEN 111Y DEN-111 Lab 0 0 3 1

This course provides the student with an opportunity to perform clinical dental hygiene procedures discussed in DEN 111X. Emphasis is placed on gaining experience in preventing disease transmission and performing medical histories, oral inspections, and charting. Upon completion, students will be able to demonstrate their ability to perform specific clinical procedures.
Prerequisites: None Corequisite: DEN 111X

DEN 112 Dental Anat & Physiology 3 0 0 3

This course is a study of the anatomy of the oral cavity and individual teeth in the permanent and deciduous dentitions. Emphasis is placed on form, function, and identification of individual teeth. Upon completion, students will be able to apply this knowledge to clinical consideration as related to dental hygiene practice. Prerequisites: None

DEN 113 Histology 3 0 0 3

This course includes the study of the histological and embryonic development of the face and the hard and soft tissue of the oral cavity. Emphasis is placed on the development of the head and the composition and clinical importance of teeth and supporting structures. Upon completion, students will be able to explain the function of the various structures as they relate to oral pathology and clinical hygiene.
Prerequisites: BIO 106, DEN 112

DEN 116 Dental Emergency Care 2 0 0 2

This course is designed to prepare the dental hygienist student to render life supporting treatment in a medical and dental emergency. Emphasis is placed on the recognition of emergencies and on methods of prevention and treatment of emergencies. Upon completion, students will be able to recognize and render assistance during an office emergency and will also be CPR certified. Prerequisite: DEN 131

DEN 121X Dental Hygiene II 3 0 0 3

This course is a continuation of DEN 111 in which the students will expand their knowledge of patient care. Topics include principles of instrumentation, sharpening and polishing, and treatment of specific oral diseases. Upon completion, students will be able to explain the principles for performing the oral prophylaxis. Prerequisite: DEN 111
Corequisite: DEN 121Y

DEN 121Y DEN-121 Lab 0 0 6 2

This course is a continuation of DEN 111 in which the student will clinically perform instrumentation skills on manikins, partners, and patients. Emphasis is placed on probing, detecting calculus, removing calculus, and polishing. Upon completion, students will be able to demonstrate clinically their ability to remove hard and soft deposits from the teeth.
Prerequisite: DEN 111 Corequisite: DEN 121X

DEN 122 Head & Neck Anatomy 2 0 0 2

This course provides for a detailed study of the structures of the head and neck regions and their functions. Emphasis is placed on the musculature, bones, blood, nerve, and lymphatic systems. Upon completion, students will be able to identify the various systems and relate this knowledge to the clinical treatment of patients. Prerequisite: DEN 113

DEN 131X Dental Hygiene III 2 0 0 2

This course is a continuation of DEN 121 in which the students will learn how to deal with special patient needs. Emphasis is placed on the patient with diabetes, cardiovascular disease, blood disorders, physical and mental disorders, and hormonal imbalances. Upon completion, students will be able to discuss the needs of special patients and will know how to alter the dental treatment to meet those needs. Prerequisite: DEN 121
Corequisite: DEN 131Y

DEN 131Y DEN-131 Lab 0 0 9 3

This course introduces the student to actual patient care in which oral prophylaxis is performed. Emphasis is placed on providing experience and proficiency in instrumentation and patient treatment skills. Upon completion, students will be able to recognize dental hygiene needs of the patient and provide oral prophylaxis to a pre-established criteria.
Prerequisite: DEN 121 Corequisite: DEN 131X

DEN 133X Radiology 3 0 0 3

This course is designed to give the student didactic background in exposing, processing, and interpreting dental radiographs and in the history and purpose of roentgenology. Topics include radiation safety, exposing, processing, mounting, interpretation, and recognition of oral anatomy and abnormalities on radiographs. Upon completion, students will be able to apply this didactic knowledge during the clinical patient treatment phase of their dental hygiene training. Prerequisite: DEN 112 Corequisite: DEN 133Y

DEN 133Y DEN-133 Lab 0 0 3 1

This course provides the student with clinical experience in exposing, processing, mounting, and evaluating dental radiographs. Topics include radiation safety, darkroom procedures, and manikin and patient practice in exposing, processing, mounting, and interpreting radiographs. Upon completion, students will be able to expose and process patient radiographs with concern for patient safety and correct darkroom procedures.
Prerequisite: DEN 112 Corequisite: DEN 133X

DEN 141 Dental Hygiene IV 1 0 6 3

This course introduces advanced theories and practice in patient care and enables the student to continue application of knowledge learned in previous quarters. Topics include total patient care, utilization of ultrasonic scalers, phase-contrast microscopes, and the PDR. Upon completion, students will be able to apply knowledge and skills learned thus far for the rendering of competent clinical dental hygiene services. Prerequisite: DEN 131

DEN 211X Dental Hygiene V 1 0 0 1

This course is a continuation of DEN 141 in developing the theories and practices of patient care. Topics include clinical procedures, expanded dental procedures, patient education, and use of the prophy jet. Upon completion, students will be able to demonstrate their knowledge in a clinical environment to a pre-established criteria. Prerequisite: DEN 141
Corequisite: DEN 211Y

DEN 211Y DEN-211 Lab 0 0 12 4

This course is a continuation of opportunities to apply knowledge and to develop competency for the rendering of clinical hygiene and supportive procedures. Emphasis is placed on the development of competency and proficiency for rendering clinical hygiene services. Upon completion, students will be able to perform an oral prophalaxis, radiographs, and other expanded dental procedures effectively and in accordance with a pre-established criteria. Prerequisite: DEN 141 Corequisite: DEN 211X

DEN 212X Community Dental Health 3 0 0 3

This course introduces the student to methods used to determine community dental health status and preventive measures used to improve dental health of the population. Topics include epidemiological indices, research evaluation, biostatistics introduction, and fluoridation and other preventive dental measures. Upon completion, students will be able to apply this didactic knowledge to plan and implement dental health programs and to evaluate scientific reports. Prerequisite: DEN 215 Corequisite: DEN 212Y

DEN 212Y DEN-212 Lab 0 0 3 1

This course is designed to give the student the opportunity to participate in community dental health activities. Emphasis is placed on conducting oral health screenings and dental health education programs for geriatrics, children, and disabled people. Upon completion, students will be able to plan and implement a dental health education program to fit the needs of a specific population. Prerequisite: DEN 215 Corequisite: DEN 212X

DEN 213 General & Oral Pathology 6 0 0 6

This course, a continuation of DEN 214, provides a general knowledge of oral pathological manifestations associated with selected systematic and oral diseases. Topics include developmental and degenerative diseases, selected microbial diseases, specific and nonspecific, immune and inflammatory responses, and emphasizing growth and tumor screening. Upon completion, students will be able to differentiate between normal and abnormal tissues, enabling the hygienist to refer unusual findings to the doctor for diagnosis. Prerequisites: DEN 214, BIO 108 and 110

DEN 214 Periodontology 3 0 0 3

This course includes a review of the basic histology, anatomy, and physiology of the jaws and periodontium and a basic introduction to oral pathology. Topics include periodontal disease etiologies and tissue responses, emphasizing periodontal inflammatory and immune reactions, and preventive and treatment methods. Upon completion, students will be able to apply this didactic knowledge during the clinical patient education and treatment phase of their dental hygiene training. Prerequisites: DEN 112, BIO 110

DEN 215 Dental Health Education 3 0 0 3

This course prepares the students to be dental health educators, both in private practice and community dental health programs. Topics include motivation and teaching methods, use of media, writing lesson plans, and nutritional counseling concepts and techniques. Upon completion, students will be able to prepare and present a dental lesson plan and perform nutritional counseling with a patient.
Prerequisites: DEN 211 and 214, NUT 101

DEN 221 Dental Hygiene VI 1 0 15 6

This course is a continuation of DEN 211 and provides opportunities to apply knowledge and develop competency for rendering clinical hygiene and supportive procedures. Emphasis is placed on oral prophalaxis, polishing amalgams, study models, radiographs, and diet analysis. Upon completion, students will be able to perform clinical procedures and expanded dental procedures effectively in accordance with pre-established criteria.
Prerequisite: DEN 211

DEN 222X Dental Materials 3 0 0 3

This course introduces the physical properties and sources of various materials used in dentistry. Topics include gypsum, hydrocolloids, cements, amalgams, gold investments, and dental resins. Upon completion, students will be able to explain the relationship of dental materials to the practice of dental hygiene. Prerequisites: DEN 112 and 122 Corequisite: DEN 222Y

DEN 222Y DEN-222 Lab 0 0 3 1

This course is designed to provide the student with skills in manipulating various materials used in dentistry. Emphasis is placed on taking and pouring impressions, polishing amalgams, and mixing different types of cements. Upon completion, students will be able to manipulate competently various materials used in routine dental office procedures.
Prerequisites: DEN 112 and 122 Corequisite: DEN 222X

DEN 223 Pharm & Anesthesiology 3 0 0 3

This course provides basic drug terminology, the general principles of drug actions, dosages, routes of administration, adverse reactions, and basic principles of anesthesiology. Topics include drugs commonly used in dentistry and the general uses of over-the-counter and prescribed drugs for patients. Upon completion, students will be able to recognize that each patient's general health or drug usage may require modification of the treatment procedures. Prerequisites: DEN 213, BIO 110

DEN 224 Office Management 1 0 0 1

This course introduces the student to general dental office management procedures. Topics include appointment and inventory control, telephone communication, recall systems, and correspondence for the dental office. Upon completion, students will be able to manage office correspondence, telephone communication, make appointments, and establish a recall system effectively in a dental office. Prerequisite: DEN 211

DEN 225X Chairside Assisting 1 0 0 1

This course is designed to provide the dental hygiene student with knowledge concerning four-handed dentistry. Topics include operative dentistry, anesthesia, and instrument transfer. Upon completion, students will be able to discuss a variety of chairside procedures.
Prerequisite: DEN 222 Corequisite: DEN 225Y

DEN 225Y DEN-225 Lab 0 0 3 1

This course provides laboratory and clinic sessions to allow sufficient practice in a variety of chairside assisting procedures. Topics include operative instruments, oral evacuation, anesthesia, rubber dam, and surgical instruments. Upon completion, students will be able to assist in operative dental procedures. Prerequisite: DEN 222 Corequisite: DEN 225X

DEN 231X Dental Hygiene VII 1 0 0 1

This course is a continuation of DEN 221X in developing the theories and practices of patient care. Emphasis is placed on the mastery of the dental hygiene clinical tasks and development of a patient case presentation. Upon completion, students will be able to demonstrate their mastery of clinical procedures and present an oral presentation of a case patient.
Prerequisite: DEN 212X Corequisite: DEN 231Y

DEN 231Y DEN-231 Lab 0 0 15 5

This course is a continuation of DEN 221 and provides opportunities to apply knowledge and develop competency for rendering clinical hygiene and supportive procedures. Emphasis is placed on performing oral prophylaxis, radiographs, expanded functions, and the development of a comprehensive patient treatment plan. Upon completion, students will be able to perform effectively oral prophalaxis and other expanded dental procedures in accordance with pre-established criteria. Prerequisite: DEN 221
Corequisite: DEN 231X

DEN 232 Ethics & Jurisprudence 2 0 0 2

This course provides the student with knowledge of professional ethics, laws, and regulations relating to the practice of dentistry and dental hygiene. Topics include the code of ethics, philosophies of ethics, professional liability, and North Carolina dental laws. Upon completion, students will be able to demonstrate their ability to practice dental hygiene within established ethics and state laws. Prerequisite: DEN 221

DEN 233 Dental Specialties 2 0 0 2

This course provides the student with the opportunity to explore the scope of dental specialties and utilization of the dental hygienist in specialty practices. Topics include endodontics, oral surgery, pediatric dentistry, periodontics, geriatric dentistry, orthodontics, and restorative dentistry. Upon completion, students will be able to recognize specialized dental problems in each specialty area of dentistry and the treatment involved for such problems. Prerequisite: DEN 221

DEN 1002X Dental Materials I 2 0 0 2

This course covers various types of dental materials commonly used in the dental office. Topics include amalgam, composite, cements, and impression materials. Upon completion, students will be able to discuss the properties and characteristics of these materials. Prerequisites: None
Corequisite: DEN 1002Y

DEN 1002Y DEN-1002 Lab 0 0 3 1

This course provides the opportunity for the student to develop skills in manipulating various types of materials used in the dental office. Emphasis is placed on mixing and storing various dental cements, medicaments, restorative, and impression materials. Upon completion, students will be able to select and manipulate these various materials. Prerequisites: None
Corequisite: DEN 1002X

DEN 1004 Dental Anatomy 4 0 0 4

This course covers all areas of dental and head and neck anatomy. Topics include structures of the mouth, tooth morphology, eruption dates, and histology. Upon completion, students will be able to identify the teeth and parts of the head and neck. Prerequisites: None

DEN 1011X Clinical Procedures I 2 0 0 2

This course introduces the student to the dental assisting profession and basic procedures that are performed in the modern dental office. Topics include the history of dentistry, the dental team, ethics and jurisprudence, dental equipment, and sterilization. Upon completion, students will be able to discuss dental equipment, sterilization, history, and laws of dentistry.
Prerequisites: None Corequisite: DEN 1011Y

DEN 1011Y DEN-1011 Lab 0 2 0 1

This course provides laboratory sessions to prepare the student to assist the dentist in basic chairside and supportive procedures. Emphasis is placed on operation of the dental unit, operator positions, sterilization, and aseptic techniques. Upon completion, students will be able to operate various dental units and equipment and perform various sterilization and aseptic techniques. Prerequisites: None Corequisite: DEN 1011X

DEN 1012X Dental Materials II 2 0 0 2

This course is a continuation of DEN 1002 which covers dental laboratory materials. Topics include waxes, resins, and gypsum. Upon completion, students will be able to discuss the properties and characteristics of each material. Prerequisite: DEN 1002 Corequisite: DEN 1012Y

DEN 1012Y DEN-1012 Lab 0 0 3 1

This course is a continuation of the development of skills necessary to manipulate various types of materials used in the dental office. Emphasis is placed on techniques for taking study model impressions, manipulating dental stone, acrylic materials, and various dental waxes. Upon completion, students will be able to take study model impressions, construct them in stone, and use various acrylics and dental wax correctly. Prerequisite: DEN 1002 Corequisite: DEN 1012X

DEN 1014X Dental Roentgenology 2 0 0 2

This course is designed to provide the dental assisting student a comprehensive view of the principles of radiology as they apply to dentistry. Topics include radiation production, patient and operator safety, exposure, darkroom techniques, characteristics of film, and radiographic anatomy. Upon completion, students will be able to expose and process dental radiographs, select film, evaluate radiographs, and practice radiation safety. Prerequisite: DEN 1004 Corequisite: DEN 1014Y

DEN 1014Y DEN-1014 Lab 0 6 0 3

This course provides the student the opportunity to apply the exposing, processing, mounting, and evaluating techniques of dental radiography. Emphasis is placed on exposure and darkroom techniques, film selection, care and operation of equipment, patient management, and the practice of radiation safety. Upon completion, students will be able to expose, process, mount, and evaluate intraoral and extraoral radiographs. Prerequisite: DEN 1004 Corequisite: DEN 1014X

DEN 1015 Pharmacology 2 0 0 2

This course provides a basic survey of pharmacology. Emphasis is placed on commonly used drugs, drug classifications, and drug administration. Upon completion, students will be able to list commonly used drugs and their indications. Prerequisite: BIO 1005

DEN 1021X Clinical Procedures II 3 0 0 3

This course is a continuation of DEN 1011 and is designed to teach four-handed dentistry techniques and procedures. Topics include dental instruments, anesthesia, chairside assisting, operative dentistry, and selected expanded functions legal in North Carolina. Upon completion, students will be able to discuss a variety of chairside assisting procedures. Prerequisite: DEN 1011 Corequisite: DEN 1021Y

DEN 1021Y DEN-1021 Lab 0 6 0 3

This course provides laboratory instruction in four-handed dentistry techniques and procedures. Emphasis is placed on instruction in and practice with dental instruments, anesthesia, chairside assistance, operative dentistry, and selected expanded functions. Upon completion, students will be able to demonstrate proficiency in a variety of chairside assisting procedures. Prerequisite: DEN 1011 Corequisite: DEN 1021X

DEN 1023X Oral Health Education 2 0 0 2

This course covers the study of preventive dentistry to prepare dental assisting students for the role of dental health educator. Topics include community dental health, oral hygiene techniques, and the function of fluoride and nutrition in oral health. Upon completion, students will be able to function as a preventive assistant in the private dental practice or in the public health setting. Prerequisite: DEN 1004 Corequisite: DEN 1023Y

DEN 1023Y DEN-1023 Lab 0 0 3 1

This course provides the opportunity to practice the principles of dental health education and various preventive techniques performed by the dental assistant. Emphasis is placed on proper oral hygiene techniques, patient motivation, nutritional counseling, and application of fluorides. Upon completion, students will be able to provide dental health to individuals or to a group, apply topical fluorides, and occlusal sealants. Prerequisite: DEN 1004 Corequisite: DEN 1023X

DEN 1025 Oral Pathology 2 0 0 2

This course covers basic principles of general and oral pathology. Emphasis is placed on pathological conditions, causes, and treatment. Upon completion, students will be able to identify specific pathology and causes and treatment of pathologic conditions found in the oral cavity.
Prerequisites: DEN 1004 and BIO 1005

DEN 1026X Dental Office Emergencies 1 0 0 1

This course is designed to prepare the student to function as an effective member of the dental team in treating medical and dental emergencies. Topics include the signs, symptoms, treatment and prevention of a variety of emergencies, vital signs, and the emergency routine. Upon completion, students will be able to recognize, treat, and prevent a variety of emergencies that may occur in the dental office.
Prerequisites: BIO 1005 and DEN 1015 Corequisite: DEN 1026Y

DEN 1026Y DEN-1026 Lab 0 2 0 1

This course includes role playing and group exercise to simulate actual dental office emergencies and provide the opportunity to demonstrate control of the emergency. Emphasis is placed on the practice of monitoring vital signs, the emergency routine, CPR, and other basic life support measures. Upon completion, students will be able to administer CPR, other life support measures, and recognize and treat other common medical and dental emergencies.
Prerequisites: BIO 1005 and DEN 1015 Corequisite: DEN 1026X

DEN 1031 Dental Office Practice I 1 0 21 8

This course is designed to provide the student with practice in a dental office or clinic. Emphasis is placed on chairside assisting, radiology, support procedures, and business office management. Upon completion, students will be able to utilize classroom theory and laboratory skills in a dental office or clinic. Prerequisites: DEN 1012, 1014, 1021, 1023, and 1034

DEN 1032 Dental Office Management 4 0 0 4

This course provides the student with the basic skills and techniques necessary to function as a receptionist/office manager in a dental office. Emphasis is placed on appointment control, payment plans, insurance forms, collections, inventory control, purchasing, and disbursements. Upon completion, students will be able to make appointments, prepare insurance forms, handle collections and disbursements, and control inventory.
Prerequisites: None

DEN 1033 Professional Development 1 0 0 1

This course covers the profession of dentistry in general and dental assisting in particular. Topics include professional organizations, career opportunities, and preparation for job-seeking. Upon completion, students will be able to list dental professional organizations and prepare for a job interview. Prerequisites: None

DEN 1034X Clinical Procedures III 4 0 0 4

This course is a continuation of DEN 1021 and is designed to give students didactic information concerning each of the dental specialties. Emphasis is placed on particular procedures and the dental assistant's role in each specialty. Upon completion, students will be able to discuss each dental specialty. Prerequisites: DEN 1011 and 1021 Corequisite: DEN 1034Y

DEN 1034Y DEN-1034 Lab 0 4 3 3

This course provides laboratory and clinical instruction concerning each of the dental specialties. Emphasis is placed on instruction in and practice with instruments and procedures involved in specialties. Upon completion, students will be able to prove proficiency in a variety of specialty procedures and instrumentations. Prerequisites: DEN 1011 and 1021
Corequisite: DEN 1034X

DEN 1041 Dental Office Practice II 1 0 18 7

This course is a continuation of DEN 1031, providing additional practice in a dental office or clinic. Emphasis is placed on speed and proficiency of previously acquired skills. Upon completion, students will be able to utilize classroom theory and laboratory skills in a dental office or clinic.
Prerequisite: DEN 1031

DFT 101 Technical Drafting I 0 6 0 3

This course provides a study of drawing principles and practices for describing objects in the graphic language through visualization and preparation of working drawings. Emphasis is placed on orthographic instrument drawing; isometrics, sections, auxiliaries, and space problems involving points, lines, and planes are introduced. Upon completion, students will be able to visualize, analyze, and prepare complete and accurate technical drawings. Prerequisites: None

DFT 102 Technical Drafting II 0 6 0 3

This course introduces drawing the parts for drill jig and mill fixture. Emphasis is placed on the workings of the drill jig and mill fixture. Upon completion, students will be able to understand the basic drawing of the drill jig and mill fixture. Prerequisite: DFT 101

DFT 111 Const & Structural Draft 0 6 0 3

This course introduces the student to the methods and techniques used in drawing plans used in a civil engineering application. Emphasis is placed on interpretation of field notes into formal drawings, basic site planning, and reinforced concrete and steel structural details. Upon completion, students will be able to prepare and review drawings that are used in engineering and the construction industry. Prerequisite: DFT 101

DFT 161 Computer Aided Drafting I 0 0 3 1

This course introduces basic computer drafting techniques used in the mechanical drafting industry. Topics include the development of computer graphics, the components and operation of a computer, and the methods of program execution. Upon completion, students will be able to name the components of a computer and complete a mechanical drawing. Prerequisites: None

DFT 162 Computer Aided Drafting II 0 0 3 1

This course is a continuation of DFT 1161 with emphasis on the use of the more advanced computer functions. Emphasis is placed on layout of detailed working drawings, sectioning of drawings, and use of the plotter. Upon completion, students will be able to construct and dimension a detailed working drawing and produce a copy of the drawing on the plotter. Prerequisite: DFT 1161

DFT 212 Jig & Fixture Design 2 4 0 4

This course is designed to acquaint the student with the working components, commercial standards, principles, practices, and tools of jig and fixture design. Emphasis is placed on individual project and design work to acquaint students with the types of jig and fixtures and their design. Upon completion, students will be able to understand the principles that apply to jig and fixture design. Prerequisite: MEC 154

DFT 1101 Schematics & Diagrams 1 0 3 2

This course covers interpretation and reading of blueprints, schematics, and technical diagrams. Topics include information on the basic principles of the blueprint: lines, views, dimensioning procedures, and notes. Upon completion, students will be able to interpret shape and size description as well as notes and specifications from working drawings. Prerequisites: None

DFT 1104 BPrint Read: Mechanical 1 2 0 2

This course includes the interpretation and reading of blueprints, lines, views, dimensioning procedures, and the use of welding tools. Emphasis is placed on basic mechanical drawings and value of using blueprint language for welding, fabricating, and cutting processes. Upon completion, students will be able to develop usable drawings with accuracy and fabricate or build assemblages from these drawings. Prerequisites: None

DFT 1110 BPrint Read: Bldg Trades 1 2 0 2

This course includes principles of interpreting blueprints and technical terms common to the building trades. Topics include reading details for foundations, floor plans, elevations, doors, and windows. Upon completion, students will be able to read and interpret a set of residential working drawings. Prerequisites: None

DFT 1111 BPrint Read & Sketching 1 2 0 2

This course covers principles of interpreting blueprints and specifications of both residential and light commercial structures. Topics include practice in reading details for foundations, floor plans, elevations, millwork, and related construction plans. Upon completion, students will be able to read and interpret both residential and commercial blueprints. Prerequisite: DFT 1110 or equiv.

DFT 1113 BPrint Read Electrical 1 2 0 2

This course is a study of the interpretation of blueprints and plans for electrical installation, with emphasis on the National Electric Code. Topics include schematics, diagrams, and electrical plans for domestic and commercial buildings, with emphasis on the National Electric Code. Upon completion, students will be able to make a list of materials and estimate cost of job from plans. Prerequisites: None

DFT 1115 BPrint Read: Plumbing 1 2 0 2

This course includes both interpretation of blueprints and actual drawing with instruments of both orthographic and pictorial drawings of complete plumbing layouts. Topics include drawing plumbing plans for domestic and commercial buildings; piping symbols, diagrams, and notes are studied in detail. Upon completion, students will be able to read complete plumbing plans and isometric pictorials of domestic and commercial piping. Prerequisite: DFT 1110

DFT 1117 BPrint Read: Welding 1 0 3 2

This course includes experience in the drawing of actual working drawings for the shop. Topics include lettering, geometric constructions, projection theory, and practice in visualization; accuracy and dimensioning are also stressed. Upon completion, students will be able to draw working drawings for the shop or others. Prerequisite: DFT 1104 or equiv.

DFT 1118 Pattern Devel & Layout 3 0 0 3

This course provides instruction to welders in drawing views and pattern stretchouts for pipe intersections. Emphasis is placed on drawing exact, precision measured patterns and stretchouts using intersections and development theory. Upon completion, students will be able to draw patterns and templates for pipe connections used in industry.
Prerequisites: DFT 1104 and 1117

DFT 1125 Descriptive Geometry I 2 2 0 3

This course covers graphical analysis of space problems dealing with practical design elements involving points, lines, planes, connectors, and a combinations of these. Topics include intersection of planes, intersection of solids, visability, connectors, solid intersections, and mathematical solutions on selected problems. Upon completion, students will be able to analyze the theory and practice dealing with space problems.
Prerequisites: DFT 1170, 1172, and 1173

DFT 1126 Descriptive Geometry II 2 2 0 3

This course is a study of spatial analysis of advanced problems and applications to industrial settings. Emphasis is placed on conics and solid geometric shapes, and advanced intersections are solved with graphic solutions. Upon completion, students will be able to analyze and solve advanced space analysis problems involving points, lines, planes, solids, and intersections. Prerequisite: DFT 1125

DFT 1140 Cabinetry Drafting 4 2 0 5

This course introduces concepts of sketching and drafting as related to drawings for kitchen cabinetry, bathroom vanities, and built-in cabinets for residential construction. Emphasis is placed on interpreting blueprints, construction isometric details, and adding dimensions correctly. Upon completion, students will be able to transfer information from blueprints to prepare isometric details of cabinetry features accurately.
Prerequisite: DFT 1111

DFT 1141 Cabinetry Design 4 2 0 5

This course is a continuation of DFT 1140 and includes concepts of sketching and drafting. Topics include custom design of cabinets and built-in furniture such as bookcases, desks, display and storage cabinets, and chests. Upon completion, students will be able to interpret and communicate with the customer concerning the customer's needs, intended use of cabinetry, and design style desired. Prerequisite: DFT 1140

DFT 1160 Manufacturing & Drafting 1 0 3 2

This course covers manufacturing processes with emphasis placed on application to actual production situations; economics and redesign are applied in the laboratory planning. Topics include models, films, and flowcharts; demonstrations in shop and field trips are utilized to provide realism. Upon completion, students will be able to write process sheets and design and redesign production tooling and related work.
Prerequisites: MEC 1111, DFT 1170

DFT 1170 Basic Drafting 2 2 3 4

This course introduces the student to drafting and the study of drafting in orthographic projection, reading, and instrument drawing of principal views. Emphasis is placed on instruction given in the selection, use, and care of instruments and on orthographic and pictorial drawings. Upon completion, students will be able to analyze and draw necessary detail, assembly, and erection drawings. Prerequisites: None

DFT 1171 Basic Industrial Drafting 2 0 3 3

This course provides drafting instruction and experience in the preparation and interpretation of shop drawings; terminology used in manufacturing processes is introduced. Topics include elementary machine parts, both in detail and assembly drawings; special emphasis is given to notes and specifications. Upon completion, students will be able to interpret engineering and shop drawings and apply much of this in the shop courses.
Prerequisites: None

DFT 1172 Technical Sketching 2 0 3 3

This course provides a study of theory and practice in making pictorial drawings in both instrument and free-hand. Topics include isometric, dimetric and trimetric, oblique, and perspective theory and practice; exploded views and shading are included. Upon completion, students will be able to prepare pictorial drawings including shaded, exploded views for assembly, production, or illustration purposes. Prerequisite: DFT 1170 or equiv.

DFT 1173 Industrial Drafting I 1 2 3 3

This course covers theory and practice in section views and primary and secondary auxiliaries; intersections and space analysis problems are introduced. Topics include full, half, revolved, removed, and broken out sections theory and practice, and simple and successive auxiliaries theory and practice. Upon completion, students will be able to visualize and prepare working drawings involving sections and primary and secondary auxiliary views. Prerequisite: DFT 1170 or equiv.

DFT 1180 Trade Drafting I 2 4 0 4

This course provides fundamental drafting principles with instruction in orthographic projection and working drawings; included are principles of sectioning and dimensioning and use of drawing instruments. Topics include geometric constructions, visualization, shop notes, lettering, and an introduction to sections. Upon completion, students will be able to prepare to scale complete working drawings and related information.
Prerequisites: None

DFT 1190 Industrial Drafting II 1 2 3 3

This course covers mechanical drafting beginning with problems concerning precision and limit dimensioning, methods of fastening materials, and fasteners: keys, rivets, springs, and welding. Topics include principles of design, gears, cams, pulleys, and basic mechanisms of motion transfer, drawings, and calculations with specifications. Upon completion, students will be able to design and draw motion transfer mechanism components and assemble drawings. Prerequisite: DFT 1173

DFT 1191 Machine & Tool Draft I 1 0 6 3

This course includes tool drafting as it relates to manufacturing and machine tools, and basic drafting and design problems involving jigs and fixture design. Emphasis is placed on standard parts and an introduction to various other elements of tool design. Upon completion, students will be able to prepare design and working assembly drawings of tool drafting.
Prerequisite: DFT 1173

DFT 1192 Design Draft & Tolerances 3 2 0 4

This course includes theory and practice involving general tolerancing, datum dimensioning and geometric tolerancing, and true position tolerancing. Topics include MMC, limits, clearance, allowance, interference fits, and geometric tolerancing and dimensioning. Upon completion, students will be able to interpret tolerancing and dimensions and specify geometric and size tolerancing. Prerequisites: MEC 1160 or 1111 and DFT 1173

DFT 1193 Industrial Drafting III 1 0 6 3

This course includes design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings, and simplified drafting practices. Emphasis is placed on working drawings of a simple machine, redesign problem, or a component sub-assembly of moderate difficulty. Upon completion, students will be able to prepare a layout assembly drawing to scale and to pick off and draw components or sub-assemblies.
Prerequisites: DFT 1173 and 1190

DFT 1194 Machine & Tool Draft II 2 2 3 4

This course includes details and assembly drawings made from industrial specifications; basic design principles are introduced with the study of tool design for production. Topics include tool design drawings involving standard parts and handbook usage and a brief introduction of dies. Upon completion, students will be able to design and draw jigs, fixtures, and other tooling attachments for production. Prerequisites: DFT 1173 and 1190

DFT 1195 Steel Fabrication Draft 3 0 3 4

This course provides introduction to shop drawings related to welding, riveting, bolting, or other joining methods of steel plates, bars, and structural shapes. Emphasis is placed on student preparation of working drawings for shop purposes. Upon completion, students will be able to draw basic structural details of fabricated steel. Prerequisite: DFT 1173

ECO 102 Macroeconomics 3 0 0 3

This course covers principles and concepts that apply to the total economy. Emphasis is placed on fiscal policy and national interests such as inflation, unemployment, and economic growth. Upon completion, students will be able to anticipate impacts of fiscal policy and related actions as they apply to the entire economy. Prerequisites: None

ECO 104 Microeconomics 3 0 0 3

This course covers principles and concepts that apply to making choices by individuals, firms, and industries. Emphasis is placed on supply, demand, utility, market structures, and the use of the marginal approach to making choices. Upon completion, students will be able to explain how various parts of the economy behave and react to changes in the economy.
Prerequisites: None

ECO 201 Labor Economics 3 0 0 3

This course covers the history of labor economics from its beginning through modern times. Topics include the U.S. labor force, organized labor, collective bargaining, wage analysis, labor law, and unemployment. Upon completion, students will be able to explain labor market problems and policies. Prerequisites: None

ECO 205 Applied Economics 3 0 0 3

This course introduces the students to the basic principles of economics. Topics include scarcity, supply and demand, markets, inflation, unemployment, and fiscal and monetary policy. Upon completion, students will be able to explain how the economy operates and how current economic issues will effect the economy. Prerequisites: None

ECO 276 Money and Banking 3 0 0 3

This course covers the development of monetary policy and its applications to the economy. Emphasis is placed on the Federal Reserve System, banks, money, discount rate, open market operations, and economic stability. Upon completion, students will be able to anticipate impacts of monetary policy and related actions as they apply to the entire economy. Prerequisites: ECO 102

EDP 102 Computer Operations 2 2 0 3

This course introduces the business computer programming student to the operation of a mainframe computer running in a multiprogramming environment. Emphasis is placed on the operating system, its commands, and the use of commands to run utilities and application programs. Upon completion, students will be able to use their knowledge of operations in writing better application programs. Prerequisites: EDP 104 and Dept. Chrp. approval

EDP 103 Intro to Programming 3 0 0 3

This course introduces programming logic and principles necessary for developing business application programs. Emphasis is placed on rules of the COBOL programming language and flowcharting the solution to specific problems. Upon completion, students will be able to flowchart structured solutions to common business problems using the COBOL programming language. Prerequisites: None

EDP 104 Intro to Data Processing 3 0 0 3

This course is designed to introduce fundamental principles and concepts of computers and information processing. Topics include data storage devices and media, computer systems, and data communications, with emphasis on business information systems. Upon completion, students will be able to demonstrate an understanding of computers and information processing for business computer programming or other business careers. Prerequisites: None

EDP 105 FORTRAN 4 0 3 5

This course introduces the student to the fundamental concepts and techniques of programming in FORTRAN. Topics include reading data from disks, calculations, formatting and printing reports, control breaks, functions, subprograms, subroutines, DO loops, and arrays. Upon completion, students will be able to write FORTRAN programs which perform most common business data processing functions. Prerequisites: EDP 103 and 104

EDP 109X COBOL I 4 0 0 4

This course introduces the COBOL business programming language for writing programs that read disk files and write business reports. Topics include syntax and structure of COBOL programs, calculations, decision making, control breaks, and group printing. Upon completion, students will be able to write report generation programs in COBOL with complex calculations, decision-making, and editing. Prerequisite: EDP 103 Corequisite: EDP 109Y

EDP 109Y EDP-109 Lab 0 0 3 1

This course introduces the student to entering, editing, compiling, and executing COBOL programs on a mainframe or microcomputer. Topics include use of a text editor and use of a terminal or microcomputer. Upon completion, students will be able to enter, edit, compile, and execute COBOL programs. Prerequisite: EDP 103 Corequisite: EDP 109X

EDP 110 COBOL II 4 0 3 5

This course is a continuation of EDP 109 and the study of the COBOL programming language. Topics include multiple control breaks, file creation, group indication, group printing, and utilization of one and two dimensional tables. Upon completion, students will be able to use advanced logic and programming techniques in a disk operating system environment. Prerequisite: EDP 109

EDP 114 Operating Systems 2 0 3 3

This course provides a detailed study of operating systems and the techniques of system resource management using several operating systems as examples. Topics include basic system resources, operating system design and development, operating system concepts, job control languages, and command control languages. Upon completion, students will be able to effectively utilize system facilities to produce business applications in both mainframe and microcomputer environments. Prerequisites: EDP 104 and 109

EDP 116 Business BASIC Language 3 2 0 4

This course introduces fundamentals of the BASIC programming language and provides background using BASIC for business applications. Topics include producing and editing printed output, loop processing, user-defined functions, file creation and processing, table processing, and sorting. Upon completion, students will be able to write programs using BASIC to solve business application problems. Prerequisite: EDP 103

EDP 117 Advanced Business BASIC 4 0 3 5

This course is a continuation of EDP 116, including more advanced programming concepts and techniques in the BASIC language. Topics include interactive data entry, the shell and bubble sorts, menus, and sequential and random access file handling. Upon completion, students will be able to develop a menu-driven system of programs for business applications. Prerequisite: EDP 116

EDP 118 Microcomputer Graphics 2 2 0 3

This course provides an introduction to low and high resolution graphics. Topics include graphics modes, color graphics, windowing, point, line, and circle commands, 3-dimensional drawing techniques, and animation. Upon completion, students will be able to write programs to draw line, bar, and pie charts for business applications and write animated graphics programs. Prerequisite: EDP 116

EDP 202 Programming Practicum 0 0 20 2

This course provides the student an opportunity to apply and enhance programming skills in an actual work environment under the supervision of an employer. Emphasis is placed on application of programming to actual business programs outside the school environment. Upon completion, students will be able to apply programming skills to solve business problems in a real business in a real-world situation. Prerequisites: Sophomore standing and Dept. Chrp. approval

EDP 204 COBOL III 4 0 3 5

This course is a continuation of the concepts and techniques of programming in COBOL begun in EDP 109 and EDP 110. Emphasis is placed on processing sequential and indexed files, validity checking techniques, advanced table processing, sorting, and character manipulation. Upon completion, students will be able to write COBOL programs which perform complex business data processing functions. Prerequisite: EDP 110

EDP 205 8088 Assembler 4 0 3 5

This course introduces the use of assembly language for the 8088 microprocessor emphasizing the design and implementation of systems utility application programs. Topics include 8088 microprocessor codes, 8088 architecture, operating system interface, basic input/output processing, file processing, and debugging techniques. Upon completion, students will be able to design, code, and execute applications using Assembler language to interface directly with the operating system. Prerequisite: EDP 114

EDP 210 Pascal 3 2 0 4

This course introduces the Pascal programming language and emphasizes the production of interactive business applications using structured modular programming techniques. Topics include problem analysis, algorithm development, Pascal source code production, compiling and linking, program execution, and program validation. Upon completion, students will be able to solve business application problems using the Pascal programming language to produce efficient computer assisted solutions.
Prerequisites: EDP 103, 104, and 109 or equiv. programming experience

EDP 211 Data Structures in Pascal 3 2 0 4

This course is a continuation of the introductory course in the Pascal programming language. Topics include arrays, records, stacks, queues, linked lists, pointers, recursion, binary trees, and sorting. Upon completion, students will be able to write advanced programs in Pascal using these data structures. Prerequisite: EDP-210

EDP 212 Data Base Management 3 0 3 4

This course introduces data base management concepts and emphasizes the design and implementation of business data systems using the SQL query language and relational data base techniques. Topics include data base fundamentals, data base models, logical design, physical design, data security, data base implementation, and data base management system functions. Upon completion, students will be able to design and implement efficient data base management systems to solve business data management problems. Prerequisite: EDP 114

EDP 213 Data Base Programming 2 4 0 4

This course introduces a data base programming language, emphasizing the development of interactive business programs using menu hierarchy techniques. Topics include data base creation, data base relations, indexing, use of multiple data bases, menu driven modules, and custom reports. Upon completion, students will be able to design, program, and implement a data base system for a variety of business applications. Prerequisite: EDP 212

EDP 214 PC Operating Systems 1 0 3 2

This course introduces the student to microcomputer operating system concepts and commands. Topics include microcomputer architecture, operating system fundamentals, commands, batch files, and software installation. Upon completion, students will be able to use a microcomputer operating system to use application software and to install software on floppy and hard disk. Prerequisites: EDP 104 and 1 programming course

EDP 215 UNIX Operating System 1 0 3 2

This course introduces the student to operating system concepts and the UNIX operating system. Topics include the UNIX file system, operating system commands, and redirection of I/O and piping. Upon completion, students will be able to use the UNIX operating system for development of application software. Prerequisites: EDP 104 and 1 programming course

EDP 216 Computer Programming Proj 3 0 9 6

This course provides the student with experience in the design and implementation of an entire data processing system, either hypothetical or actual. Emphasis is placed on scheduling the project for completion within eleven weeks and implementing a functioning system using actual data. Upon completion, the student will be able to function as a programmer or programmer-analyst in a business data processing environment. Prerequisites: EDP 223 and 6th quarter standing

EDP 217 Data Communications 3 0 0 3

This course covers the basic principles of a data communication system. Topics include networks, data communication hardware and software, error handling, communication protocols, and network architecture. Upon completion, students will be able to describe the major hardware and software components of a data communication network. Prerequisite: EDP 114

EDP 218 C Language I 4 0 3 5

This course introduces the programming student to the C programming language. Topics include C language programming concepts, data types, data manipulation, input/output functions, arrays and pointers, and data structures. Upon completion, students will be able to write a complex program in C language involving advanced programming techniques. Prerequisite: An advanced level programming course or equivalent

EDP 219 C Language II 4 0 3 5

This course is a continuation of EDP 218, C Language I, and includes advanced programming concepts and techniques using the C programming language. Topics include data structure design, implementation of queues and stacks using linked lists and use of system software tools. Upon completion, students will be able to develop, implement and maintain complex C language applications which require advanced programming concepts and techniques. Prerequisite: EDP 218

EDP 221 Sys Analysis & Design I 3 4 0 5

This course introduces the student to the concepts and techniques of analysis and design of data processing systems. Topics include systems analysis, input design, output design, documentation and file organization, and design with emphasis on sequential files. Upon completion, students will be able to analyze, design, and produce a business data processing system utilizing sequential file organizations. Prerequisite: EDP 110

EDP 223 Sys Analysis & Design II 3 4 0 5

This course is a continuation of the concepts of system analysis and design begun in EDP 221. Topics include file organization emphasizing indexed files, data base design, hardware and software procurement, data communications, and on-line processing. Upon completion, students will be able to analyze, design, and produce a business data processing utilizing indexed file organizations. Prerequisite: EDP 221

EDP 230 RPG-II Language I 4 0 3 5

This course introduces the RPG-II programming language including a study of the language formulation, rules, and programming techniques. Topics include calculations, decision making, disk input, printer output, control breaks, look ahead fields, control codes, and exception output. Upon completion, students will be able to write RPG-II report generation programs for a variety of business problems. Prerequisites: EDP 103 and 104

EDP 231 RPG-II Language II 4 0 3 5

This course is a continuation of EDP 230 emphasizing advanced features of the RPG-II programming language and including techniques used in writing business-related programs. Topics include arrays and tables, file creation, sequential and indexed sequential file updating techniques, and read-demand files. Upon completion, students will be able to demonstrate competency in writing business application programs in RPG-II. Prerequisite: EDP 230

EDU 103 Teacher's Aide Role 3 0 0 3

This course gives an overview of how the teacher's aide can render a supportive service to the classroom teacher. Emphasis is placed on developing a cohesive working relation with the teacher and acquiring a sensitive, caring attitude about children. Upon completion, students will be able to function successfully as teachers' aides in classroom situations.
Prerequisites: None

EDU 104 Teacher's Aide Methods 3 0 0 3

This course will develop a comprehensive understanding of the basic skills needed to function successfully as a teacher's aide. Topics include organizing classroom activities, keeping class records, and using audiovisual equipment and materials. Upon completion, students will be able to render a supportive service to the classroom teacher by knowledge acquired.
Prerequisites: None

EDU 105 Discipline in the School 3 0 0 3

This course covers an examination of the causes of discipline problems and a variety of techniques for handling discipline problems. Topics include statistics on discipline, assertive discipline model, stress and time management, self-esteem, classroom management, and behavior modification. Upon completion, students will be able to state the causes of misbehavior and develop an effective discipline plan. Prerequisites: None

EDU 106 Phonics for Teacher Aides 3 0 0 3

This course covers consonant and vowel sounds, blends, diagraphs, silent consonants, syllabication, contractions, synonyms, homographs, antonyms, rhyming words, plurals, and rules for the above. Emphasis is placed on hearing the sounds and applying the rules through the use of records, filmstrips, boardwork, and worksheets. Upon completion, students will be able to use their understanding of phonics to assist the classroom teacher in teaching reading skills. Prerequisites: None

EDU 107 Art for the Classroom 3 0 0 3

This course includes basic figure and landscape drawing and creation of art activities. Topics include male and female figures, Cumberland County flat landscapes, and cut and paste art activities. Upon completion, students will be able to introduce at least twenty new art activities to their students. Prerequisites: None

EDU 108 Working W/Except Children 3 0 0 3

This course is designed to familiarize prospective teachers' aides, assistants, parents, and teachers with the educational needs of exceptional children. Topics include giftedness, physical limitations, visual and hearing impairments, mental retardation, emotional disturbances, learning disabilities, and communications disorders. Upon completion, students will be able to assist the regular exceptional-child teacher in the classroom.
Prerequisites: None

EDU 109 Legal Issues in Education 3 0 0 3

This course is designed to examine the roles of the schools and educators in the legal structure. Topics include landmark supreme court decisions, censorship, tort liability, negligence, in-school injuries, current litigations, and the local law library. Upon completion, students will be able to discuss the liability in education and utilize the local law library.
Prerequisites: None

EDU 110 Techniques of Counseling 3 0 0 3

This course includes a basic overview of counseling techniques utilized during the counseling process. Emphasis is placed on understanding and facilitating the helping process. Upon completion, students will be able to assist in the counseling process through effective listening and making the client aware of alternatives. Prerequisites: None

EDU 111 Substitute Teacher Train 3 0 0 3

This course is designed to familiarize the student with requirements for substitute teaching, routine of school day, and techniques for handling typical school problems. Topics include requirements for substitute teachers, reading lesson plans, useful time-fillers, operating audiovisual equipment, and discipline. Upon completion, students will be able to substitute in schools with a better understanding of school procedures, teaching, and discipline techniques. Prerequisites: None

EDU 112 Creative Writing & Speak 3 0 0 3

This course is designed to assist students in designing and implementing learning experiences that will motivate children to write and speak. Emphasis is placed on activities designed to teach writing and speaking, with opportunities for practice. Upon completion, students will be able to assist classroom teachers to motivate children to write and speak.
Prerequisites: None

EDU 113 Working W/Problem Child 3 0 0 3

This course is designed to familiarize prospective teacher's aides, assistants, parents, and teachers with the special needs of the problem child. Topics include causes leading to inappropriate and unacceptable behavior in children and suggested means for correcting it. Upon completion, students will be able to assist the regular teacher's work with problem children.
Prerequisites: None

EDU 114 Basic Reading Skills 3 0 0 3

This course is an introduction to teaching reading to the young child. Emphasis is placed on the development of reading skills, methods, and materials. Upon completion, students will be able to assist in the teaching of basic reading skills to young children. Prerequisites: None

EDU 120 Computer Literacy 3 0 0 3

This course is designed to provide hands-on use of microcomputers as educational tools. Emphasis is placed on the operation of microcomputers and education-oriented software. Upon completion, students will be able to operate a microcomputer and use selected educational software.
Prerequisites: None

EDU 121 LOGO With Turtle Graphics 1 2 0 2

This course is designed to instruct teachers in the use of the LOGO computer language as a tool for teaching computer programming to elementary students. Emphasis is placed on the use of graphics to write procedures that are included in complete programs. Upon completion, students will be able to use LOGO procedures to develop and enrich logical thinking and demonstrate problem-solving skills and creativity. Prerequisites: None

EDU 201 Intro to Preschool Educ 3 0 0 3

This course is designed to familiarize the student with the principles and practices used in early childhood education. Topics include guidelines for identifying, planning, organizing, and implementing appropriate programs and facilities needed for teaching young children. Upon completion, students will be able to assist in the teaching of preschool children.
Prerequisites: None

EDU 202 Child Health, Safety, Nut 3 2 0 4

This course provides an overview of childhood illnesses, basic first-aid, safety precautions, and nutrition for young children. Topics include illnesses and symptoms, first-aid, safety procedures, and nutrients essential for life and well-being. Upon completion, students will be able to recognize and use good principles of health safety and nutrition when working with young children. Prerequisites: None

EDU 203 Pediatric First-Aid & CPR 3 2 0 4

This course covers special first-aid problems characteristic of small children. Emphasis is placed on choking, bites, bruises, cuts, and cardiopulmonary resuscitation (CPR). Upon completion, students will be able to perform CPR and first-aid techniques. Prerequisites: None

EDU 204 PGM Plng in Preschool 3 0 0 3

This course presents the basic knowledge, skills, attitudes, and philosophies which are the foundation of quality early childhood education. Topics include early childhood development and learning theories, the teacher's role, the educational setting and planning the curriculum. Upon completion, the student will be able to formulate their own philosophies and approaches to caring for young children. Prerequisites: None

EDU 205 PGM Plng for Infants/Todd 3 0 0 3

This course presents the basic skills and knowledge necessary for the care and teaching of infants and toddlers. Emphasis is placed on the interrelation of emotional, social, cognitive, physical, and language development patterns. Upon completion, students will be able to match curriculum activities with developmental levels. Prerequisites: None

EDU 206 Creative Curr Act I 3 2 0 4

This course presents students with a theoretical basis for creative expression in a wide variety of classroom activities for infants, toddlers, and preschool. Topics include curriculum activities such as art, science, drama, music, dance, reading readiness, math, social studies, and health. Upon completion, students will be able to design and promote creative expression in all areas of a curriculum for young children.
Prerequisites: None

EDU 207 Creative Curr Act II 3 2 0 4

This course spans the theoretical and developmental activities for children in the early primary grades (103). Emphasis is placed on helping children reach their full creative potential in art, music, dramatic play, and specific curricular areas. Upon completion, students will be able to develop effective and enjoyable learning and skill building activities for children in the early primary grades. Prerequisites: None

EDU 208 Language Art Techniques 3 0 0 3

This course provides communication skills in reading, writing, and speaking, individually and in groups for small children. Emphasis is placed on improvement of reading, writing, and speaking skills, including methods and materials for teaching. Upon completion, students will be able to assist in the teaching of language arts. Prerequisites: None

EDU 209 Childcare Applications 0 0 3 1

This course is the observation of the activities of a preschool child in a child care center. Topics include supervised visitation in one or more child care centers and organized discussion concerning these observations. Upon completion, students will be able to continue other courses designed to help the student have a better understanding of children.
Prerequisites: None

EDU 210 Children's Literature 3 0 0 3

This course is a survey of literature appropriate for preschool and early childhood age children. Emphasis is placed on the principles of selecting literature for children and methods of instruction. Upon completion, students will be able to select appropriate literature and methods for motivating children to read and enjoy children's literature. Prerequisites: None

EDU 211 Food Prep in Child Care 2 0 3 3

This course teaches the skills needed to plan menus and prepare and serve food to preschool and school children. Topics include nutritional needs of young children and processes for providing for these needs. Upon completion, students will be able to assist the regular teacher to identify the nutritional needs of children and provide them. Prerequisites: None

EDU 249 A-V Media and Production 1 0 3 2

This course covers the planning and production of slides, still pictures, mounting and preserving materials, graphics, transparencies, and audio recordings for instructional use. Topics include an introduction to audio-visual instruction with an emphasis on equipment operation. Upon completion, students will be able to select, use, and evaluate the use of audiovisual and instructional equipment and materials.

EDU 250 Methods of Instruction 2 2 0 3

This course includes the principal practices and problems of instruction in an educational setting. Emphasis is placed on the teaching/learning situation and methods which create appropriate learning situations in the classroom. Upon completion, students will be able to choose a specific method of instruction, present it, and evaluate its effectiveness.
Prerequisites: None

EDU 250A Methods of Instruction 0 2 0 1

This course includes the principal practices and problems of instruction in an educational setting. Emphasis is placed on the teaching/learning situation and methods which create appropriate learning situations in the classroom. Upon completion, students will be able to choose a specific method of instruction, present it, and evaluate its effectiveness.
Prerequisites: None

EDU 250B Methods of Instruction 2 0 0 2

This course includes the principal practices and problems of instruction in an educational setting. Emphasis is placed on the teaching/learning situation and methods which create appropriate learning situations in the classroom. Upon completion, students will be able to choose a specific method of instruction, present it, and evaluate its effectiveness.
Prerequisites: EDU 250A

EDU 251 Methods of Teaching Child 2 4 0 4

This course includes the writing of lesson plans with emphasis on behavioral objectives and individualized instruction. Topics include the production of audiovisual materials for instructional use, writing behavioral objectives, and designing individualized materials. Upon completion, students will be able to utilize behavioral objectives and media in the classroom. Prerequisite: EDU 250

EDU 252 Principles of Day Care Operations 3 0 0 3

This course is an overview of administrative topics common to most child care programs. Topics include an emphasis on state licensing and federal certification guidelines of child care programs. Upon completion, students will be able to develop a hypothetical program to demonstrate understanding of the above concepts. Prerequisites: None

EDU 253 Parent Education 3 0 0 3

This course gives an overview of how to build a relationship and communicate with parents. Topics include basic listening and responding skills to be used in a structured interview in parent-teacher conferences. Upon completion, students will be able to build a working relationship with parents. Prerequisites: None

EDU 81 Career Life Planning 3 0 0 3

This course is designed to allow the students to understand themselves and the world of work. Emphasis is placed on self-assessment, career information, adult life transitions, decision making, and planning. Upon completion, students will be able to write a tentative, realistic career/life plan. Prerequisites: None

EDU 82 Dev Studies Orientation 1 0 0 1

This course provides the developmental studies student exposure to the essential skills and knowledge needed for success at FTCC. Emphasis is placed on familiarizing the student with the campus, personnel, services, procedures, rules, and opportunities at FTCC. Upon completion, students will be able to utilize fully the educational opportunities offered them.
Prerequisites: None

ELC 101X Fundamentals of Elect I 4 0 0 4

This course introduces the elementary principles of electricity with reference to both alternating current and direct current voltage sources. Topics include basic electric units, Ohm's Law, Kirchhoff's Laws, Superposition Theorem, Thevenin's Theorem, sinusoidal waveforms, inductance, capacitance, and complex algebra. Upon completion, students will be able to analyze passive A.C. and D.C. circuits by applying several methods of analysis. Prerequisites: None Corequisites: MAT 101 and ELC 101Y

ELC 101Y ELC-101 Lab 0 6 0 3

This course provides the opportunity to verify basic principles of electricity by constructing and making measurements on actual electric circuits. Emphasis is placed on the proper use of basic electrical measuring instruments including voltmeters, ammeters, digital multimeters, and oscilloscopes. Upon completion, students will be able to use electrical measuring instruments to verify their theoretical analysis of basic electric circuits. Prerequisites: None Corequisite: ELC 101X

ELC 103X Fundamentals of Elect II 2 0 0 2

This course is a continuation in the study of electricity fundamentals, including the application of network theorems. Topics include maximum power transfer, Kirchhoff's loop analysis, Kirchhoff's nodal analysis, complex power, transformers, and resonance. Upon completion, students will be able to achieve in the many directions of more advanced and specialized courses in Electrical or Electronic Technology. Prerequisite: ELC 101
Corequisite: ELC 103Y

ELC 103Y ELC-103 Lab 0 0 3 1

This course provides a laboratory experience in which the student can develop a better understanding of electric principles by performing experiments and making observations. Emphasis is placed on developing expertise with laboratory equipment, analysis of experiments, and conveying electric principles in a written format. Upon completion, students will be able to utilize electrical measuring devices to verify elementary principles of electricity. Prerequisite: ELC 101 Corequisite: ELC 103Y

ELC 1104 Intro to Electricity 3 0 3 4

This course is an introduction to electrical structure of matter and electron theory. Topics include voltage, current, and resistance. Upon completion, students will be able to explain the concepts of current in series and parallel circuits. Prerequisites: None

ELC 1105 Intro Industrial Wiring 2 0 3 3

This course provides instruction and application in planning, installing, and maintaining wiring systems in commercial and industrial complexes. Topics include alternating current, capacitors, coils, transformers, and their reactions in a circuit; safety procedures are also stressed. Upon completion, students will be able to calculate current, measure current, voltage, and resistance, and locate faults in components in a circuit.
Prerequisites: None

ELC 1106 Industrial Elect Maint 2 0 3 3

This course provides an introduction to application of industrial electrical maintenance practices. Topics include use of electrical test instruments and controls used throughout industry, safety procedures, and National Electric Code. Upon completion, students will be able to compute industrial loads, layout electrical circuits, and connect machinery to electric supply. Prerequisites: None

ELC 1107 Electric Control & Motors 4 0 6 6

This course is an introduction to electro mechanical and solid state devices used in industry. Topics include the use of schematic drawings and wiring diagrams of circuits and of motor controls, machine controls, and control centers. Upon completion, students will be able to recognize, analyze, and repair electrical faults safely with minimum out-of-service time.
Prerequisites: None

ELC 1112 AC/DC Current 5 0 15 10

This course is a study of the structure of matter and the electron theory and the relationship between voltage, current, and resistance in parallel circuits. Emphasis is placed on electron theory, voltage, current and resistance, wire size, and voltage drop. Upon completion, students will be able to wire simple circuits such as door bells, single pole light switches, and 3- or 4-way switches. Prerequisites: None

ELC 1112A AC/DC Current 2 0 6 4

This course is a study of the structure of matter and the electron theory and the relationship between voltage, current, and resistance in parallel circuits. Emphasis is placed on electron theory, voltage, current and resistance, wire size, and voltage drop. Upon completion, students will be able to wire simple circuits such as door bells, single pole light switches, and 3- or 4-way switches. Prerequisites: None

ELC 1112B AC/DC Current 2 0 6 4

This course is a continuation of ELC 1112A and covers matter and the electron theory and the relationship between voltage, current, and resistance in parallel circuits. Emphasis is placed on electron theory, voltage, current and resistance, wire size, and voltage drop. Upon completion, students will be able to wire simple circuits such as door bells, single pole light switches, and 3- or 4-way switches. Prerequisite: ELC 1112A

ELC 1112C AC/DC Current 1 0 3 2

This course is a continuation of ELC 1112B and covers matter and the electron theory and the relationship between voltage, current, and resistance in parallel circuits. Emphasis is placed on electron theory, voltage, current and resistance, wire size, and voltage drop. Upon completion, students will be able to wire simple circuits such as door bells, single pole light switches, and 3- or 4-way switches. Prerequisite: ELC 1112B

ELC 1113 AC/DC Machines & Controls 5 0 15 10

This course provides basic concepts of AC/DC current flow, inductive and capacitive reactance, phase angle impedence, and power factor for motors and transformers. Emphasis is placed on number of poles and motor speed, inductive reactance and capacitive reactance power factor, resonance, and antiresonance circuit. Upon completion, students will be able to explain the operation of motors and make them more efficient. Prerequisite: ELC 1112

ELC 1113A AC/DC Machines & Controls 1 0 3 2

This course provides basic concepts of AC/DC current flow, inductive and capacitive reactance, phase angle impedence, and power factor for motors and transformers. Emphasis is placed on number of poles and motor speed, inductive reactance and capacitive reactance power factor, resonance, and antiresonance circuit. Upon completion, students will be able to explain the operation of motors and make them more efficient. Prerequisite: ELC 1112

ELC 1113B AC/DC Machines & Controls 2 0 6 4

This course, a continuation of ELC 1113A, provides the basic concepts of AC/DC current flow, inductive and capacitive reactance, phase angle impedence, and power factor for motors and transformers. Emphasis is placed on number of poles and motor speed, inductive reactance and capacitive reactance power factor, resonance, and antiresonance circuit. Upon completion, students will be able to explain the operation of motors and make them more efficient. Prerequisites: ELC 1112 and 1113A

ELC 1113C AC/DC Machines & Controls 2 0 6 4

This course, a continuation of ELC 1113B, provides basic concepts of AC/DC current flow, inductive and capacitive reactance, phase angle impedence, and power factor for motors and transformers. Emphasis is placed on number of poles and motor speed, inductive reactance and capacitive reactance power factor, resonance, and antiresonance circuit. Upon completion, students will be able to explain the operation of motors and make them more efficient. Prerequisites: ELC 1112 and 1113B

ELC 1124 Residential Wiring 5 0 9 8

This course provides instruction in planning, layout, and installation of wiring in residential applications such as service, switchboards, branch circuits, and feeder. Topics include blueprint reading, load calculation, wire size, fuse and breaker size, services, and conduits. Upon completion, students will be able to install the service and wiring in a residential structure. Prerequisite: ELC 1113

ELC 1124A Residential Wiring 3 0 3 4

This course provides instruction in planning, layout, and installation of wiring in residential application such as service, switchboards, branch circuits, and feeder. Emphasis is placed on blueprint reading, load calculation, and wire sizes. Upon completion, students will be able to install the service and wiring in a residential structure. Prerequisite: ELC 1113

ELC 1124B Residential Wiring 2 0 6 4

This course, a continuation of ELC 1124A, provides instruction in planning, layout, and installation of wiring in residential application such as service, switchboards, branch circuits, and feeder. Emphasis is placed on fuse and breaker size, services, and conduits. Upon completion, students will be able to install the service and wiring in a residential structure. Prerequisite: ELC 1124A

ELC 1125 Commercial & Indus Wiring 5 4 6 9

This course provides instructions in layout, planning, and installation of wiring systems in commercial and industrial complexes with emphasis on the National Electric Code. Emphasis is placed on layout, floor plans, motor control, wire, conduit, heater, and switch sizes, and conduits installation. Upon completion, students will be able to run conduit and pull wire to lights, receptacles, motor switches, and panels and make necessary connections. Prerequisite: ELC 1124

ELC 1125A Commercial & Indus Wiring 3 2 3 5

This course provides instruction in layout, planning, and installation of wiring systems in commercial and industrial complexes with emphasis on the National Electric Code. Emphasis is placed on layouts, floor plans, wire size, and conduit size. Upon completion, students will be able to run conduit and pull wire to light receptacles. Prerequisite: ELC 1124

ELC 1125B Commercial & Indus Wiring 2 2 3 4

This course, a continuation of ELC 1125A, covers layout, planning, and installation of wiring systems in commercial and industrial complexes with emphasis on the National Electric Code. Emphasis is placed on motor control, heater size, switch sizes, and conduit installation. Upon completion, students will be able to run conduit and pull wire to light receptacles, motor switches, and panels and make necessary connections. Prerequisite: ELC 1125A

ELC 1180 Basic Electricity 3 0 0 3

This course covers the determination of resistance or impedance, voltage, current, and power for basic DC and AC, and transformer and power supply connections. Topics include electricity generation, magnetism, resistance, voltage, current, power, series, parallel, and series-parallel circuits, transformers, rectification, and welder connections. Upon completion, students will be able to calculate resistance, currents, voltage drops, and power of basic DC and AC circuits, and explain basic circuit connections. Prerequisites: None

ELC 90 Intro Elect 2 0 3 3

This course is a basic study of the structure of matter and the electron theory and the relationship between voltage, current, and resistance. Emphasis is placed on electron theory, Ohm's law, voltage, current, and resistance. Upon completion, students will be able to solve minor problems in current, voltage, and resistance. Prerequisites: None

ELN 100 Introduction to Electronics 4 2 0 5

This course is a study of solid-state electronic devices with emphasis placed on digital applications of these devices in automotive electronic circuitry. Topics include diodes, bipolar-junction and field-effect transistors, transistor amplifiers, transistor switches, and logic circuitry. Upon completion, students will be able to apply the concepts studied to troubleshoot and analyze electronic problems in automotive circuitry. Prerequisites: None

ELN 102X Basic Logic Circuits 2 0 0 2

This course provides an in-depth study of integrated logic circuits (RTL, HTL, TTL, IIL, ECL, MOS, and CMOS) with emphasis on circuit and system design. Topics include special base mathematics, logic codes, Boolean algebra, gates, multivibrators, coders, AD/DA converters, timers, counters, adders, multiplexers, and registers. Upon completion, students will be able to write and simplify Boolean equations for logic system design and discuss microcomputer circuit systems. Prerequisite: ELN 103 Corequisite: ELN 102Y

ELN 102Y ELN-102 Lab 0 2 0 1

This course provides hands-on experience designing and constructing logic systems using integrated circuit logic gates and discrete components. Emphasis is placed on logic systems design using integrated circuit AND, OR, NAND, NOR, counters, registers, adders, and decoders. Upon completion, students will be able to explain the principles of design and applications of logic circuits and systems. Prerequisite: ELN 103 Corequisite: ELN 102X

ELN 103X Active Devices I 2 0 0 2

This course provides a basic study of the P-N junction diode and transistor concepts using descriptive narratives, mathematical equations, device characteristic curves, and models. Topics include atomic structure of semiconductor materials, biased and unbiased P-N junctions, diode applications, and basic transistor amplifier configurations. Upon completion, students will be able to analyze and explain verbally and mathematically basic diode and transistor amplifier circuits.
Prerequisite: ELC 101 Corequisite: ELN 103Y

ELN 103Y ELN-103 Lab 0 2 0 1

This course provides hands-on experience through laboratory experiments based upon lecture materials discussed in ELN 103X classes. Topics include diode characteristics and models; diode rectifiers, clippers, and clampers, and common base, common emitter, and common collector transistor configurations. Upon completion, students will be able to construct, and test basic diode and transistor circuits using laboratory instruments and analyze test results. Prerequisite: ELC 101 Corequisite: ELN 103X

ELN 104X **Active Devices II** 4 0 0 4

This course provides in-depth study of bipolar junction transistors and field effect transistors using both a descriptive and mathematical approach to design and analysis. Topics include graphic analysis of BJT and FET, biasing, stabilization, large and small signal analysis, hybrid parameters, and cascaded amplifiers. Upon completion, students will be able to investigate, and explain in detail, the design and analysis of transistor amplifiers using BJT's and FET's. Prerequisites: ELN 103 and ELC 103 Corequisite: ELN 104Y

ELN 104Y **ELN-104 Lab** 0 0 3 1

This course provides hands-on experience through laboratory experiments based upon lecture materials discussed in ELN 104X classes. Topics include use of transistor curve tracer, bias and stabilization, hybrid parameters, amplifier gain, and coupling of amplifier stages. Upon completion, students will be able to design, construct, and test multi-stage BJT and FET amplifiers using laboratory instruments, and analyze and explain test results.
Prerequisites: ELN 103 and ELC 103 Corequisite: ELN 104X

ELN 106 **Passive Networks I** 2 2 0 3

This course provides an in-depth analysis of passive networks under conditions of varying frequency or transient conditions. Topics include transfer functions, Bode plots, and Pascal programs of various filter networks, differentiator network, and integrator network. Upon completion, students will be able to investigate and explain the design and analysis of differentiators, integrators, and passive filters under varying frequency conditions. Prerequisites: ELC 103 and MAT 102

ELN 110 **Commercial Circuits** 3 0 0 3

This course introduces the programming language Pascal to students in Electronics Engineering Technology. Topics include an introduction to programming logic and implementation of Pascal for complex numerical calculations. Upon completion, students will be able to use Pascal for solving a variety of problems in Electronics Engineering Technology.
Prerequisite: ELC 103

ELN 206 **Active Networks Analy I** 2 0 3 3

This course includes a philosophical and mathematical study of transistor application to audio amplifiers and stabilizing circuits. Topics include circuit gains, frequency response, stability, and methods of interstage coupling. Upon completion, students will be able to apply information learned to the study of more advanced circuits. Prerequisite: ELN 104

ELN 207 **Active Network Analy II** 2 0 3 3

This course provides a study of the internal circuits of integrated operational amplifiers and the overall applications of operational amplifiers. Topics include operational amplifier applications to oscillators, comparators, active filters, and mathematical operators. Upon completion, students will be able to apply operational amplifiers to logic and linear systems.
Prerequisites: ELN 106 and 206

ELN 209 **Passive Networks II** 3 0 0 3

This course provides a study of sophisticated resonant circuits and their behavior in coupling and impedance matching networks. Topics include quality factor, bandwidth, selectivity, universal resonance curve, voltage and current rise, impedance matching networks, and resonant transformers. Upon completion, students will be able to explain, in detail, verbally and mathematically the behavior of resonant circuits used in coupling and impedance matching networks. Prerequisite: ELN 106

ELN 214 **Computer Principles** 2 4 0 4

This course includes the evolution of computer architecture in three stages of increasing complexity using academic computers with emphasis on microcomputers. Topics include the detailed study of computer architecture and associated instructional sets and assembly language. Upon completion, students will be able to apply information learned to real-line microcomputers. Prerequisites: ELN 106 and 206

ELN 216 **Microcomputers** 6 0 6 8

This course provides a study of a real-line microprocessor computer and associated family of chips using instant design circuit boards. Topics include computer interfacing, software design, and system hardware expansion. Upon completion, students will be able to study the industrial application of computers, computer peripherals, and transmission standards.
Prerequisites: ELN 207, 209, and 214

ELN 220 **Electronic Systems** 4 4 0 6

This course introduces electronic systems from the block diagram concept with emphasis on communication systems such as amplitude, frequency, and digital modulated transmitters and receivers. Topics include noise, LC circuits, RF oscillators, modulation, demodulation, communication techniques, digital communications, transmission lines, wave propagation, and antennas. Upon completion, students will be able to analyze electronic communication systems with respect to their design and operation.
Prerequisites: ELN 207, 209, and 214

ENG 106 World Literature I 3 0 0 3

This course is a study of major literary works of Western culture from the Ancient World through the Middle Ages. Topics include characteristics that distinguish literature of Hebrews, Greeks, and Romans from literature of various cultures of the Middle Ages. Upon completion, students will be able to discuss specific literary works as they reflect characteristics of their age and culture. Prerequisites: ENG 105 and 108

ENG 107 World Literature II 3 0 0 3

This course is a study of major literary works of Western culture from the Renaissance through the eighteenth century. Topics include specific themes and elements that characterize the literature and reflect the concerns of Renaissance and eighteenth century cultures. Upon completion, students will be able to discuss specific literary works as they typify their age and culture. Prerequisite: ENG 108

ENG 108 Usage & Composition III 3 0 0 3

This course is a continuation of the analytical and research skills learned in ENG 105, skills which will now extend to poetry and drama. Topics include poetry analysis, involving such devices as tone and versification, and drama analysis involving elements of tragedy and comedy. Upon completion, students will be able to analyze literature and refine research skills. Prerequisite: ENG 105

ENG 110 Business English 3 0 0 3

This course is designed to help the General Office and Secretarial-Executive students become proficient in producing written communication. Topics include punctuation, capitalization, number usage, spelling, word division, plurals and possessives, compound words, and abbreviations. Upon completion, students will be able to apply the rules of grammar in producing mailable written communication.
Prerequisites: BUS 191 and 106 (Secretarial-Executive students); BUS 104 (General Office students)
Corequisites: BUS 107 (Secretarial-Executive students); BUS 261 (General Office students)

ENG 115 Medical Terminology & Voc 3 0 0 3

This course introduces the basic tools for building a medical vocabulary and mastering the identification of anatomical words and components. Topics include the anatomy, vocabulary related terminology, and pathology of the musculoskeletal, respiratory, cardiovascular, and nervous systems. Upon completion, students will be able to recognize, identify, and define medical words through structural analysis and utilize medical terminology in written and verbal communication. Prerequisites: None

ENG 115A Medical Terminology & Voc 2 0 0 2

This course introduces the basic tools for building a medical vocabulary and mastering the identification of anatomical words and components. Topics include the anatomy, vocabulary related terminology, and pathology of the musculoskeletal, respiratory, cardiovascular, and nervous systems. Upon completion, students will be able to recognize, identify, and define medical words through structural analysis and utilize medical terminology in written and verbal communication. Prerequisites: None

ENG 115B Medical Terminology & Voc 1 0 0 1

This course, a continuation of ENG 115A, introduces the basic tools for building a medical vocabulary and mastering the identification of anatomical words and components. Topics include the anatomy, vocabulary related terminology, and pathology of the musculoskeletal, respiratory, cardiovascular, and nervous systems. Upon completion, students will be able to recognize, identify, and define medical words through structural analysis and utilize medical terminology in written and verbal communication. Prerequisite: ENG 115A

ENG 121 English Composition 5 0 0 5

This is a computer assisted composition course designed to develop the student's ability to express himself clearly, effectively, and correctly in expository writing. Emphasis is placed on sentence structure, mechanics, and the study of rhetorical methods of exposition to obtain clear, logical, and well-organized compositions. Upon completion, students will be able to write organized, mechanically correct compositions, reflecting careful thought and awareness of basic grammar, syntax, and punctuation. Prerequisites: None

ENG 122 Composition and Literature 5 0 0 5

This course develops students' abilities in researching, writing, and documenting the research paper and in analyzing and interpreting short fiction, poetry, and drama. Emphasis is placed on plot, theme, character, and figurative language in selected literary works and on a short library paper. Upon completion, students will be able to construct a mechanically-sound, research paper and be able to understand, analyze, and write about literary works. Prerequisite: ENG 121

ENG 131 Speech Communications 5 0 0 5

This course is designed to improve communication skills of the speaker and to increase analytical and critical ability of the audience. Emphasis is placed on research, organization, audience analysis, grammar, vocabulary, articulation and delivery skills such as eye contact. Upon completion, students will be able to communicate better in informal situations and present well-prepared speeches for more formal occasions. Prerequisites: None

ENG 204 Oral Communications 3 0 0 3

This course is a study of basic concepts, techniques, and principles of oral communication. Emphasis is placed on preparation and delivery of informative, demonstrative, and persuasive speeches and other speaking assignments. Upon completion, students will be able to communicate with others verbally and to produce effective oral presentations.
Prerequisites: None

ENG 206 Business Communications 3 0 0 3

This course develops skills in the techniques of writing effective communications. Emphasis is placed on writing various types of business letters and preparing data sheets. Upon completion, students will be able to compose mailable letters using correct organization.
Prerequisites: BUS 191 or equiv. and ENG 101

ENG 207 Bus Comm for Word Process 5 0 0 5

This course develops skills in the techniques of writing effective communications for administrative and correspondence secretaries. Emphasis is placed on correctly writing inquiry, sales, credit, collection, adjustment, complaint, order, acknowledgment, remittance, application letters, and resumes. Upon completion, students will be able to determine the types of correspondence necessary for office situations and effectively process the written word. Prerequisites: BUS 105, ENG 110

ENG 209 World Literature III 3 0 0 3

This course provides a survey of the major literary movements and works of the nineteenth and twentieth centuries. Topics include Romanticism, Realism, Naturalism, and Modernism. Upon completion, students will be able to discuss critically the literary movements and works of the nineteenth and twentieth centuries. Prerequisite: ENG 108

ENG 210 American Literature I 3 0 0 3

This course is designed to show the student the historical and cultural background from colonial times to about 1860. Topics include Puritanism, Diarists, Reason and Revolution, Romantic Rediscovery, Symbolic and Ethical Idealism, Transcendentalism, popular poets, folk humor, and Whitman. Upon completion, students will be able to appreciate the importance and beauty of the major literary works of this time-span. Prerequisite: ENG 102 or 108

ENG 211 American Literature II 3 0 0 3

This course is designed to show the student the historical and cultural background of American literature from about 1860 to the present. Topics include Dickinson, Clemens, local colorists, critical realism, naturalism, 20th-century poetry, essays, drama, short fiction, and novels. Upon completion, students will be able to appreciate the importance and beauty of the major literary works of this time-span. Prerequisite: ENG 102 or 108

ENG 221 American Literature I 5 0 0 5

This course covers readings from the seventeenth through the first two-thirds of the nineteenth century, focusing on literary trends of the period. Topics include the characteristics of Colonialism, Romanticism, and Reason and Revolution; hence the course features authors from John Smith through Walt Whitman. Upon completion, students will be able to understand, appreciate, and write compositions about the major literary works of this time.
Prerequisites: ENG 121 and ENG 122

ENG 222 American Literature II 5 0 0 5

This course covers reading from the mid-nineteenth century to the present, placing attention on the literary trends of their time-span. Emphasis is placed on the literary characteristics of realistic and 20th century literature and includes authors from Whitman to Barthelme. Upon completion, students will be able to analyze, appreciate, and write compositions about the major literary works of this period. Prerequisites: ENG 121 and ENG 122

ENG 231 English Literature I 5 0 0 5

This course provides a chronological survey of British literature from Anglo-Saxon poetry to Restoration drama. Emphasis is placed on discussing selected works of major writers in the context of the chief traditions of their age. Upon completion, students will be able to discuss major works and trace major trends of English verse and prose through the eighteenth century.
Prerequisites: ENG 121 and ENG 122

ENG 232 English Literature II 5 0 0 5

This course covers readings from the late 1700's to the present, placing attention on the literary trends of the era. Topics include Romantic, Victorian, and Modern English literature, and the course covers authors from Blake through Hughes. Upon completion, students will be able to analyze, appreciate, and write compositions about the major works of this period.
Prerequisites: ENG 121 and ENG 122

ENG 241 World Literature I 5 0 0 5

This course surveys literary Masterpieces of Western culture from the Ancient World through the Renaissance. Emphasis is placed on analyzing works as they typify period, culture, and genre and reflect ideas formative of Modern Western thought. Upon completion, students will be able to discuss the content and style of major works that seize the Western mind. Prerequisites: ENG 121 and ENG 122

ENG 242 World Literature II 5 0 0 5

This course surveys literary Masterpieces of Western culture from the eighteenth century to the present day. Emphasis is placed on analyzing works characteristic of these major periods: Neoclassicism, Romanticism, Realism, Naturalism, and Modernism. Upon completion, students will be able to discuss major literary works and trends of the eighteenth, nineteenth, and twentieth centuries. Prerequisites: ENG 121 and ENG 122

ENG 1101 Comm Skills - Grammar 3 0 0 3

This course is designed to aid students in the improvement of self-expression in written composition and oral usage. Emphasis is placed on grammar, diction, sentence structure, punctuation, and spelling. Upon completion, students will be able to apply the principles of English grammar in day-to-day situations at work and in social life. Prerequisites: None

ENG 1102 Vocational Communications 3 0 0 3

This course includes a review of major grammatical principles and the development of writing skills. Emphasis is placed on writing clear, effective, well-developed paragraphs and essays and applying standard grammar rules to writing. Upon completion, students will be able to communicate effectively through good language usage in writing, to think more clearly, and to reason more forcefully. Prerequisite: ENG 1101

ENG 1103 Report Writing 3 0 0 3

This course is designed to help the student develop competency in report writing. Emphasis is placed on writing letters, writing informal reports, and developing communications skills. Upon completion, students will be able to write with accuracy and clarity reports, memoranda, business letters, the letter of application, and data sheet. Prerequisite: ENG 1102

ENG 50 Reading Proficiency 6 4 0 8

This course is designed for high school graduates who can benefit from instruction in reading improvement. Emphasis is placed on techniques, exercises, and application to increase reading rates, comprehension, and spelling ability. Upon completion, students will be able to demonstrate reading habits that promote success in subsequent developmental courses. Prerequisites: None

ENG 80 Applied Reading Skills 3 2 0 4

This course includes time management, study methods, reading skills, notetaking, memory, library skills, formal outlines, term papers, and test-taking skills. Emphasis is placed on adjusting to college life, developing successful study and reading skills, and test-taking skills. Upon completion, students will be able to apply their study skills in mastering academic work. Prerequisites: None

ENG 88 English as a 2nd Language 3 2 0 4

This course provides a background of English fundamentals to the student for whom English is a second language. Topics include grammatical patterns, vocabulary development, and pronunciation, presented through skills practice in reading, writing, and speaking. Upon completion, students will be more confident and functional in using the English language. Prerequisites: None

ENG 89 Comp for Non-Native Speak 3 2 0 4

This course, designed for students who can comprehend written and spoken English, emphasizes the application of grammatical principles. Topics include English usage, grammatical forms, methods of paragraph development, pronunciation, and intonation. Upon completion, students will be able to write grammatically correct, well-developed paragraphs and short themes. Prerequisite: ENG 88

ENG 90 Prescriptive Reading 3 2 0 4

This course includes vocabulary development, comprehension improvement, rate increase, and dictionary skills. Emphasis is placed on diagnosing and remediating reading deficiencies on an individual basis. Upon completion, students will be able to apply their reading skills to college level reading assignments. Prerequisites: None

ENG 91 Vocabulary & Reading 3 2 0 4

This course is a reading and vocabulary development course devoted primarily to developing good reading skills and habits. Emphasis is placed on dictionary skills, word attack, and reading speed and comprehension. Upon completion, students will be able to demonstrate reading habits that promote success in curriculum courses. Prerequisites: None

ENG 92 **Grammar & Composition** 3 2 0 4

This course prepares the student for an understanding and utilization of standard English usage. Topics include grammar, sentence structure, and punctuation. Upon completion, students will be able to pass to the next developmental level and further prepare for entrance into curriculum English. Prerequisites: None

ENG 93 **Vocabulary & Composition** 3 2 0 4

This course is a writing and vocabulary development course devoted to the promotion of proficiency in writing. Emphasis is placed on vocabulary enrichment and writing improvement through the application of the principles of rhetoric. Upon completion, students will be able to enter curriculum English. Prerequisites: None

ENV 1100 **Basic Biology** 2 0 3 3

This course introduces techniques utilized in determining the bacteriological status of both potable and nonpotable water. Emphasis is placed on laboratory technique and validity of results from the use of approval procedures. Upon completion, students will be able to perform approved bacteriological procedures and interpret the results. Prerequisites: None

ENV 1101 **Water Laboratory Control** 2 0 6 4

This course is designed to cover the theory and laboratory technique for control tests used in water purification plants. Topics include color, turbidity, pH, alkalinity, hardness, bacteriology, coagulation, fluoride, iron, manganese, and detergents. Upon completion, students will be able to perform tests, interpret results, and apply data to proper facility operation. Prerequisites: None

ENV 1102 **Water Plant Operations** 3 2 0 4

This course introduces construction features and operational techniques of the water purification facilities and equipment. Topics include continuity of operation and proper control of chemical dosages for purification purposes. Upon completion, students will be able to discuss public health and safety aspects of water treatment plant operations. Prerequisites: None

ENV 1103 **Waste Laboratory Control** 2 0 6 4

This course introduces the theory and laboratory techniques used for control and testing of wastewater treatment plant operations. Emphasis is placed on residue, demand tests, nutrient tests, physical tests, bacterial enumeration, and the respective proper techniques associated with these procedures. Upon completion, students will be able to perform tests, interpret results, and apply data to proper plant operations. Prerequisites: None

ENV 1104 **Waste Plant Operations** 3 2 0 4

This course introduces construction features and operational techniques of wastewater purification process equipment. Topics include operator responsibility in the successful operation of wastewater treatment facilities. Upon completion, students will be able to identify equipment and processes and comprehend proper plant operations. Prerequisites: None

ENV 1105 **Maintenance** 2 0 3 3

This course introduces preventive maintenance procedures and keeping of records for basic and specialized equipment used in water and wastewater plants. Topics include equipment nomenclature, a preventive maintenance program, and operation and maintenance processes. Upon completion, students will be able to use operation and maintenance manuals and prepare programs of preventive maintenance. Prerequisites: None

ENV 1106 **Environmental Microbio** 2 0 3 3

This course introduces techniques to determine the bacteriological quality of various environments encountered in natural and manufacturing processes. Emphasis is placed on procedures for testing air, water, wastewater, food, milk, and cosmetics. Upon completion, students will be able to perform tests according to standard procedures and interpret the results obtained. Prerequisites: None

ENV 1107 **Stream Studies** 2 0 3 3

This course is a study of the natural purification process that occurs in streams and the chemical, biological, and mechanical tests used to determine purity. Emphasis is placed on methods of evaluating streams at various locations and determining the assimilation capacity of them. Upon completion, students will be able to perform a stream survey determining the stream's ecological and biological classification. Prerequisites: None

)O 115 Cake Decorating 2 0 6 4

This course is designed to provide the fundamental skills needed for :corating cakes and cookies and an introduction to sugar cookery and basic)nfectionaries. Topics include icing (borders, flowers, figures, writing, d cake design), torting, and assembling cakes for decoration. Upon mpletion, students will be able to decorate cakes and cookies and do basic igar cookery and confectionaries in the foodservice industry. 'erequisite: FSO 107

)O 116 Ice Carving 1 0 3 2

This course is designed to teach basic skills in ice carving. Topics iclude tools of the trade, ice handling, pattern design, and techniques of :e carving. Upon completion, students will be able to handle and carve ice)r decoration. Prerequisites: None

)O 117X Advanced Baking 2 0 0 2

This course develops the skill and knowledge of yeast-raised products.)pics include specialty breads and rolls, sweet yeast-raised dough products, ughnut varieties, and variety pies. Upon completion, students will be able apply their knowledge and techniques of yeast-raised products in the odservice industry. Prerequisite: FSO 107 Corequisite: FSO 117Y

O 117Y FSO-117 Lab 0 0 9 3

This course provides hands-on training of laboratory methods and chniques as they relate to supporting instructional material of FSO 117X. pics include specialty breads and rolls, sweet yeast-raised dough products, ughnut varieties, and variety pies. Upon completion, students will be able apply their knowledge and techniques of yeast-raised products in the odservice industry. Prerequisite: FSO 107 Corequisite: FSO 117X

O 118 Confectionaries 1 0 3 2

This course introduces the principles and development of skills in sugar okery and candy making. Emphasis is placed on the elements of sugar cookery d the preparation of crystalline, noncrystalline, spongy, molded, and hand pped candies. Upon completion, students will be able correctly and ccessfully to prepare and judge the quality of crystalline, noncrystalline, ongy, molded, and hand dipped candies. Prerequisites: None

FSO 119 Mixology 1 2 0 2

This course includes the proper techniques of mixing drinks, products to use, sanitation, and organization of a mixology station. Topics include use and care of hand tools and equipment of a mixology station and regulations of the Alcoholic Beverage Control Agency. Upon completion, students will be able to operate a mixology station properly in the foodservice industry. Prerequisites: None

FSO 120 School Foodservice 1 2 0 2

This course is an overview of the principles of planning nutritious, appealing, and low cost meals that meet requirements of USDA for Child Nutrition Programs. Topics include menu planning requirements and policies, commodities quality assurance, and food habits as controlled by USDA. Upon completion, students will be able to explain and implement the USDA regulations as they apply to menu planning in Child Nutrition Programs. Prerequisites: None

FSO 122X Food Preparation III 2 0 0 2

This course includes an overview of quantity meal preparation. Topics include recipe conversion, costing, portion control, purchasing, meal organization, hot and cold food presentation, set meal service, buffets, receptions and special parties, preparation of hors d'oeurves and party foods. Upon completion, students will be able to plan, organize, prepare and evaluate quantity meal functions, buffets and receptions. Prerequisites: FSO 102 and FSO 112 Corequisite: FSO 122Y

FSO 122Y FSO-122 Lab 0 0 9 3

This course applies the principles of quantity meal preparation. Topics include recipe conversion, costing, portion control, purchasing, meal organization, hot and cold food presentation, set meal service, buffets, receptions and special parties, preparation of hors d'oeuvres and party foods. Upon completion, students will be able to plan, organize, prepare and evaluate quantity meal functions, buffets and receptions. Prerequisites: FSO 102 and FSO 112 Corequisite: FSO 122X

FSO 125 Catering

This course is designed to provide the fundamental skills needed to carry out various types of catering events. Emphasis is placed on organizing catering services, contracting catering services, on and off premises catering, accommodator service, Kosher catering, menu planning for catered events. Upon completion, students will be able to organize, plan menus, make arrangements and write contracts or various types of catering events. Prerequisites: None

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FSO 202 **Food Preparation IV** 2 0 6 4

This course is designed to continue development of skills in food preparation, on a quantity level, of whole meal preparations. Topics include planning food bar concepts, cafeteria line serving, short-order meals, brunches, breakfast, selective menus, and convenience foods in menu planning. Upon completion, students will be able to apply their knowledge and skills in foodservice management. Prerequisite: FSO 122

FSO 203 **Organization & Management** 3 0 0 3

This course is a study of the organization structure, application of the principles of scientific management, and the effectiveness of personnel. Topics include planning, organizing, managing, and directing a foodservice operation using quality control, production, and cost techniques. Upon completion, students will be able to compete using the five functions of management in foodservice management. Prerequisite: FSO 108

FSO 204 **Food Purch & Cost Control** 3 0 0 3

This course teaches fundamentals of sound food purchasing methods and procedures based on cost control, specifications, quantity, and storage. Topics include source selection, price considerations, buying strategy, service and vendor relations, and value analysis as a purchasing tool. Upon completion, students will be able to use effective purchasing techniques in foodservice management. Prerequisites: None

FSO 205 **Menu Planning** 3 0 0 3

This course is designed to teach the mechanics of menu planning. Included are manual methods and computerizing the menu planning process. Emphasis is placed on menu planning for hospitals, nursing homes, elderly groups, adolescents and children, college students, industrial groups, state institutions and restaurant customers. Upon completion, students will be able to plan menus applying consumer worker, management and nutritional considerations for various subgroups. Prerequisite: FSO 106

FSO 207 **Food Merchandising** 3 2 0 4

This course is an overview of the principles of foodservice merchandising. Emphasis is placed on menu design, menu pricing, on-premises promotions, personal selling, advertising, and behavior of foodservice consumers. Upon completion, students will be able to design a marketing plan for a foodservice establishment. Prerequisite: FSO 122

FSO 210 **Foodservice Internship II** 0 0 20 2

This course provides student work experience in a mid-management or supervisory level under the direction of the instructor and with the cooperation of the employer. Topics include inventories, record accountability, scheduling of employees, quality and quantity inspection of equipment, and commodities. Upon completion, students will be able to apply these techniques in industrial foodservice management.
Prerequisites: All other FSO courses Corequisite: FSO 211

FSO 211 **Seminar II** 2 0 0 2

This course will be used to review experiences received in work experience FSO 210. Topics include resume writing, problem research, and areas covered in work experience. Upon completion, students will be able to provide solutions to their work problems and will be competent in foodservice management jobs. Prerequisite: All other FSO courses
Corequisite: FSO 210

FSO 212 **Food Preparation V** 1 0 6 3

This course includes the planning of special meals and menus. Emphasis is placed on catering, party foods, international cuisine, modified diets, and school lunch menus. Upon completion, students will be able to plan and prepare special meals in the foodservice industry. Prerequisite: FSO 202

FSO 215 **Advanced Cake Decorating** 1 3 0 2

This course is designed to provide intermediate and advanced cake decorating skills. Emphasis is placed on advanced borders and flowers, color flow preparation, marzipan, filigree, stringwork, pattern making, cake designing, tier cake design and assembly. Upon completion, students will be able to design and decorate cakes and desserts using advanced decorating techniques. Prerequisite: FSO 115

HIS 104 **Western Civilization** 3 0 0 3

This course introduces the student to Western civilization from pre-history to 1300 A.D. Topics include Ancient Greece, Rome, Christian institutions of the Middle Ages, and development of national monarchies in Western Europe. Upon completion, students will be able to discuss and identify historical socio-political problems and solutions during this era.
Prerequisites: None

HIS 105 Western Civilization II 3 0 0 3

This course, a continuation of HIS 104, covers the history of 1300–1850. Topics include the age of reformation, the religious wars, the industrial revolution, and Europe in the 17th and 18th centuries. Upon completion, students will be able to discuss and identify the historical socio-political problems and solutions during this era. Prerequisites: None

HIS 106 Western Civilization III 3 0 0 3

This course is a continuation of HIS 104 and 105 and covers the history of Western civilization from 1850 to the present. Topics include European government restoration, social unrest, Age of Nation States, Third Republic, World Wars I and II, and alliances. Upon completion, students will be able to discuss and identify the historical socio-political problems and solutions during this era. Prerequisites: None

HIS 121 Western Civilization I 5 0 0 5

This course introduces the student to Western civilization from pre-history to 1600 A.D. Topics include Ancient Greece, Rome, Christian institutions of the Middles Ages, and the development of national monarchies in Western Europe. Upon completion, students will be able to discuss and identify socio-political problems and solutions during this period. Prerequisites: None

HIS 122 Western Civilization II 5 0 0 5

This course is a continuation of HIS 121, and covers the period of history from 1600–present. Topics include the religious wars, the industrial revolution, European government restoration, World Wars I & II, and alliances. Upon completion, students will be able to discuss and identify the historical socio-political problems and solutions during this era. Prerequisites: 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. Topics include migrants to the New World, colonial peoples, new thought, the American Revolution, constitutional America, slavery, and the Civil War. Upon completion, students will be able to discuss American social and political development up to the Civil War era. Prerequisites: None

HIS 202 American History II 3 0 0 3

This course is a continuation of HIS 201 from the outbreak of the Civil War through World War I. Topics include the reconstruction period, industrialization, imperialization, and World War I incorporating parties, politics, and reform in urban America. Upon completion, students will be able to discuss American religious tolerance along with social and political reform during this era. Prerequisites: None

HIS 203 American History III 3 0 0 3

This course is a continuation of HIS 202 and covers American history from World War I to the present. Topics include the Great Depression, World War II including the cold war with Russia, social unrest, and foreign and domestic policy. Upon completion, students will be able to discuss U.S. political and social policies developed since the end of World War II. Prerequisites: 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 America's discovery to the Civil War. Topics include the unique development of North Carolina during the colonial period including the development of basic institutions. Upon completion, students will be able to discuss life in North Carolina today because of their knowledge of state history before the Civil War era. Prerequisites: 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. Topics include state reconstruction, the Industrial Revolution, North Carolina politics, World Wars I and II, and social and political problems to present. Upon completion, students will be able to explain life in North Carolina today because of their knowledge of state history, Civil War to present. Prerequisites: None

HIS 221 American History I 5 0 0 5

This course is a survey of American history from the discovery of America through the end of the nineteenth century. Topics include migrants to the New World, colonial peoples, new thought, the American Revolution, Slavery, the Civil War, and reconstruction. Upon completion, students will be able to discuss American social and political reform and development up to the start of the twentieth century. Prerequisites: None

HIS 222 American History II 5 0 0 5

This course is a continuation of HIS 221 from the beginning of the twentieth century to the present. Topics include industrialization, World War I, the Great Depression, World War II, the cold war with Russia, and social unrest. Upon completion, students will be able to discuss America's foreign and domestic political and social decisions developed since the turn of the century. Prerequisites: None

HIS 231 World Civilization I 5 0 0 5

This course introduces the student to World history from the dawn of civilization to approximately the year 1500 A.D. Topics include food gatherers and food growers, Eurasian civilizations, Greco-Roman civilizations, the rise of Christianity, Islam, and Bryzantic cultures. Upon completion, students will be able to better understand the social, political, and cultural differences being demonstrated among present day societies. Prerequisites: None

HIS 232 World Civilization II 5 0 0 5

This course is a continuation of HIS 231 and covers the period of World history from the year 1500-present. Topics include the Moslem World, the Confucian World, West European expansion, India, and China, and Second Industrial Revolution. Upon completion, students will be able to better understand the social, political, and cultural differences being demonstrated among present day societies. Prerequisites: None

HIS 241 Black History 5 0 0 5

This course introduces the student to the role played by Blacks in the historical development of this country. Topics include the slave trade, western pioneers, the quasi-free Negro, the Civil War, reconstruction, democracy and the Black Revolution. Upon completion, students will be able to identify the social and political problems facing blacks in society and offer insight for reform. Prerequisites: None

HIS 251 North Carolina History 5 0 0 5

This course is a study of geographical, political economic and social conditions existing in North Carolina from America's discovery to the present. Topics include state institutional development before, during, and after the colonial period, Civil War, and World Wars I and II. Upon completion, students will be able to discuss major life styles of North Carolinians historically, politically, and socially from the states beginning to the present. Prerequisites: None

HOR 109 Computer in Horticulture 0 0 3 1

This course introduces hands-on experience in the use of microcomputers as tools in horticulture business. Topics include how to operate a microcomputer and use major types of software applicable to horticulture business. Upon completion, students will be able to utilize word processing, inventory control, and production management software.
Prerequisites: BUS 191 or 192 recommended

HOR 110 Soil Science & Fertilizer 4 2 0 5

This course introduces the basic principles of efficient classification, evaluation, and management of agricultural soils. Emphasis is placed on the care, cultivation, and fertilization of the soil and the conservation of soil fertility. Upon completion, students will be able to conduct and evaluate soil tests and to implement recommendations or other corrective measures. Prerequisites: None

HOR 120 Plant Materials I 4 2 0 5

This course is designed to develop the student's knowledge and understanding of herbaceous plant material. Emphasis is placed on the identification, utilization, propagation, and landscape uses of economically important plants. Upon completion, students will be able to identify common herbaceous plants, be partially prepared for the Plantsman Certification Test, and be knowledgeable of plant use. Prerequisites: None

HOR 121 Plant Materials II 4 2 0 5

This course is designed to develop the student's knowledge and understanding of wood plant material. Emphasis is placed on the identification, utilization, propagation, and landscape use of trees, shrubs, vines, and ground covers. Upon completion, students will be able to identify common woody plants, be partially prepared for the Plantsman Certification Test, and be knowledgeable of plant use. Prerequisites: None

HOR 130 Intro to Agricultural Eco 3 2 0 4

This course introduces economics, the function of the agricultural economic system, and the role of agriculture in the economy. Emphasis is placed on the functions of a small business manager and the principles used in making economic decisions. Upon completion, students will be able to make management decisions pertinent to the success of a business based upon sound economic principles. Prerequisites: None

HOR 135 Plant Science 5 2 0 6

This course introduces general botany and provides a study of fundamental principles of plant culture. Emphasis is placed on plant physiology, morphology, and anatomy and other factors relating to plant culture. Upon completion, students will be able to apply basic principles of botanical science to horticultural and agronomic application. Prerequisites: None

HOR 150 General Houseplant Hort 3 2 0 4

This course covers the basics of identifying, growing, and using indoor plants. Emphasis is placed on identification, culture, propagation, and uses. Upon completion, students will be able to identify specific houseplants by common and scientific names and know culture and propagation techniques. Prerequisites: None

HOR 153 Greenhouse Management 3 2 0 4

This course covers the application of the basic principles of plant and soil science in greenhouse crop production. Emphasis is placed on the production of greenhouse crops, greenhouse construction, physical maintenance, and environmental control. Upon completion, students will be able to plan and implement crop production and those factors related such as chemical application, photoperiod control, and fertilization.
Prerequisite: HOR 135 or Dept. Chrp. approval

HOR 160 Hort Plant & Prod Display 2 2 0 3

This course provides a practical introduction to horticultural product display. Emphasis is placed on the design and implementation of a successful plant and product exhibit. Upon completion, students will be able to determine important factors in plant and product appeal and implement an attractive exhibit. Prerequisite: Sophomore standing

HOR 171 Bedding Plant Production 2 2 0 3

This course is a continuation of HOR 170 and covers ordering, scheduling, and preparing bedding plant crops for commercial sale. Topics include the identification, production, and maintenance of bedding plants. Upon completion, students will be able to produce or work with bedding plants in a commercial business. Prerequisite: HOR 170

HOR 180 Residential Landscape Design 2 2 0 3

This course covers basic residential landscape horticulture principles with an emphasis on practical application for the homeowner. Topics include planning, design, plant selection, proper maintenance, and special effects to enhance a residential landscape. Upon completion, students will be able to apply basic landscape principles to enhance the aesthetic and practical value of a private residence. Prerequisites: None

HOR 181 Vegetable and Fruit Gardening 2 2 0 3

This course covers basic aspects of home vegetable and fruit gardening in a limited area. Topics include efficient planning, crop succession and utilization, variety selection, soil preparation, care, and maintenance of the garden. Upon completion, students will be able to develop an efficient vegetable and fruit production area for home use. Prerequisites: None

HOR 182 Non-Commercial Floral Design 2 2 0 3

This course introduces the construction of horticultural arrangements and floral designs. Emphasis is placed on developing the awareness and skills necessary to design and implement aesthetically pleasing floral designs. Upon completion, students will be able to design and construct floral arrangements using living and/or silk flowers and other related horticultural arrangements. Prerequisites: None

HOR 183 Indoor Plant Care and Identification 2 2 0 3

This course introduces the identification, care, and arrangement of common indoor plants in the home. Topics include plant identification, selection, cultivation, care and utilization of home plants. Upon completion, students will be able to display indoor plants in an aesthetically pleasing arrangement and care for all cultural requirements. Prerequisites: None

HOR 190 Prod of Plants & Crops 3 2 0 4

This course is designed to survey traditional and novel production practices in horticultural plants. Emphasis is placed on soil preparation, planting, cultivation, harvest, and marketing of flowers, fruits, and vegetables. Upon completion, students will be able to discuss the advantages and disadvantages of various production practices. Prerequisites: None

HOR 200 Landscape Horticulture I 3 4 0 5

This course introduces residential and commercial landscape principles and practices. Emphasis is placed on drafting, common elements of good design, plant material selection, and proper utilization. Upon completion, students will be able to read, plan, draft, and render a landscape design.
Prerequisite: HOR 121 or Dept. Chrp. approval

HOR 201 Landscape Horticulture II 3 4 0 5

This course introduces residential and commercial landscape development, cost analysis, and installation of a landscape design. Emphasis is placed on job cost estimates, installation of a planned landscape design, and post installation maintenance. Upon completion, students will be able to read blueprints of a landscape design, develop cost estimates, and implement the design. Prerequisite: HOR 200

HOR 202 Floral Design I 3 2 0 4

This course covers the principles of floral design, retail marketing, and other factors pertinent to the florist trade. Emphasis is placed on flower selection, arrangement, display, and the development of appropriate pricing and marketing. Upon completion, students will be able to construct floral displays, corsages, silk arrangements, and other products commonly found in the retail florist shop. Prerequisites: None

HOR 204 Plant Management Practice 4 2 0 5

This course is designed to identify the general principles and practices involved in turf, nursery, and orchard establishment and management. Topics include ornamental nursery management, fruit orchard management, and sod production. Upon completion, students will be able to plan, direct, and manage the operation of a small ornamental, fruit, or turf nursery. Prerequisite: HOR 135

HOR 205 Horticulture Marketing 3 2 0 4

This course covers marketing principles utilized in the retail horticulture trade. Topics include how to operate a small business such as a garden center involved in selling horticultural plants and supplies. Upon completion, students will be able to perform sales or management tasks in a small retail horticulture business. Prerequisites: None

HOR 210 Vegetable & Fruit Prod 3 2 0 4

This course covers the basics of fruit and vegetable production which include variety selection, soil preparation, culture, and harvest techniques. Emphasis is placed on variety selection, soil management, propagation, cultivation, insect and disease control, harvesting, and marketing. Upon completion, students will be able to plan, establish, and manage a fruit or vegetable operation. Prerequisites: None

HOR 224 Landscape Maintenance 2 4 0 4

This course provides a practical introduction to residential landscape maintenance. Topics include lawn, shrub, tree, flower maintenance and related pruning, disease, and insect chemical control measures. Upon completion, students will be able to maintain commercial or residential grounds utilizing current technology equipment and pesticides. Course offers excellent review for NC Commercial Pesticide License. Prerequisites: None

HOR 228 Plant Disease & Parasites 3 2 0 4

This course introduces the disease and insect pests which have an economic or aesthetic impact on horticultural production. Emphasis is placed on disease and insect identification, natural and artificial control measures, and economic impact. Upon completion, students will be able to identify common disease and insect problems and prescribe appropriate control measures based upon North Carolina state recommendations.
Prerequisites: HOR 135 and/or HOR 120 and 121

HOR 250 Fruit and Nut Production 3 2 0 4

This course covers the basics of fruit and nut production which will include cultivar selection, soil preparation, and harvest procedures. Emphasis is placed on production and culture of peach, plum, blueberry, strawberry, grape, pecan, walnut, bramble crops, and other regional fruit and nut crops. Upon completion, students will be able to plan, establish, and manage an orchard or nut production. Prerequisites: None

HOR 254 Plant Propagation 3 2 0 4

This course covers the study of the fundamental principles involved in the sexual and asexual reproduction of plants. Emphasis is placed on seed production techniques, grafting, stem and root propagation, and a brief introduction to micropropagation technique. Upon completion, students will be able to select and implement a propagation program for several commonly utilized horticultural plants. Prerequisites: None

HOR 258 Turf Management 3 2 0 4

This course is designed to identify the principles and practices involved in turf establishment, culture, and management. Emphasis is placed on grass identification, site and soil requirements, soil preparation, fertilization, pest control, and maintenance practices. Upon completion, students will be able to plan, direct, and maintain a commercial or residential turf area. Prerequisite: HOR 135

HOR 298 Seminar 1 0 0 1

This course introduces students to current topics in horticultural production, marketing, and sales. Emphasis is placed on professionalism in horticulture, new production techniques, and new trends in plant material selection. Upon completion, students will be able to deliver an organized presentation on a pertinent horticultural topic. Prerequisites: None

HOR 299 Internship 0 0 20 2

This course is designed to provide the student with an opportunity to pursue and be involved in work experience in a specialty field. Topics include employment involving production, processing, manufacturing, distributing, marketing, and inspecting horticultural products. Upon completion, students will be able to evaluate career potential in horticulture.
Prerequisite: 35 hours horticulture instruction or Dept. Chrp. approval

INS 215 Life Insurance 3 0 0 3

This course covers types of life insurance, policy provisions, applicable laws and regulations, and buying practices. Topics include term, permanent, endowment and special life plans, and required and optional policy provisions. Upon completion, students will be able to discuss types of life insurance, appropriate policy provisions, appropriate legal principles, and their applicable use. Prerequisite: INS 214

INS 216 Property and Casualty Ins 3 0 0 3

This course covers types of property and casualty coverages, policy provisions, applicable laws and regulations, buying procedures, government property, and casualty coverages. Topics include general liability insurance, automobile insurance, homeowner's insurance, commercial, fire, and extended coverages, worker's compensation, and various policy provisions. Upon completion, students will be able to discuss types of property and casualty coverages, appropriate policy provisions, and appropriate legal principles and their applicable uses. Prerequisite: INS 214

INS 217 Insurance Adjustment 3 0 0 3

This course covers methods, theories, and practices involved in insurance claims handling by adjusters. Topics include tort law, auto and homeowner's insurance policies, investigation, negotiation, and evaluation and settlement of injury and property claims. Upon completion, students will be able to apply for an adjustor's license issued by the North Carolina Department of Insurance. Prerequisites: INS 214 and 216

INS 220 Financial Services 2 2 0 3

This course provides an overview of the environment in which financial service professionals assist clients in meeting their financial security needs. Emphasis is placed on identifying client objectives and formulating and assessing plans to achieve them. Upon completion, students will be able to be more effective in information gathering and client counseling techniques. Prerequisites: None

INS 221 Income Tax 2 2 0 3

This course deals with the federal income tax system with particular reference to the taxation of life insurance and annuities. Emphasis is placed on the income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates. Upon completion, students will be able to render more professional financial service planning that can result in avoidance, minimization, or deferral of taxation. Prerequisites: None

INS 222 Economics 2 2 0 3

This course is designed to explain the basic economic principles and institutions necessary for explaining and solving business and government economic problems. Emphasis is placed on the price system, the market economy stabilization policy, the supply and demand for money, unemployment, and inflation. Upon completion, students will be able to understand, appreciate, and explain alternative solutions for the more common economic problems facing private and government sectors. Prerequisites: None

INS 223 Fin Stmt Analy/Ins Ben 2 2 0 3

This course covers various topics related to personal and business financial statements and describes individual insurance coverages concerning life, personal, property, and liability risks. Emphasis is placed on the techniques of financial statement analysis and personal budgeting relative to individual insurance needs and liability risks. Upon completion, students will be able to analyze a client's financial condition as it relates to insurance and risk management. Prerequisites: None

INS 224 Insur Environment & Oper 2 2 0 3

This course concerns legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, and disposition of life insurance proceeds. Emphasis is placed on insurance company types, organizations, and regulations with one assignment addressing psychological aspects of death and dying. Upon completion, students will be able to explain the regulatory aspects of company investments, reserves, privacy, surrender values, policy approval, and company examination. Prerequisites: None

INS 225 Grp Benefits & Social Ins 2 2 0 3

This course analyzes group insurance benefits, including the regulatory environment, contract provisions, marketing, underwriting, rate making, plan design, and alternative funding methods. Emphasis is placed on both government and private group programs related to the economic problems of death, old age, employment, and disability. Upon completion, students will be able to coordinate the various government programs and social insurance with group benefits available from the private sector. Prerequisites: None

INS 226 Pension & Retirement Plns 2 2 0 3

This course introduces qualified and nonqualified deferred compensation, pension, profit sharing plans, and funding instruments for these plans. Emphasis is placed on design, cost factors, and income and estate tax aspects of qualified and nonqualified plans. Upon completion, students will be able to assist individuals and business owners in planning for employee retirement income. Prerequisites: None

INS 227 Employee Benefits 2 2 0 3

This course focuses on the economic problems arising from death, old age, unemployment, and disability, and the benefit plans that alleviate them. Emphasis is placed on Social Security and other government programs, group insurance benefits, pension plans, and other deferred compensation arrangements. Upon completion, students will be able to apply their knowledge of the fundamental features of employee benefit plans sponsored by employers. Prerequisites: None

INS 228 Investments 2 2 0 3

This course relates to various aspects of investment principles and their application to personal financial planning. Emphasis is placed on investment markets, evaluation of common stock, real estate, debt management, mutual funds, variable annuities, and tax-sheltered investments. Upon completion, students will be able to discuss the growing importance of money management and assist in personal portfolio management. Prerequisites: None

INS 229 Wealth Accumulation Plng 2 2 0 3

This course deals with the establishment of a "living estate" through wise investment and tax planning. Emphasis is placed on real estate investment, tax-sheltered investments, and various retirement and tax planning vehicles. Upon completion, students will be able to advise and counsel individual investors on the strategies and means of accumulating wealth. Prerequisites: None

INS 230 Estate Gift Tax Plng 2 2 0 3

This course is concerned with estate and gift tax planning including the nature, valuation, disposition, administration, and taxation of property. Emphasis is placed on providing a basic understanding of unified estate and gift tax systems. Upon completion, students will be able to assist individuals in development of appropriate personal estate plans using various estate planning devices. Prerequisites: None

INS 231 Plng for Business Owners 2 2 0 3

This course concerns the tax and legal aspects of organizing a business and the problems in continuing the business after an owner's death. Emphasis is placed on insured buy-sell agreements, retirement of a business owner, corporate recapitalizations, stock dividends, and stock redemptions. Upon completion, students will be able to assist business owners in the techniques of business uses of life and health insurance plans. Prerequisites: None

INS 232 Financial Planning Applic 2 2 0 2

This course applies what students have learned in earlier ChFC courses with a case study approach to typical financial and estate problems. Emphasis is placed on sample cases from simple fact patterns to complex situations involving personal and business financial problems. Upon completion, students will be able to put into practice applications of integrating the tax, insurance, and investment planning strategies covered in earlier courses. Prerequisites: None

INS 235 Personal Risk Mgmt/Ins I 2 2 0 3

This course focuses on personal property-liability insurance products for handling loss exposures faced by individuals and families. Emphasis is placed on the role of homeowners, automobile, and liability insurance in handling loss exposures faced by the typical family. Upon completion, students will be able to apply product knowledge in formulating solutions to common personal liability problems. Prerequisites: None

INS 236 Personal Risk Mgmt/Ins II 2 2 0 3

This course focuses on the use of life and health insurance products for handling loss exposures faced by individuals and families. Emphasis is placed on the role of investments, retirement planning, business insurance, and estate planning in handling loss exposures. Upon completion, students will be able to apply product knowledge in formulating solutions to common personal financial problems. Prerequisites: None

INS 237 Multi-line Ins Laws/Oper 2 2 0 3

This course focuses on the legal aspects, underwriting, and pricing of life, health, and property-liability insurance products. Emphasis is placed on multi-line insurance laws, operations, and claims handling. Upon completion, students will be able to provide, as a practitioner, a comprehensive analysis of personal lines of insurance to clients for meeting their loss exposures. Prerequisites: None

ISC 102 Industrial Safety 2 2 0 3

This course provides an overview of the principles of functional risk management in the industry. Topics include job safety analysis, accident prevention models, special analysis of hazards, and employee motivation. Upon completion, students will be able to evaluate jobs for safety hazards, effect hazard elimination, and develop safe conditions.
Prerequisites: None

ISC 120 Principles of Indus Mgmt 3 0 0 3

This course provides an introductory overview of the history and evolution of American industry. Emphasis is placed on functional areas of the industry and their contribution to overall organizational effectiveness. Upon completion, students will be able to apply the principles of functional industrial management in the organizational setting.
Prerequisites: None

ISC 140 Manufacturing Process 3 0 0 3

This course provides an overview of the various materials and processes in today's industrial sector. Topics include properties of materials, process selection, cost factors, and processing innovations. Upon completion, students will be able to analyze industrial processes for function, cost, and feasibility. Prerequisites: None

ISC 201 Production & Inv Cont 2 2 0 3

This course is designed to survey concepts of control in production processes and inventory management. Topics include production scheduling, ROP, MRP, JUST IN TIME, TIME PHASING, and COMPUTER SYSTEMS. Upon completion, students will be able to analyze production and inventory systems for inefficiencies and formulate functional solutions to reduce the inefficiencies. Prerequisites: ISC 120 and 140, and MAT 100

ISC 202 Quality Control 3 0 0 3

This course is designed to survey the principles of process control by statistical methods. Topics include data collection, analysis, control charts for variables and attributes, and problem solving. Upon completion, students will be able to tabulate and present data and construct, plot, and analyze control charts. Prerequisites: None

ISC 204 Value Analysis 2 2 0 3

This course introduces the principles of cost-function relationships in products and processes. Topics include product and process analysis, value engineering, value purchasing, and function enhancement. Upon completion, students will be able to analyze products and processes for function and value. Prerequisites: None

ISC 205 Purchasing 3 0 0 3

This course is designed to survey the concepts of modern industrial purchasing. Emphasis is placed upon just-in-time, single sourcing methods in high output industries. Upon completion, students will be able to implement the concepts and systems for optimizing procurement. Prerequisites: None

ISC 221 Intro to Ind Engineering 3 2 0 4

This course provides an overview of the principles of motion and time study, process efficiency studies, and cost reduction. Topics include motion economy, time study, synthetic time systems, line balancing, standard data, and reporting. Upon completion, students will be able to apply the principles of industrial engineering to work stations and processes to effect efficiency and cost reduction. Prerequisites: ISC 120 and 140

ISC 234 Industrial Mgmt Seminar 1 0 0 1

This course provides classroom preparation for Industrial Management's Practicum course. Emphasis is placed on actual problems encountered by industrial managers and methods of problem resolution. Upon completion, students will be able to evaluate process and product problem parameters and formulate viable solutions. Prerequisite: Sophomore standing

ISC 235 Industrial Mgmt Practicum 0 0 10 1

This course is the classroom complement for ISC 234. Emphasis is placed on evaluation of practical experiences of the student during the seminar hours. Upon completion, students will be able to evaluate through discussion problems encountered in "real world" seminar experiences.
Prerequisites: Second year standing: ISC 221, 102, and 202

ISC 236 Management Science 2 2 0 3

This course is designed to survey quantitative methods of management and operations. Topics include statistics, project scheduling, linear programming, and decision theory. Upon completion, students will be able to apply scientific principles of management to industrial operations.
Prerequisites: MAT 100 and 104, BUS 282, ISC 140

ISC 241 Industrial Training 3 0 0 3

This course introduces the student to the fundamental principles of industrial training. Topics include learning curve analysis, training project analysis, task analysis, simulators, training models, and manual preparation. Upon completion, students will be able to complete a training analysis and prepare training audio and visual aids. Prerequisites: None

ISC 250 Computer Aided Mfg 3 4 0 5

This course is designed to survey areas of computer integration in the manufacturing system. Topics include computer inventory systems, graphics, and control concepts. Upon completion, students will be able to apply basic computer knowledge to problem solving and manufacturing efficiency. Prerequisites: MAT 100, EDP 103 and 116, ISC 140 and 220

ISC 251 Organizational Effective 3 0 0 3

This course provides both a theoretical and applicatory approach to organizational behavior. Topics include time management, motivational models, productivity models, creativity projects, and stress analysis. Upon completion, students will be able to apply effective organizational behavior techniques in the industrial setting. Prerequisites: None

ISC 252 Materials Handling 3 0 0 3

This course is designed to survey materials management, movement, and storage. Topics include automatic storage and retrieval, equipment, and plant layout. Upon completion, students will be able to analyze materials management requirements and objectives and formulate viable strategies to accomplish them. Prerequisites: ISC 120 and 140

LCJ 100 Basic Law Enforcement Training 15 0 27 24

This course contains all required studies for certification as a law enforcement officer as prescribed in the state of North Carolina basic training certification standards. Topics include an overall view of the criminal justice system, criminal law, motor vehicle law, and patrol procedures. All credits are earned through successful completion of the basic law enforcement training school. Prerequisites: None

LCJ 101 Intro to Criminal Justice 5 0 0 5

This course is a study of the American criminal justice system including police, court, and correctional components. Emphasis is placed on the history, philosophy, responsibilities, and functions of the various criminal justice system components. Upon completion, students will be able to explain the responsibilities and functions of the various components of the criminal justice system. Prerequisites: None

LCJ 102 Constitutional Law 5 0 0 5

This course introduces the history and fundamental concepts and principles of the U.S. Constitution and its Amendments. Topics include problems of federalism, safeguards to privacy, life, liberty, and property, and protection of civil and political rights. Upon completion, students will be able to relate U.S. Constitutional law to the criminal justice system in the U.S. Prerequisites: None

LCJ 103 Criminology 5 0 0 5

This course is an overview of research into the causes of crime. Topics include the learning theories, bio-social dynamics, and psychological factors thought to be important in the causation of crime. Upon completion, students will be able to relate theoretical concepts of criminology to practical attempts at crime control. Prerequisites: None

LCJ 104 Police Organization/Admin 5 0 0 5

This course is a study of the development, organization, and management of police departments. Topics include management theory, organizational behavior, policy-making, planning, decision making, budgeting, personnel management, manpower allocation, and productivity. Upon completion, students will be able to apply management theory, concepts, and principles in a police department. Prerequisites: None

LCJ 105 Intro to Corrections 3 0 0 3

This course is a study of the correctional system in America, historical perspectives, contemporary philosophies, and the treatment of offenders in a modern correctional system. Emphasis is placed on North Carolina corrections, alternatives to imprisonment, and current issues in corrections. Upon completion, students will be able to explain the organization and functions of the American correctional system. Prerequisites: None

LCJ 106 Corrections Counseling 3 2 0 4

This course is an overview of the rehabilitation theories and techniques applicable to correctional casework and counseling. Topics include psychotherapy, behavior modification, and rational therapy. Upon completion, students will be able to apply basic counseling principles to clients within the correctional setting.
Prerequisites: PSY 101 and LCJ 105 or Instructor consent

LCJ 107 Community Based Corrections 3 0 0 3

This course is an examination of the theoretical underpinnings and practical processes involved in probation and parole. Emphasis is placed upon community supervision as an important element of rehabilitation ideology. Upon completion, students will be able to discuss the true purposes and practices of probation and parole within our society.
Prerequisite: LCJ 105 or Instructor consent

LCJ 108 Criminal Law 5 0 0 5

This course includes a history of the development and philosophy of criminal law, theory and practice of criminalization, liability laws, crimes, and defenses. Emphasis is placed on North Carolina General Statutes, specifically Chapter 14. Upon completion, students will be able to explain elements of specific offenses against property, habitation, and person and apply criminal law concepts to enforcement.
Prerequisite: LCJ 102 or Instructor consent

LCJ 109 Criminal Evidence and Procedure 3 0 0 3

This course introduces the laws relating to arrest, search, seizure, and confessions. Topics include recent U.S. Supreme Court decisions and possible trends in relevant laws. Upon completion, students will be able to explain the history and expansion of individual rights of arrest, search, seizure, and confessions through judicial interpretation. Prerequisite: LCJ 102

LCJ 110 Public Safety Photography 1 4 0 3

This course includes the study of photographic equipment and its application to the field of public service. Emphasis is placed upon crime scene recording, micro and macro photography, and the processing of negative and positive materials. Upon completion, students will be able to produce and process photographic prints suitable for forensic purposes.
Prerequisites: None

LCJ 111 Interpersonal Comm for CJ 3 2 0 4

This course examines the theory, concepts, and principles of effective interpersonal communication in the criminal justice field. Emphasis is placed on the effective application of listening, assertion, conflict-management, and collaborative problem-solving skills to job-related situations. Upon completion, students will be able to make effective application of communication skills in client centered encounters. Prerequisites: None

LCJ 112 Confinement Facilities Management 3 0 0 3

This course is an examination of principles and processes involved in the administration of correctional institutions and agencies. Topics include management techniques, supervision styles, and organizational structures. Upon completion, students will be able to understand the methods and frameworks necessary for the routine administration of complex organizations.
Prerequisites: None

LCJ 113 Firearms & Defensive Tact 4 2 0 5

This course is designed to help the student develop an understanding of the need for use of and respect for firearms and defensive tactics. Emphasis is placed on the development of proficiency in the use of handguns, shotguns, and non-lethal weapons and defensive methods. Upon completion, students will be able to approach the use of firearms and defensive tactics in job related situations with selectivity and knowledgeability. Prerequisites: None

LCJ 114 Organization Theory and Behavior 5 0 0 5

This course provides an overview of organizational theory and behavior. Topics include organizational functions, structures, processes, and behavior and the manifestation of these phenomena in the criminal justice system. Upon completion, students will be able to discuss organizational theory as it applies to the criminal justice system. Prerequisite: PSY 101

LCJ 200 Criminal Justice Planning 4 2 0 5

This course is a study of the planning process in criminal justice agencies. Emphasis is placed on problem identification, problem solving technique, program development and implementation, program evaluation, and application of microcomputers in the planning process. Upon completion, students will be able to apply the principles of effective criminal justice planning. Prerequisite: BUS 109

LCJ 201 Traffic Planning & Mgmt 4 2 0 5

This course covers the history of traffic enforcement, the organization of the traffic unit, and enforcement responsibilities. Topics include the 3 E's and legislation, enforcement tactics, evaluation of traffic program effectiveness, and allocation of personnel and materials. Upon completion, students will be able to explain current traffic problems and the responsibilities of the law enforcement officer to the traffic function.
Prerequisites: None

LCJ 202 Judicial Process 4 2 0 5

This course is a study of the judicial process in America with special focus on the courts of original and appellate jurisdiction in North Carolina. Emphasis is placed on the roles of judicial personnel, pretrial process, jury selection, trial procedures, sentencing, and current problems in the courts. Upon completion, students will be able to explain the organization and operation of the American judicial system. Prerequisite: LCJ 102

LCJ 203 White Collar Crime 3 0 0 3

This course is an examination of business and organizational deviance. Emphasis is placed on the methods utilized and rationale for committing crime in the workplace. Upon completion, students will be able to identify the techniques and theories that relate to white collar crime.
Prerequisites: None

LCJ 206 Criminal Justice Issues 3 0 0 3

This course provides an analysis of contemporary problems that affect the criminal justice system in America today. Topics include causes of violent crime, gun control, stress, police deadly force, plea bargaining, prison conditions, and others. Upon completion, students will be able to discuss and analyze critical issues facing police, courts, and corrections in America today. Prerequisite: LCJ 101 or Instructor consent

LCJ 207 Interview & Interrogation 3 0 0 3

This course includes a survey of the sources of information available to criminal justice personnel and the techniques used in collecting information, interviewing, and interrogation. Emphasis is placed on the application of constitutional and democratic guidelines in obtaining admissions and confessions. Upon completion, students will be able to record admissions and confessions permanently and utilize the proper application of the polygraph. Prerequisite: LCJ 223 or Instructor consent

LCJ 208 Identification Techniques 2 2 0 3

This course includes the study of various identification methods and how they evolved into the present day systems. Emphasis is placed on various fingerprint classification systems and will include dental and skeletal identification. Upon completion, students will be able to classify, file, and retrieve fingerprint records and recognize the application of other forms of identification. Prerequisite: LCJ 210 or Instructor consent

LCJ 209 Juvenile Justice Admin 5 0 0 5

This course examines the prevention, control, and treatment of juvenile delinquency. Emphasis is placed on causes of delinquency, juvenile court processes, juvenile corrections, and the role of family and school in delinquency prevention. Upon completion, students will be able to discuss the theories, concepts, and principles of juvenile delinquency prevention, control, and treatment. Prerequisite: LCJ 103 or Instructor consent

LCJ 210 Criminal Investigation I 3 2 0 4

This course introduces the student to the fundamentals of criminal investigation. Topics include crime scene search and recording, collection and preservation of evidence, and case preparation and presentation. Upon completion, students will be able to process crime scenes and prepare evidence collected for court. Prerequisites: None

LCJ 211 Community Relations and Ethics 4 2 0 5

This course is designed to create an awareness of the need for good police and community relations. Topics include problems confronting police personnel, solutions to these problems, and strategies for improving police community relations. Upon completion, students will be able to initiate and complete a community related project employing the theories and strategies taught in the class.
Prerequisite: Second year standing or Instructor consent

LCJ 212 Prisoners' Rights 5 0 0 5

This course is an examination of the legal and constitutional rights granted to those incarcerated in American prisons. Emphasis is placed upon important legal decisions and their overall effect upon prison administration. Upon completion, students will be able to identify and understand the rationale behind institutional practices regarding the legal rights of inmates. Prerequisite: LCJ 102

LCJ 213 Firearms and Defensive Tactics 4 2 0 5

This course is designed to help the student develop an understanding of the need for use of and respect for firearms and defensive tactics. Emphasis is placed on the development of proficiency in the use of handguns, shotguns, and non-lethal weapons and defensive methods. Upon completion, students will be able to approach the use of firearms and defensive tactics in job related situations with selectivity and knowledgeability. Prerequisites: None

LCJ 219 Intro to Criminalistics 1 4 0 3

This course includes a survey of the various forensic sciences and their application to the field of law enforcement. Topics include common forensic applications such as weights, measurements, and comparisons, blood grouping, blood alcohol, luminol, drug analysis, and number restoration. Upon completion, students will be able to recognize, collect, and preserve evidence in the field, thereby contributing to the effectiveness of the crime laboratory. Prerequisite: LCJ 210

LCJ 221 Substance Abuse 5 0 0 5

This course is designed to present a history of drugs, in general, and the use and abuse of narcotics drugs, specifically. Topics include pharmacology and pharmacognosy; emphasis is placed on familiarizing the student with characteristics of drugs and drug abusers. Upon completion, students will be able to identify the general characteristics of narcotic drugs and narcotic drug abusers. Prerequisites: None

LCJ 231 Intro to Sec Svcs and Loss Prev 3 0 0 3

This course provides an overview of the role of Security and the Security Practioner in the contemporary business and governmental community. Topics include the administrative, personnel and physical aspects of security and loss prevention. Upon completion, students will be able to explain the basic security concepts and principles and the relationship of security to the Criminal Justice process. Prerequisites: None

LCJ 232 Commercial/Retail Loss Prevention 3 0 0 3

This course deals with security function of mercantile establishments. Topics include dishonest employees, shoplifters, receiving and warehousing, inventory control, special laws for shop owners and commercial enterprise. Upon completion, students will be able to understand the complexity of commercial/retail relationship to profitability and public relations. Prerequisite: LCJ 231 or Dept. Chrp. approval

LCJ 233 Industrial and Private Security Mgmt 3 0 0 3

This course covers organization, administration and management of security and plant protection units and programs in business, industry and government. Emphasis is placed on adapting the security function to meet organizational needs. Upon completion, students will be able to understand how the personnel and budget process relates to policy and decision making. Prerequisite: LCJ 231 or Dept. Chrp. approval

LEG 101 Intro to Paralegalism 3 0 0 3

This course includes an overview of the federal and state legal systems, observation of actual trials, and a study of legal terminology. Topics include an introduction to investigation, litigation, legal ethics, paralegal duties, constitutional law, legal research, and statutory and caselaw. Upon completion, students will be able to name sources of law, describe courtroom procedure, identify courts and their jurisdiction, and recognize unauthorized practice of law. Prerequisites: None

LEG 105 Partnership & Corp Law 3 0 0 3

This course introduces the student to the creation, organization, operation, and termination of the proprietary, partnership, and corporate forms of business. Topics include types of business enterprise, the formation and operation of sole proprietorships, partnerships, corporations, dissolution, and tax consequences. Upon completion, students will be able to prepare corporate charters, by-laws, other necessary corporate documents, partnership agreements, dissolutions, and check lists. Prerequisites: None

LEG 108 Admin & Governmental Law 3 0 0 3

This course involves a study of the scope and authority of administrative agencies of federal and state government and the role of paralegals in them. Emphasis is placed on the role of governmental agencies, exhausting administrative remedies, rules of evidence, and practice before such agencies. Upon completion, students will be able to represent a client before agencies where permitted, investigate cases, prepare necessary forms, and follow appellate process. Prerequisites: None

LEG 113 Family Law 3 2 0 4

This course involves the study of annulment, divorce, separation agreements, child custody, support, alimony, equitable distribution, adoption, and name changes. Emphasis is placed on drafting documents relating to the above topics and recent legislation modifying prior caselaw. Upon completion, students will be able to draft complaints and judgments relating to divorce, custody, support and equitable distribution, and to complete adoption forms. Prerequisites: None

LEG 115 Contract Law and the UCC 3 0 0 3

This course is designed to cover the requirements of enforceable contracts, remedies for breach of contract and selected articles of the Uniform Commercial Code. Emphasis is placed on the law of contracts and Uniform Commercial Code as it relates to commercial paper, sales and secured transactions. Upon completion, students will be able to apply the principles learned to the practice of business law in a law office. Prerequisites: None

LEG 117 Torts 3 0 0 3

This course involves the study of the law of negligence, intentional torts, and strict liability. Emphasis is placed on negligence with the preparation of pleadings, discovery devices, and the settlement brochure as course projects. Upon completion, students will be able to identify the elements of the various torts and prepare pleadings, discovery devices, and the settlement brochure. Prerequisites: None

LEG 118 Elements of Criminal Law 2 0 0 2

This course covers substantive criminal law-the elements comprising each crime and the facts sufficient to establish each element. Emphasis is placed on the analysis of all significant misdemeanor and felony crimes in North Carolina. Upon completion, students will be able to determine whether a specific factual situation is sufficient to support a criminal conviction for a particular crime. Prerequisites: None

LEG 119 Criminal Procedures 3 0 0 3

This course covers the procedures involved in a criminal case including both police procedures and those procedures which govern the trial of criminal case. Topics include arrest, search and seizure, confessions, pretrial discovery, guility pleas, pretrial motions, special defenses, sentencing and capital cases. Upon completion, students will be able to identify improper police procedures and to assist in disposition of a criminal case through guilty plea or trial. Prerequisites: None

LEG 130 Legal Research 4 2 0 5

This course teaches students to research law using statutory, caselaw, and constitutional authorities. Emphasis is placed on N.C. authorities as well as federal laws. Upon completion, students will be able to competently research legal problems on both the state and federal levels. Prerequisites: None

LEG 131 Legal Writing 2 4 0 4

This course is a continuation of LEG 130 and teaches the student the mechanics of legal writing. Emphasis is placed on teaching students to analyze legal authority, draft legal issues, and use proper writing style. Upon completion, students will be able to write a legal memorandum of law, a trial brief, and an appellate brief. Prerequisite: LEG 130

LEG 135 Civil Litigation I 5 0 0 5

This course involves the study of N.C. Rules of Civil Procedure relating to complaints, answers, counterclaims, crossclaims, and third party practice, service of process, and default judgment. Emphasis is placed on the practical aspects of service of process and the preparation of the above mentioned documents. Upon completion, students will be able to accomplish service of process and draft pleadings as well as use with confidence the Rules of Civil Procedure. Prerequisites: None

LEG 136 Civil Litigation II 3 0 0 3

This course is a continuation of Civil Litigation I and involves the study of motions and orders as well as the discovery devices. Emphasis is placed on the preparation of discovery devices and pretrial motions. Upon completion, students will be able to effectively use the discovery devices and to draft and serve motions. Prerequisites: None

LEG 140 Bankruptcy & Collections 2 2 0 3

This course involves the study of the two types of individual bankruptcy, specifically, straight bankruptcy and Chapter Thirteen. Emphasis is placed on the taking of financial information, preparing bankruptcy petitions, and the notification of creditors. Upon completion, students will be able to take financial information, prepare bankruptcy petitions, and deal with creditors. Prerequisites: None

LEG 204 Investigation 4 0 0 4

This course is designed to provide the student with a working knowledge of various aspects of civil and criminal investigation. Topics include interviewing techniques, obtaining records, sketching and photographing accident and crime scenes, collecting and preserving evidence, and tracing missing witnesses. Upon completion, students will be able to prepare questionnaires, interview witnesses, obtain criminal, motor vehicle, medical, and accident records, trace missing witnesses, and sketch scenes. Prerequisites: None

LEG 214 Property I - Real Estate 4 0 0 4

This course involves study of land ownership, present and future interests, absolute and conditional transfers, retained powers, and documents necessary to establish interest in land. Topics include freehold and less than freehold estates, fixtures, types of ownership, contracts, deeds, mortgages, intangible interests, liens, and recording. Upon completion, students will be able to identify personalty, realty and fixtures, intangible interests of estate conveyed, and requirements of deeds and explain recording system. Prerequisites: None

LEG 215 Property II - Title Search 2 4 0 4

This course is a continuation of LEG 214 and involves the actual examination of real estate titles to determine ownership, encumbrances, liens, and taxes. Topics include establishing the chain, checking out conveyances and liens, checking taxes and assessments, and writing the opinion. Upon completion, students will be able to trace chain of title, locate all liens, prepare forms for closing, and write rough draft of title opinion. Prerequisites: LEG 214 and 224

LEG 216 Property III - RE Closing 3 0 0 3

This course includes a study of intellectual property; a study of real estate closing. Topics include patent, trademark and copyright law; conventional, FHA, VA, FmHA closings, and closing documents. Upon completion, students will be able to prepare and explain necessary documents and conduct various types of real estate closings and explain intellectual property law. Prerequisites: None

LEG 220 Remedies 3 0 0 3

This course familiarizes the student with the various legal and equitable remedies which are available to a plaintiff in a lawsuit. Topics include a study of legal damages in tort and contract cases, injunctions, specific performance, declaratory judgments, and restitution. Upon completion, students will be able to evaluate a potential lawsuit as to which of the available legal and equitable remedies are most desirable.
Prerequisites: None

LEG 224 Wills, Trusts & Estates 4 2 0 5

This course includes a study of types of wills and trusts, probate and estate, administration, intestacy, wills and estates checklist, death taxes, and administration of trusts. Topics include terminology, law of wills, contesting wills, small estates, taxation, testamentary trusts, probate, and administration of estates. Upon completion, students will be able to draft and probate simple wills, compute death taxes, identify types of wills and trusts, and administer estates and trusts. Prerequisites: None

LEG 225 Law Office Management 2 0 0 2

This course includes study of types of law practice, setting up and maintaining administrative and mini-maxi systems, billing, flowcharting, and monitor systems. Topics include forms of law practice, monitoring, time-keeping, filing, bookkeeping, billing systems, drafting resumes, library maintenance, and case management systems. Upon completion, students will be able to set up and maintain various law office systems, hire and supervise non-lawyer personnel, and monitor case progress. Prerequisites: None

LEG 226 Consumer Protection 3 0 0 3

This course includes the study of factors creating the need for consumer protection, consumer protection laws, and government agencies administering those laws. Emphasis is placed on government agencies including the Food and Drug Administration, Federal Trade Commission, and Consumer Product Safety Commission. Upon completion, students will be able to identify the procedure to enforce consumer rights through courts and government agencies.
Prerequisites: None

LEG 228 Constitutional Law 3 0 0 3

This course is an introduction to constitutional analysis by familiarizing the student with the basic principles of constitutional law. Topics include a study of the most significant portions of the U.S. Constitution as they relate to current events. Upon completion, students will be able to better understand the practical application of the U.S. Constitution as it relates to their daily lives. Prerequisites: None

LEG 290 Internship 0 0 30 3

This course includes supervised on-the-job training in a law office for thirty hours per week for eleven weeks. Emphasis is placed on actual job training in law offices (two major areas of law), supervised by instructor and attorney. Upon completion, students will be able to understand law practice in Cumberland County and in general, put skills learned through classroom experience into practice. Prerequisites: All courses except LEG 216 and 228

LEG 291 Seminar 3 0 0 3

This course includes the exchange of internship experiences by the students, review of critical courses, guest speakers, and evaluation of all courses required by curriculum. Topics include work experiences of interns, written evaluation of courses, evaluation of internship, and review of major courses. Upon completion, students will be able to join the working world of legal assistants under supervision of attorneys.
Prerequisites: All courses except LEG 216 and 228

MAS 1100 Introduction to Bricklaying 2 0 6 4

This course covers the history of the bricklaying industry, the types of brick, and the tools needed in the trade. Topics include laying foundations and concepts in arithmetic as it applies to masonry. Upon completion, students will be able to better understand the fundamentals of masonry.
Prerequisites: None

MAS 1101 Masonry Concepts 2 0 6 4

This course covers the types of brick, bonding, and various uses of tools needed in masonry. Topics include laying brick and an introduction to reading blueprints. Upon completion, students will be able to read simple blueprints, will be knowledgeable in the different types of brick and tools.
Prerequisites: None

MAS 1102 Fundamental of Bricklaying I 2 0 6 4

This course introduces bonding, actual use of the tools, and spreading mortar. Topics include laying block and more in-depth interpretations of blueprint reading as it applies to masonry. Upon completion, students will be able to spread mortar, interpret blueprints, and lay brick.
Prerequisites: None

MAS 1107 **Fund of Bricklaying II** 4 0 18 10

This course introduces the practical application of selecting mortars, the proper use of bonds, expansion strips, and wall ties, and methods of caulking. Topics include the construction of various building elements to include walls, chimneys, and arches. Upon completion, students will be able to read details of blueprints for grades, foundations, walls, elevations, chimneys, fireplaces, and arches. Prerequisite: MAS 1106

MAS 1107A **Fund of Bricklaying II** 2 0 6 4

This course is designed to introduce bonds and how they are used. Topics include the construction of walls and other masonry projects. Upon completion, students will be able to lay brick to the line and will be more skilled at bonding. Prerequisite: MAS 1106

MAS 1107B **Fund of Bricklaying II** 1 0 6 3

This course is a continuation of MAS 1107A and introduces the practical application of selecting mortar and the proper use of wall ties. Topics include construction of walls and chimneys. Upon completion, students will be able to lay brick and block walls with some skill and accuracy.
Prerequisite: MAS 1107A

MAS 1107C **Fund of Bricklaying II** 1 0 6 3

This course is a continuation of MAS 1107B and includes the proper use of bonds, expansion joints, and methods of caulking. Topics include the construction of fireplaces and arches. Upon completion, students will be able to read details of blueprints for foundations, walls, chimneys, fireplaces, and arches. Prerequisite: MAS 1107B

MAS 1108 **Fund of Masonry I** 6 0 18 12

This course introduces students in the actual layout of masonry lintels, fireplaces, tiles, stone, panels, and other related masonry structures. Topics include the calculation of required quantities and the cost of materials for building various masonry components and structures. Upon completion, students will be able to read more complex blueprints and will have gained more skill in laying various masonry units.
Prerequisite: MAS 1107

MAS 1108A **Fund of Masonry I** 2 0 6 4

This course introduces students to the actual layout of masonry lintels and fireplaces. Topics include the calculation of required quantities. Upon completion, students will be able to do estimates of basic structures.
Prerequisite: MAS 1107

MAS 1108B **Fund of Masonry I** 2 0 6 4

This course is a continuation of MAS 1108A and covers more difficult blueprints and the use of tile and stone. Topics include estimating materials and the cost of materials. Upon completion, students will be able to estimate with a good deal of accuracy and read more complex blueprints.
Prerequisite: MAS 1108A

MAS 1108C **Fund of Masonry I** 2 0 6 4

This course is a continuation of MAS 1108B and provides more hands-on experience and in-depth estimation of materials, cost, and labor. Topics include labor and material costs. Upon completion, students will be able to estimate materials, cost, and labor and will have attained speed and accuracy in laying masonry units. Prerequisite: MAS 1108B

MAS 1109 **Fund of Masonry II** 6 0 18 12

This course is designed to include all the fundamentals and techniques used in masonry construction. Emphasis is placed on fundamentals of concrete masonry to include grading, forming, mixing by proportions, and curing of concrete. Upon completion, students will be able to compete for jobs being skilled in various techniques and much improved in speed and accuracy.
Prerequisite: MAS 1108

MAS 1109A **Fund of Masonry II** 2 0 6 4

This course is designed to include a variety of masonry techniques. Topics include grading and forming. Upon completion, students will be able to demonstrate the basics of laying out building lines and digging footings.
Prerequisite: MAS 1108

MAS 1109B **Fund of Masonry II** 2 0 6 4

This course is a continuation of MAS 1109A and includes fundamentals of masonry. Topics include mixing by proportions and stepped footing. Upon completion, students will be able to lay brick and block under more difficult circumstances than previously covered. Prerequisite: MAS 1109A

MAS 1109C **Fund of Masonry II** 2 0 6 4

This course is a continuation of MAS 1109B and is designed to employ the techniques and fundamentals of the entire course. Topics include the curing of concrete. Upon completion, students will be able to compete for jobs by demonstrating skill in various techniques and much improvement in speed and accuracy. Prerequisite: MAS 1109B

MAS 1113 Masonry Building Codes 4 0 0 4

This course covers building codes and focuses on regulations governing the minimum requirements for local and state construction. Topics include minimum requirements of the North Carolina state code relating to residential and small commercial buildings. Upon completion, students will be able to determine if a building is in compliance with the North Carolina Building Code. Prerequisites: None

MAS 90 Fundamentals of Masonry 2 0 3 3

This course covers the basic types of brick bonding, tools needed in the trade, and blueprint reading. Emphasis is placed on the construction of various building elements including walls, leads, corners, and other related projects. Upon completion, students will be able to read simple blueprints and will have gained more skill laying various masonry units.
Prerequisites: None

MAT 100 Technical Algebra I 5 0 0 5

This course is designed to provide the student with fundamental concepts of algebra and trigonometry. Topics include basic operations of algebra, linear equations and inequalities, exponents, polynomials, and right triangles. Upon completion, students will be able to apply their knowledge of algebra and trigonometry to their specific areas of study. Prerequisite: MAT 94 or equiv.

MAT 101 Technical Math I 5 0 0 5

This course is designed to develop the elementary algebraic and trigonometric skills necessary for the solution of practical technical problems. Topics include the four basic operations with algebraic expressions, functions, trigonometry, j-operator, exponents, and vectors. Upon completion, students will be able to interpret and employ trigonometric concepts and use algebraic skills in solving practical technical problems. Prerequisites: MAT 95, 96, and 97 or equiv.

MAT 102 Technical Math II 5 0 0 5

This course, a continuation of MAT 101, develops skills in solving equations and inequalities and in graphing techniques with algebraic and transcendental functions. Topics include systems of equations, logarithmic and exponential functions, graphs of trigonometric functions, higher degree equations, inequalities, variation, and progressions. Upon completion, students will be able to solve higher degree equations and inequalities and use graphic techniques on exponential, logarithmic, and trigonometric functions. Prerequisite: MAT 101

MAT 103 Technical Math III 5 0 0 5

This course, a continuation of MAT 102, develops skills in using trigonometric identities, solving trigonometric equations, analyzing functions, and differentiating algebraic functions. Emphasis is placed on trigonometric identities, solving trigonometric equations, analytic geometry, limits, differentiation, and applications of the derivative. Upon completion, students will be able to solve trigonometric equations, analyze functions, and apply differentiation to technical problems. Prerequisite: MAT 102

MAT 104 Technical Algebra II 5 0 0 5

This course is a continuation of MAT 100 with additional study of algebraic techniques. Emphasis is placed on factoring, quadratic equations, algebraic fractions, graphing and solving linear systems, roots, radicals, factoring, and quadratic equations. Upon completion, students will be able to apply their knowledge of algebra and trigonometry to their specific areas of study.
Prerequisite: MAT 100 or equiv.

MAT 105 Algebra & Trigonometry 5 0 0 5

This course provides the student with college level algebraic and trigonometric skills. Topics include exponents, binomial theorem, factoring, linear and quadratic equations, polynomial and rational functions, trigonometric functions, and their applications. Upon completion, students will be able to employ their knowledge of algebra and trigonometry to specific areas in their curricula. Prerequisites: MAT 95 and 96 (MAT 97 recommended)

MAT 106 EDP Math I 5 0 0 5

This course provides a review of algebra and an introduction to computer related mathematics. Topics include real numbers, linear equations, inequalities, functions, numeration systems (binary, octal, and hexadecimal), logic, sets, Boolean algebra, and circuits. Upon completion, students will be able to work effectively with the real number system and to relate mathematical concepts to computer technology.
Prerequisites: MAT 95 and 96 or equiv.

MAT 107 EDP Math II 3 0 0 3

This course is a continuation of MAT 106 with emphasis on orderly procedures in problem solving. Topics include matrix arithmetic, invertible matrices, determinants, systems of linear equations, linear programming, the simplex algorithm, and numerical methods. Upon completion, students will be able to apply systematic strategies for problem solving and to relate problem solving strategies to computer technology. Prerequisite: MAT 106

MAT 110 Business Mathematics 5 0 0 5

This course introduces students to the use of mathematics in the business world. Topics include percents, checking accounts, simple interest, credit, and insurance. Upon completion, students will be able to compute percents, discounts, proceeds, finance charges, insurance premiums, monthly payment amounts, and simple interest. Prerequisites: None

MAT 111 College Trigonometry 5 0 0 5

This course introduces the concept of function to develop the analytical aspects of trigonometry and applies trigonometric principles in the solution of problems. Topics include real number sets and functions, trigonometric functions, trigonometric identities and equations, triangle trigonometry, complex numbers, and vectors. Upon completion, students will be able to demonstrate an understanding of trigonometric principles, particularly identities and equations. Prerequisite: MAT 109 or equiv.

MAT 112 College Algebra II 5 0 0 5

This course is a continuation of MAT 109 with equal emphasis on theory and manipulative skills. Topics include functions (polynomial, exponential, and logarithmic), matrices, sequences, counting, and systems of equations and inequalities. Upon completion, students will be able to explain the nature of functions and transfer that knowledge to further their mathematical studies. Prerequisite: MAT 109 or equiv.

MAT 121 Technical Math I 5 0 0 5

This course is designed to enable the students to solve technical problems encountered in their curriculum by stressing manipulative skills. Topics include a basic review of geometry, with additional attention focused on elementary concepts of algebra and trigonometry. Upon completion, students will be able to adapt this basic knowledge of mathematics to technical problem solving in other course work. Prerequisites: MAT 95, 96, and 97 or equiv.

MAT 122 Technical Math II 5 0 0 5

This course is a continuation of MAT 121 with advanced study of algebra and trigonometry, as well as an introduction to statistics. Topics include statistics, systems of equations, graphs of the trigonometric functions, vectors, oblique triangles, and both logarithmic and exponential functions. Upon completion, students will be better able to apply their increased knowledge of mathematics to technical engineering problems. Prerequisite: MAT 121

MAT 123 Technical Math III 5 0 0 5

This course is the third in a series designed to permit students in technological curricula to solve technical problems encountered in their work. Topics include inequalities, geometric progressions, analytic geometry, limits, the derivative and the integral and its applications. Upon completion, students will be able to grasp the more technical and scientific aspects of their curriculum through a thorough knowledge of mathematics. Prerequisites: MAT 121 and 122

MAT 131 College Mathematics 5 0 0 5

This course provides the student with a survey of mathematical topics applicable to a liberal arts education. Emphasis is placed on sets, logic, the metric system, consumer mathematics, probability, and statistics. Upon completion, students will be able to employ their knowledge of these topics to specific areas in their curricula. Prerequisites: MAT 95 and MAT 96 or equivalent

MAT 132 College Algebra 5 0 0 5

This course provides a conceptual approach to the principles of algebra while concurrently strengthening the student's manipulative skills in algebra. Topics include the basic concepts of algebra: equations, inequalities, absolute value, and functions (linear, polynomial, rational, and inverse). Upon completion, students will be able to work effectively with functions and equations and apply this knowledge to further mathematical studies. Prerequisites: MAT 95 and MAT 96 or equivalent

MAT 133 Pre-Calculus I 5 0 0 5

This course is designed to emphasize those topics in college algebra which are fundamental to the study of calculus. Topics include review of basic concepts; equations and inequalities in one variable; functions; systems of equations and inequalities. Upon completion, students will be able to apply their knowledge of college algebra to the study of calculus. Prerequisites: MAT 132 or equivalent

MAT 134 Pre-Calculus II 5 0 0 5

This course, a continuation of MAT 133, is designed to emphasize topics in trigonometry, analytic geometry and other areas fundamental to the study of calculus. Topics include expontial and logarithmic functions; right and oblique triangles; trigonometric identities and equations; conic sections; vectors; Binomial Theorem. Upon completion, students will be able to apply their knowledge of trigonometry, logarithms and conic sections to the study of calculus. Prerequisite: MAT 133

MAT 150 Functional Geometry 5 0 0 5

This course develops fundamental concepts for construction of plane and solid figures and for surface and volume measurements and related problems. Topics include trigonometry of the right triangle, gear ratios, lead screw, and indexing problems. Upon completion, students will be able to apply these geometric and trigonometric concepts to work in the machine shop. Prerequisite: MAT 104

MAT 151 Trig for the Machinist 5 0 0 5

This course reviews geometric concepts and extends trigonometric concepts to include oblique triangles with application to practical shop problems. Topics include geometric propositions and trigonometry of right and oblique triangles (the sines and cosines laws). Upon completion, students will be able to apply both geometric and trigonometric concepts in the solution of problems encountered in the machine shop. Prerequisite: MAT 150

MAT 201 Calculus I 5 0 0 5

This course introduces basic concepts necessary to provide a comprehensive treatment of analytic geometry and limits. Topics include real numbers, functions, limits and continuity, the derivative, and the integral. Upon completion, students will be able to apply differentiation and integration techniques to algebraic functions of one variable. Prerequisites: MAT 105 or 109 and 111

MAT 202 Calculus II 5 0 0 5

This course is a continuation of MAT 201 with emphasis on applications of differentiation and integration, including treatment of transcendental functions. Topics include the definite integral and applications, the fundamental theorem of calculus, and functions (logarithmic, exponential, and trigonometric). Upon completion, students will be able to solve application problems using differentiation and integration techniques and apply these techniques to transcendental functions. Prerequisite: MAT 201

MAT 203 Calculus III 5 0 0 5

This course is a continuation of MAT 202 with a review of fundamental integration forms and an introduction to polar coordinates and series. Topics include algebraic and transcendental functions, conic sections, polar coordinate systems, polar equations, and infinite series. Upon completion, students will be able to integrate successfully various functions and have a working knowledge of conic sections, polar coordinates, and infinite series. Prerequisite: MAT 202

MAT 204 Calculus IV 5 0 0 5

This course is a continuation of MAT 203 with emphasis on the indefinite integral and indeterminate forms. Topics include parametric equations, vectors, solid analytic geometry, and differentiation and integration of various functions of several variables. Upon completion, students will be able to pursue topics in advanced calculus or other mathematics courses. Prerequisite: MAT 203

MAT 210 Business Math Applications 5 0 0 5

This course covers advanced applications of mathematics in the business world. Topics include analysis of financial statements, consumer credit, annuities, depreciation, retail math, and an introduction to statistics. Upon completion, students will be able to analyze income statements and balance sheets, compute credit charges, depreciation schedules, and recognize statistical data. Prerequisite: MAT 110

MAT 221 Calculus I 5 0 0 5

This course introduces basic concepts necessary to provide a comprehensive treatment of limits and an introduction to derivatives and integrals. Topics include Cartesian plane and functions, limits and continuity, the derivative and its applications, and the integral. Upon completion, students will be able to apply differentiation and basic integration techniques to algebraic functions of one variable. Prerequisites: MAT 134 or equivalent

MAT 222 Calculus II 5 0 0 5

This course is a continuation of MAT 221 with emphasis on applications of integration and differentiation and integration of transcendental functions. Topics include applications of integration, differentiation and integration of transcendental functions, techniques of integration, and conic sections. Upon completion, students will be able to solve application problems using integration to problems involving transcendental functions. Prerequisites: MAT 221 or equivalent

MAT 286 Technical Math IV 3 0 0 3

This course is a continuation of MAT 103 and develops skills in using the techniques of differentiation and integration. Topics include integration and differentiation of logarithmic, trigonometric, inverse trigonometric, exponential, and algebraic functions. Upon completion, students will be able to solve practical problems using the techniques of differentiation and integration. Prerequisite: MAT 103

MAT 1101 Vocational Mathematics I 3 2 0 4

This course is designed to develop basic mathematical concepts and principles used to compute data necessary in the vocational fields. Topics include English and metric measurement systems, common and decimal fractions, percent, ratio, and proportion. Upon completion, students will be able to solve practical problems in the vocational fields. Prerequisites: None

MAT 1102 Vocational Algebra 3 2 0 4

This course covers the basic concepts and operations of algebra for addition, subtraction, multiplication, and division of real numbers. Topics include whole numbers, fractions, decimals, letter representation, grouping, factoring, ratio and proportion, variation, graphical, and algebraic solutions. Upon completion, students will be able to apply these concepts and operations in the solution of first degree and simultaneous systems of equations. Prerequisite: MAT 1101 or equiv.

MAT 1103 Geometry 3 0 0 3

This course introduces the fundamental properties and definitions of plane and solid figures. Topics include selected general theorems, geometric construction of lines and angles, areas of plane figures, and volumes of solids. Upon completion, students will be able to apply these principles to shop and drafting work. Prerequisite: MAT 1101 or equiv.

MAT 1104 Vocational Trigonometry 3 2 0 4

This course provides an introduction to the trigonometric concepts which relate to mechanical drafting and shop problems. Topics include fundamental concepts of triangles, right triangle trigonometry, trigonometric functions for any angle, and the solution of oblique triangles. Upon completion, students will be able to employ their knowledge of right and oblique triangles in the solution of practical problems. Prerequisite: MAT 1102

MAT 1105 Math for Nurses 3 0 0 3

This course provides the practical nursing student with a review of fundamental mathematical concepts, with applications to nursing procedures. Topics include whole numbers, fractions, decimals, percents, proportions, systems of measurement, oral and injectable medications, and pediatric dosages. Upon completion, students will be able to use basic mathematical concepts in the calculations for various types of adult and pediatric medications. Prerequisites: None

MAT 1110 Math for Building Trades 5 0 0 5

This course covers the basic mathematical concepts relating to the building trades. Topics include basic concepts of arithmetic and geometry with emphasis placed on application problems. Upon completion, students will be able to solve the types of basic mathematical problems which are encountered in the building trades. Prerequisites: None

MAT 1116 Math for Plumbers 3 2 0 4

This course provides skills necessary for the layout, measurement, and computation of pipe lengths, volumes, pressures, and capacities of water tanks and pipes. Topics include basic arithmetic, linear equations, linear measurement using angles to compute offset, diagonal, rise or run, percent, areas, and volumes. Upon completion, students will be able to apply skills learned to solve practical problems in the plumbing trade.
Prerequisites: None

MAT 1151 Trigonometry I 3 2 0 4

This course provides tool and die students the opportunity to develop and use the concepts of algebra, trigonometry, and plane (two dimensional) geometry. Emphasis is placed on shop related problems involving right and oblique triangle trigonometry, geometry, and algebra. Upon completion, students will be able to solve application problems pertaining to the tool and die shop. Prerequisite: MAT 151

MAT 1152 Trigonometry II 3 2 0 4

This course covers the fundamental concepts of solid (three dimensional) geometry and includes the solution of compound angles. Emphasis is placed on use of plane trigonometry and solid geometry to solve compound angles from pictorial and orthographic drawings. Upon completion, students will be able to solve compound angle problems pertaining to the tool and die shop.
Prerequisite: MAT 1151

MAT 50 General Mathematics 6 4 0 8

This course provides a lecture and laboratory setting to improve the mathematical background of those students who need to review the basic operations of arithmetic. Topics include the four basic operations of addition, subtraction, multiplication, and division of whole numbers, common fractions, and decimal fractions. Upon completion, students will be able to perform the four basic operations of arithmetic with emphasis on practical applications. Prerequisites: None

MAT 91 Basic Math I 3 2 0 4

This course is designed to improve the mathematical background of those students who need to review the basic operations of arithmetic. Topics include the four basic operations of addition, subtraction, multiplication, and division of whole numbers, common fractions, and decimal fractions. Upon completion, students will be able to perform the four basic operations of arithmetic with emphasis on practical application. Prerequisites: None

MAT 92 Basic Math II 3 2 0 4

This course covers the relationships between percent, ratios, and proportions and introduces signed numbers. Emphasis is placed on ratio, proportion, percent, and operations with signed numbers. Upon completion, students will be able to solve problems involving percent by using proportion as well as perform the four basic operations with signed numbers. Prerequisite: MAT 91 or equiv.

MAT 93 Basic Math III 3 2 0 4

This course covers the English and metric systems of measurement, roots and radicals, basic geometry, and basic algebra. Emphasis is placed on roots and radicals, English and metric measurements, Pythagorean theorem, algebraic expressions, and linear equations. Upon completion, students will be able to apply their skills to solve practical problems using basic geometry and elementary algebra. Prerequisite: MAT 92 or equiv.

MAT 94 Pre-Algebra 3 2 0 4

This course provides a rapid review of arithmetic, basic geometry, and elementary algebra. Topics include basic operations of arithmetic and signed numbers, percent, radicals, metric and English systems, perimeter, area, volume, and right triangle. Upon completion, students will be able to apply arithmetic, and basic geometry to solve problems.
Prerequisites: None

MAT 95 Algebra I 3 2 0 4

This course introduces basic mathematics concepts and develops the algebraic skills needed in subsequent courses in either mathematics or science. Emphasis is placed on number systems, solving equations and inequalities, exponents and polynomials, factoring, and applications. Upon completion, students will be able to use the algebraic skills acquired to solve problems as well as continue to subsequent mathematics or science courses. Prerequisite: MAT 94 or equiv.

MAT 96 Algebra II 3 2 0 4

This course is a continuation of MAT 95, covering more advanced topics in algebra. Emphasis is placed on rational expressions, graphing, linear systems, roots and radicals, and quadratic equations. Upon completion, students will be able to use the algebraic skills acquired to permit them to achieve success in college level or technical mathematics courses.
Prerequisite: MAT 95 or equiv. Algebra I course

MAT 97 Algebra III/Trig 3 2 0 4

This course provides a comprehensive review of basic algebra and covers the trigonometric concepts pertaining to right triangles, oblique triangles, and vectors. Topics include basic numeric and algebraic concepts, ratio, proportion, variation, right triangle trigonometry, graphing, trigonometric functions, oblique triangles, and vectors. Upon completion, students will be able to graph functions, solve both right and oblique triangles, and apply algebraic and trigonometric concepts in solving technical problems.
Prerequisites: MAT 95 and 96 or two years of algebra

MAT 98 Math of Dosages/Solutions 3 2 0 4

This course provides the pre-ADN student with a review of mathematical topics and a discussion of calculation of dosages and solutions. Topics include fractions, decimals, percents, proportions, systems of measurement, oral and injectable medications, intravenous medications, and pediatric dosages. Upon completion, students will be able to employ mathematical concepts in the calculation of dosages for various types of adult and pediatric medications. Prerequisite: Instructor approval

MEC 107X Numerical Cntrl in Mfg I 2 0 0 2

This course is designed to acquaint the student with computer numerical control machining, and the role it holds in modern manufacturing. Emphasis is placed on the control unit, command language, programming procedures, and use of the equipment. Upon completion, students will be able to simple program, edit program, and enter program in the control unit. Prerequisite: MAT 150
Corequisite: MEC 107Y

MEC 107Y MEC-107 Lab 0 0 3 1

This course is designed to acquaint the student with the controls on the machine and to teach setting up the machine to run a part. Emphasis is placed on the control unit, setting tool length off-set, cutter compensation, setting reference point, and entering data. Upon completion, students will be able to do simple set-ups and programs on the computer numerical control machine.
Prerequisite: MAT 150 Corequisite: MEC 107X

MEC 108X **Numerical Cntrl in Mfg II** 2 0 0 2

This course is designed to further acquaint the student with CNC controls like the (Fanuc) 3TC controller and the Anilam Crusader II control unit. Emphasis is placed on doing complex part programs and showing how personal computers are interfaced with equipment to speed up manufacturing. Upon completion, students will be able to set up equipment, do complex programs, and explain how off-line computers are used. Prerequisite: MEC 107
Corequisite: MEC 108Y

MEC 108Y **MEC-108 Lab** 0 4 6 4

This course is designed to further acquaint the student with CNC controls like the (Fanuc) 3TC controller and the Anilam Crusader II control unit. Emphasis is placed on off-line programming, the Cartesian coordinate system, keyboard, modes of operations, address codes, programming, and operation. Upon completion, students will be able to do some complex part programming and will know how to use a personal computer. Prerequisite: MEC 107
Corequisite: MEC 108X

MEC 151X **Theory & Practice I** 3 0 0 3

This course introduces machine shop technology. Emphasis is placed on identification and basic fundamentals of tools and machinery in a machine shop. Upon completion, students will be able to understand procedures and safety of using hand tools, inspection equipment, and grinders.
Prerequisites: None
Corequisite: MEC 151Y

MEC 151Y **MEC-151 Lab** 0 0 12 4

This course provides practical hands-on use of the machine shop equipment. Emphasis is placed on proper use of the tools, inspection equipment, and grinders. Upon completion, students will be able to use the tools, inspection equipment, and grinders in a machine shop.
Prerequisites: None Corequisite: MEC 151X

MEC 152X **Theory & Practice II** 3 0 0 3

This course introduces lathe and lathe accessories used in machine shop operations. Emphasis is placed on operation of the lathe and lathe accessories. Upon completion, students will be able to explain the purpose and operation of the lathe. Prerequisite: MEC 151 Corequisite: MEC 152Y

MEC 152Y **MEC-152 Lab** 0 2 6 3

This course provides hands-on experience with the lathe, band saw, and drill press. Emphasis is placed on practicing the operation of the lathe, band saw, and drill press. Upon completion, students will be able to operate the lathe, band saw, and drill press safely. Prerequisite: MEC 151
Corequisite: MEC 152X

MEC 153X **Theory & Practice III** 3 0 0 3

This course introduces the mill machine and its attachments. Emphasis is placed on proper operation of mill machine. Upon completion, students will be able to explain the uses of the mill machine and its attachments.
Prerequisite: MEC 152 Corequisite: MEC 153Y

MEC 153Y **MEC-153 Lab** 0 2 6 3

This course provides hands-on experiences in operating the mill machine and its attachments. Emphasis is placed on using the different functions of the mill machine and its attachments. Upon completion, students will be able to safely operate the mill machine and its attachments.
Prerequisite: MEC 152 Corequisite: MEC 153X

MEC 154X **Theory & Practice IV** 3 0 0 3

This course provides more emphasis on the use of machine shop equipment. Emphasis is placed on set-up and machining of different metals and shapes. Upon completion, students will be able to explain the operation and tooling for machine shop equipment. Prerequisite: MEC 153
Corequisite: MEC 154Y

MEC 154Y **MEC-154 Lab** 0 0 9 3

This course provides hands-on experience operating all machinery in the machine shop. Emphasis is placed on each machine. Upon completion, students will be able to operate with more understanding of machines and metal shapes.
Prerequisite: MEC 153 Corequisite: MEC 154X

MEC 160 **Industrial Specifications** 3 0 0 3

This course is designed to acquaint the student with industrial specifications on nuts, bolts, steel, gears, dowels, and other tools for machines and equipment. Emphasis is placed on studying machine tool and hand tool specifications, job sheets, and procedure sheets along with specification sheets. Upon completion, students will be able to use the specification charts and the machinist handbook. Prerequisite: MEC 153

MEC 182 Jig & Fixture Making 3 0 9 6

This course is designed to acquaint the student with the principles of jigs and fixtures, their application to industry, and the basic fabrication methods. Emphasis is placed on developing self-confidence and accuracy in the student's ability to do high precision work. Upon completion, students will be able to explain the working aspects of jig and fixture and their components. Prerequisite: MEC 154

MEC 183 Machine Repair 2 0 3 3

This course is designed to acquaint the student with movable parts of machine tools and basic methods of joining parts together to obtain satisfactory service. Emphasis is placed on developing an understanding of the operation, hydraulic and electrical systems, and rebuilding of machine tools. Upon completion, students will be able to do minor repairs on machines and will have a working knowledge of machine tools. Prerequisite: MEC 252

MEC 210 Physical Metallurgy 3 2 0 4

This course is designed to acquaint the student with the equipment used in heat treating of ferrous and nonferrous metals. Emphasis is placed on the effects of hardening, tempering, and annealing upon the structure and physical properties of metals. Upon completion, students will be able to use equipment for heat treatment and will know what quench medium to use with different types of steels. Prerequisite: MEC 153

MEC 252 Precision Machines 3 0 9 6

This course is designed to assist students in machining parts in close tolerances and to help them understand the importance of these processes to industry. Emphasis is placed on close tolerances, surface finish, and proficiency using precision measuring and gauging instruments. Upon completion, students will be able to machine parts to very close tolerances. Prerequisite: MEC 154

MEC 253 Advanced Machine Process 3 0 6 5

This course is designed to further acquaint the student with advanced set-ups and operation of machines for mass production. Emphasis is placed on advanced set-ups to motivate students to apply themselves to find ways of improving methods of production equipment. Upon completion, students will be able to do various complex set-ups on milling machines, lathes, and grinders. Prerequisite: MEC 252

MEC 1104 Structure of Metals 3 2 0 4

This course covers the identification of metal structures, markings, manufacturing and classification, properties, and specifications derived from manuals and charts. Topics include processing metals through controlled experiments by preparation and hands-on work performed by the student in the lab. Upon completion, students will be able to identify specific metals through lab and microscopic processing and determine properties of metal through lab techniques. Prerequisites: None

MEC 1108 Industrial Materials 3 0 3 4

This course includes a study of modern industrial materials with emphasis on their physical properties and applications. Emphasis is placed on methods by which materials are produced and processed; testing data is analyzed and recorded on diagrams. Upon completion, students will be able to use manuals, select certain qualities, and do basic materials testing.
Prerequisite: PHY 1101

MEC 1110 Machine Processes I 1 0 3 2

This course introduces the basic equipment used in a machine shop. Emphasis is placed on understanding the uses of the equipment and attachments. Upon completion, students will be able to understand the uses of the various equipment in a machine shop. Prerequisites: None

MEC 1111 Intro to Mfg Processes 2 0 3 3

This course covers manufacturing methods and processes, including textbook material and shop demonstrations. Topics include various manufacturing processes not previously covered presented by text, films, and field trips. Upon completion, students will be able to explain the broad capabilities of the most important manufacturing processes.
Prerequisite: MEC 1110 or equiv.

MEC 1112 Machine Shop Processes 1 0 6 3

This course introduces the basic equipment in a machine shop. Emphasis is placed on understanding the uses of machine shop equipment and attachments. Upon completion, students will be able to use the various machines in a machine shop. Prerequisites: None

MEC 1151 Jigs & Fixtures 1 0 6 3

This course involves methods of fastening parts together, clamping and locating methods, and the application of jigs and fixtures to production machining. Emphasis is placed on the quality of workmanship and precision tolerances. Upon completion, students will be able to show proficiency in working to very close tolerances. Prerequisite: Machine Shop

MEC 1152 Gages & Special Tools 2 2 0 3

This course includes an overview of precision gages and special tools and their application to production. Topics include the making of slide tools, form tools, fly cutters, and the use of plug gages and grinding fixtures. Upon completion, students will be able to apply these skills to industrial situations for production machining. Prerequisite: MEC 1151

MEC 1153 Tool Making II 3 0 6 5

This course is a continuation of MEC 1152 with advanced instructions in form dressing procedures, surface finishes, precision tolerances, and general tool making. Topics include complicated jigs and fixtures, safety, and magnification and amplification of error. Upon completion, students will be able to demonstrate proficient use of these devices in challenging situations. Prerequisite: MEC 1152

MEC 1154 Die Making I 2 0 6 4

This course introduces students to the principles of dies and metal stamping and the terminology common to the trade. Topics include accuracy, surface finish, importance of clearances, radiuses, and the press cycle. Upon completion, students will be able to design a simple progressive blanking and piercing die. Prerequisite: Machine Shop

MEC 1155 Die Making II 2 0 9 5

This course is a continuation of MEC 1154 and covers the development of correct working habits and close tolerance machining. Topics include insufficient and excessive cutting clearances, bending stresses, stripping forces, bend allowance curves, and angular clearances. Upon completion, students will be able to demonstrate techniques used by diemakers in industrial situations. Prerequisite: MEC 1154

MEC 1156 Die Making III 2 0 6 4

This course is a continuation of MEC 1155 involving advanced theory and design of progressive dies. Topics include pilot locations, grinding operations, blank development, and set-up of a three or more stage progressive die. Upon completion, students will be able to discuss, design, machine, and assemble a multiple station progressive die. Prerequisite: MEC 1155

MEC 1158 Intro to Plastic Molding 2 0 9 5

This course includes the different types, uses, and the behavior of plastics and terminology common to the trade. Topics include injection molding, the standard mold base, and design and machining of mold components. Upon completion, students will be able to design and apply these techniques in industrial situations. Prerequisite: Machine Shop

MEC 1159 Tool Making II 2 0 6 4

This course is a continuation of MEC 1153 with advanced tool making practices in single and multi-point cutting tools. Emphasis is placed on design, machining, heat-treating, and sharpening of form tools. Upon completion, students will be able to demonstrate effective methods of form cutting and grinding. Prerequisite: MEC 1153

MEC 1170 Mold Making I 2 0 9 5

This course includes the basic design and machining of the standard injection mold base. Topics include optical finishes, grating, runner systems, ejection methods, venting and cooling, and final assembly procedures. Upon completion, students will be able to design and apply state-of-the-art techniques in industrial settings. Prerequisite: MEC 1158

MEC 1171 Mold Making II 2 0 6 4

This course will encompass the molds, materials, and methods for molding thermoset plastics. Emphasis is placed on compression and transfer molding techniques. Upon completion, students will be able to design and apply their knowledge of thermoset plastics in industrial settings.
Prerequisite: MEC 1158

MEC 1172 Mold Making III 2 2 0 3

This course is a continuation of MEC 1171 with advanced instruction involving molds for thermoset plastics. Topics include the blow molding process and the more recent in-line screw injection process. Upon completion, students will be able to apply these techniques as needed in industrial situations. Prerequisite: MEC 1171

MEC 1198X Automotive Machine Shop 2 0 0 2

This course is provided to familiarize the student with cylinder block boring equipment, cylinder head surfacing, valve reconditioning, and piston pin servicing equipment. Emphasis is placed on proper use of equipment and maintaining close tolerances to specifications during repair work to automotive engine parts. Upon completion, students will be able to use properly and safely automotive engine reconditioning equipment.
Prerequisites: None Corequisite: MEC 1198Y

MEC 1198Y MEC-1198 Lab 0 0 6 2

This course is the shop application of the 1198X course. Emphasis is placed on the operation of lathes, boring bar, cylinder head resurfacing equipment, valve guide and seat equipment, and piston pin fitting. Upon completion, students will be able to use safely and correctly the automotive machine equipment. Prerequisites: None Corequisite: MEC 1198X

MKT 219 Credit Procedures 3 0 0 3

This course provides the individual consumer and business with an understanding of what credit is, what it does, and what it can and cannot do. Emphasis is placed on the credit decision, limit setting, and collection policies of consumers and commercial credit institutions. Upon completion, students will be able to exhibit a basic knowledge of credit procedures and practices used today by business, industry, and government.
Prerequisites: None

MKT 225 Techniques in Selling 3 0 0 3

This course is an overview of selling from its introduction, through the selling process, to the management of a territory. Topics include selling roles in business and the economy, types of selling, selling skills, and effective sales management. Upon completion, students will recognize and follow the selling process and evaluate its results. Prerequisites: None

MKT 237 Women in Management 3 0 0 3

This course is designed to help women develop management skills. Topics include self-evaluation, career planning, management, communications, and survival skills. Upon completion, students will be able to deal with the opportunities and problems of advancement in business management more effectively. Prerequisites: None

MKT 239 Marketing 5 0 0 5

This course is a study of the functions of management as applied to the field of marketing. Topics include the marketing concept, its impact on business, and key concepts of consumerism, research, product, price, promotion, and distribution. Upon completion, students will be able to integrate marketing concepts, techniques, and strategies into a business situation. Prerequisites: None

MKT 240 Advanced Marketing 2 2 0 3

This course includes explanation of the role marketing plays in the economy and the way marketing is planned and managed in companies. Topics include the strategic planning process, the marketing environment as it relates to consumer and organizational buyers, the principles and tools for measuring and forecasting demand, marketing management systems, international marketing and case studies. Upon completion, students will be able to develop marketing strategies, successfully develop marketing plans, and understand how they relate to company goals and forecasts. Prerequisite: MKT 239

MKT 241 Market Research 2 2 0 3

This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making and providing experience for marketers in real situations. Upon completion, students will be able to conduct a marketing research project and interpret the results.
Prerequisite: BUS 239

MKT 243 Advertising 5 0 0 5

This course is concerned with giving an overview of advertising from the marketing viewpoint; terminology, types of advertising, management, and planning of advertising are studied. Emphasis is placed on the basic steps in selecting an overall media plan for implementing the marketing strategy for a company. Upon completion, students will be able to make advertising decisions concerning choice of media, advertising content, and creation for a product, service, or idea. Prerequisites: None

MKT 245 Retailing 5 0 0 5

This course is an introduction to retailing as a part of the business community. Topics include retail structure, functions performed, principles governing operational and managerial problems, and retail entrepreneurship leading to effective decision making. Upon completion, students will be able to apply their understanding of retail importance in business, consumer buying motives, organization, functions, opportunities, and problems facing retailers. Prerequisites: None

MKT 246 Textiles 3 0 0 3

This course is a survey course of the textile field. Topics include construction, selection, use, and care of textiles made from natural and man-made sources. Upon completion, students will be able to act as a communicator between the textile industry and consumers of textiles. Prerequisites: None

MKT 249 Buying & Merchandising 1 4 0 3

This course is an examination of the buying and merchandising functions of a retail buyer. Topics include buyer environment, responsibility, and management of the buying and retailing functions for profitable sale. Upon completion, students will be able to plan and manage buying and merchandising activities of a retail operation. Prerequisites: BUS 245, MAT 210

MKT 251 Consumer Behavior 3 0 0 3

This course presents insights into consumer behavior developed from other disciplines and offers practical application of these concepts to marketing situations. Emphasis is placed on expanding the ideas presented in BUS 239 concerning consumer demographics and lifestyles. Upon completion, students will be able to apply the basics of consumer behavior to the marketing plan for a specific product or service. Prerequisite: BUS 239

MKT 254 Promotion 3 0 0 3

This course is an overview of the diverse fields of advertising, personal selling, sales promotion, and publicity. Topics include product, service, and idea promotion from the conceptual, managerial, and creative approaches. Upon completion, students will be able to manage processes, opportunities, and problems in the public relations field. Prerequisites: None

MKT 255 Public Relations 3 0 0 3

This course is an overview of the range and breadth of public relations. Topics include the basic principles that guide public relations activities as applied to business, services, institutions, and associations. Upon completion, students will be able to perform the writing, editing, and researching activities of the public relations profession. Prerequisites: None

MKT 256 Business Leadership 2 2 0 3

This course is designed to help students develop leadership skills for business. Topics include self-evaluation, career planning, communications, assertiveness, image building, motivation, decision making, problem solving, and stress and time management. Upon completion, students will be able to communicate more effectively and lead a business in a more effective manner. Prerequisites: None

MKT 264 Nonprofit Marketing 3 0 0 3

This course is designed to address and understand marketing as applied to nonprofit organizations. Topics include understanding opportunities through marketing, organizing and planning for marketing; attracting resources and adapting to the marketing concept. Upon completion, students will be able to understand how the elements of marketing can be applied to nonprofit organizations. Prerequisites: None

MKT 285 Salesmanship 5 0 0 5

This course teaches selling skills applied to modern business careers and presents the selling process in a step-by-step treatment. Emphasis is placed on professional selling, its legal aspects, and the techniques of salesmanship used in various situations. Upon completion, students will be able to design and present a sales presentation for a specific product, idea, or service. Prerequisites: None

MKT 287 Commercial Display & Dsgn 2 4 0 4

This course explores visual merchandising as a tool for increasing the return on promotional investments of a business. Topics include history and changes in techniques, elements of design, and the development of skills in presentation. Upon completion, students will be able to plan and build displays according to the elements of design and evaluate display effectiveness. Prerequisites: None

MKT 288 Fashion 2 2 0 3

This course introduces the fashion industry as it relates to retailers. Topics include the history and movement of fashion, impact on the business world, industry structure, and elements of fashion. Upon completion, students will be able to demonstrate skills in recognizing and forecasting fashion to fulfill job requirements for entry level positions. Prerequisites: None

MUS 102 Fundamentals of Music 3 0 0 3

This course is designed to integrate basic material and skills of rhythm, meter, scales, and intervals. Emphasis is placed on chord progression cadences, modulation, and non-harmonic tones with integrated avenues of writing and class demonstrations. Upon completion, students will be able to utilize a solid foundation of musical design and interpretation. Prerequisites: None

MUS 221 Music Appreciation 5 0 0 5

This course is designed to further the development of knowledge, understanding, and appreciation for all mediums of music. Emphasis is placed on historical development, forms and styles, and correct listening; analysis is conducted through lectures, reports, projects, and listening. Upon completion, students will be able to appreciate all mediums of music and their styles through listening. Prerequisites: None

NUR 101 Introduction to Nursing 6 4 3 9

This course is an introduction to the role of the technical nurse in utilizing basic nursing skills to meet common health problems. Emphasis is placed on basic concepts of pharmacology, nutrition, growth and development, safety, professional development, communication skills, and the nursing process. Upon completion, students will be able to apply nursing theory to the performance of nursing care at a beginning level.
Prerequisites: None

NUR 102 Nursing Child/Adults I 6 4 3 9

This course increases the technical nursing student's background in pharmacology, nutrition, professional development, and communication skills. Emphasis is placed on relating concepts to the health-illness continuum and on the introduction of major health problems. Upon completion, students will be able to apply nursing concepts to provide more complex nursing care to meet the individual needs of clients.
Prerequisites: All first quarter courses

NUR 103 Nursing Child/Adults II 6 2 9 10

This course gives the student the opportunity to study selected health problems with emphasis on those requiring surgical intervention. Topics include pre-operative, operative, and post-operative nursing intervention for clients with problems of nutrition, reproduction, and fluid and electrolyte balance. Upon completion, students will be able to utilize the nursing process in developing and implementing more complex nursing care plans for selected clients. Prerequisites: All second quarter courses

NUR 104 Nursing Mothers/Infants 4 0 6 6

This course focuses on the factors involved in providing family-centered maternal and neonatal nursing care with childbearing presented as a normal physiological process. Emphasis is placed on health promotion and the prevention of complications as significant aspects of nursing care. Upon completion, students will be able to assist clients to maintain a self-care agency throughout the childbearing cycle and support clients in caring for their neonates. Prerequisite: NUR 103 Corequisite: SOC 102

NUR 205 Nursing Child/Adults III 6 2 12 11

This course presents the concept of mental health as a continuum of behaviors ranging from adaptive to maladaptive. Emphasis is placed on self-awareness facilitative communication skills and mutuality within the nurse-client relationship. Upon completion, students will be able to function in a therapeutic relationship with individuals who demonstrate self-care deficits relevant to the mental health continuum. Prerequisites: NUR 104, PSY 204

NUR 206 Nursing Child/Adults IV 6 2 12 11

This course gives the technical nursing student the opportunity to study selected health problems. Emphasis is placed on respiratory, endocrine, and neurological conditions. Upon completion, students will be able to increase skill in application of new and previously introduced procedures and knowledge. Prerequisite: NUR 104

NUR 207 Nursing Child/Adults V 6 0 15 11

This course focuses on the nursing care of clients with cardiovascular, orthopedic, skin, and sensory disorders. Emphasis is placed on the management of groups of clients and the development of organizational skills. Upon completion, students will be able to utilize knowledge and skills in the care of selected hospitalized clients. Prerequisites: NUR 205 and 206
Corequisite: NUR 208

NUR 208 Professional Development 3 0 0 3

This course presents the technical nursing student with a brief historical review of nursing and the relationship of history to the present organizational structure. Topics include history of nursing, current issues and trends, legal aspects, management concepts, reality shock, and career opportunities. Upon completion, students will be able to discuss current and future trends in nursing and role of the technical nurse in an ever expanding nursing profession. Prerequisites: NUR 205 and 206
Corequisite: NUR 207

NUR 1101 Fund of Nursing Assistant 2 0 12 6

This course introduces the student to the role of the nursing assistant. Topics include basic bedside nursing procedures, medical asepsis, safety, emergency measures, role of the nursing assistant, and obtaining employment. Upon completion, students will be able to identify basic fundamentals of the health field and understand their role in the health facilities.
Prerequisites: None Corequisite: NUR 1102

NUR 1102 Basic Anatomy & Physio 3 0 0 3

This course introduces basic structure and function of man. Topics include function of the cell, organization of body components and structure, and function of various body organs. Upon completion, students will be able to discuss how the body system interrelates and the effects produced with homeostasis interference. Prerequisites: None Corequisite: NUR 1101

NUR 1103 Medical Management 3 0 12 7

This course introduces the student to the effects of illness on body functioning. Topics include health-illness continuum, effects of illness on patient, family, and community, and common health problems of the elderly. Upon completion, students will be able to describe the health-illness continuum, make simple patient observations, recognize unusual signs and symptoms, and report appropriately. Prerequisites: NUR 1101 and 1102
Corequisite: NUR 1104

NUR 1104 Nutrition 2 0 0 2

This course introduces the student to the basic food groups. Topics include functions of nutrients, nutrition for the elderly, and special eating problems of the elderly. Upon completion, students will be able to define the function of basic nutrition in maintaining health and discuss the nutritive process of the elderly. Prerequisite: NUR 1103

NUR 1110 Nursing Transition 3 0 0 3

This course is designed to assist the Licensed Practical Nurse in making the adjustment to the Associate Degree Nursing Program. Topics include: Orem's Self-Care Deficit Theory, the Nursing Process, problem oriented records and the legal role and responsibility of the Registered Nurse. Upon completion, students will be able to demonstrate skills in the Nursing Skills laboratory. Prerequisites: None

NUT 101 Nutrition 3 0 0 3

This course is a study of the basic knowledge from the field of nutrition and the relationship of poor nutrition to general and oral diseases. Topics include basic nutrients, nutritional physiology, and the effects of vitamins, mineral, hormonal, and dietary deficiencies on oral tissues. Upon completion, students will be able to interpret clinical and dietary findings to provide patient counseling as part of a total treatment plan.
Prerequisites: BIO 107 and 110, and DEN 214

NUT 1101 Nutrition 3 0 0 3

This course introduces the nutrients according to body use, the four basic food groups, and dietary modifications prescribed to meet specific requirements of the individual. Topics include the utilization of essential nutrients by the body, therapeutic diet modificaitons, and nutrition in the life cycle. Upon completion, students will be able to apply understanding of nutrition principles to both health maintenance and the instruction of individuals according to nutritional status.
Prerequisites: All first quarter courses
Corequisites: All second quarter courses

PHI 101 Intro to Philosophy 3 0 0 3

This course is designed as an introductory course utilizing a historical approach to the understanding of philosophy. Emphasis is placed on the basic concepts of theories, themes, and arguments of ancient, medieval, modern, and contemporary philosophers. Upon completion, students will be able to explain some of the basic issues of human existence and develop his or her own life philosophy. Prerequisites: None

PHI 102 Intro to Logic 3 0 0 3

This course is designed to help the student acquire the ability and habit of correct reasoning and sound thinking. Emphasis is placed on the traditional logic of syllogism and modern symbolic logic including classical fallacies in logical arguments. Upon completion, students will be able to apply the knowledge learned to develop logical judgments and use logical arguments. Prerequisites: None

PHI 221 Intro to Philosophy 5 0 0 5

This course is designed as an introductory course utilizing a historical approach to the understanding of philosophy. Emphasis is placed on the basic concepts of theories, themes, and arguments of ancient, medieval, modern, and contemporary philosophers. Upon completion, students will be able to explain some of the basic issues of human existence and develop his or her own life philosophy. Prerequisites: None

PHI 222 Intro to Logic 5 0 0 5

This course is designed to help the student acquire the ability and habit of correct reasoning and sound thinking. Emphasis is placed on the traditional logic and syllogism and modern symbolic logic including classical fallacies in logical arguments. Prerequisites: None

PHM 101 Intro to Pharmacy 5 0 0 5

This course includes an orientation to institutional and community pharmacy, responsibilities of pharmacy technicians, and medical terminology. Topics include prescription orders (interpretation and dispensing), legal and ethical aspects of pharmacy support personnel, and the Health Care System. Upon completion, students will be able to explain the role of pharmacy technicians, recognize medical words, interpret prescription orders, and utilize pharmacy reference materials. Prerequisites: None

PHM 102 Pharmacology I 5 0 0 5

This course includes a study of the properties, effects, and therapeutic value of the primary agents in major drug categories. Topics include nutritional products, blood modifiers, hormones, diuretics, cardiovasculars, respiratory drugs, and gastrointestinal agents. Upon completion, students will be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names.
Prerequisite: PHM 101

PHM 103 Pharmacology II 5 0 0 5

This course is a continuation of PHM 102 in which the properties, effects, and therapeutic value of major drugs are discussed. Topics include drugs affecting the autonomic nervous system, muscle relaxants, tranquilizers, antiepileptic agents, analgesics, anti-inflammatory agents, and anti-infectives. Upon completion, students will be able to place major drugs into correct therapeutic categories and identify indications, side effects, and trade and generic names. Prerequisite: PHM 102

PHM 104 Pharmaceutical Prep I 3 4 0 5

This course covers pharmaceutical dosage forms and considerations in their preparation with lab experience in extemporaneous compounding for selected dosage forms and prescription compounding. Topics include routes of drug administration, dosage form design, good manufacturing practices, tablets, capsules, solutions, syrups, suspensions, and elixers. Upon completion, students will be able to describe characteristics of pharmaceutical dosage forms covered and perform steps involved in compounding and dispensing prescriptions.
Prerequisites: PHM 101 and 110, BUS 191 or equiv.

PHM 104X Pharmaceutical Prep I 3 0 0 3

This course is a study of pharmaceutical dosage forms and considerations in their preparation. Topics include routes of drug administration, dosage form design, good manufacturing practices, tablets, capsules, solutions, syrups, suspensions, and elixirs. Upon completion, students will be able to describe characteristics of pharmaceutical dosage forms covered.
Prerequisites: PHM 101 and 110, BUS 191 or equiv.
Corequisite: PHM 104Y

PHM 104Y PHM-104 Lab 0 4 0 2

This course provides the lab portion for PHM 104X and is designed to develop techniques of extemporaneous compounding for selected dosage forms and prescription dispensing. Emphasis is placed on proper technique in weighing and measuring and in the preparation of solutions and syrups. Upon completion, students will be able to perform steps involved in dispensing prescriptions and identify special considerations in compounding of certain dosage forms. Prerequisites: PHM 101 and 110, BUS 191 or equiv.
Corequisite: PHM 104X

PHM 105 Pharmaceutical Prep II 3 4 0 5

This course, a continuation of PHM 104, emphasizes parenteral dosage forms and provides appropriate lab experiences. Topics include injections, biologicals, sterile fluids, aerosols, transdermal delivery systems, topical preparations, ophthalmics, otics, and other preparations. Upon completion, students will be able to describe characteristics of pharmaceutical dosage forms covered and prepare an ointment, cream, or intravenous admixture properly. Prerequisite: PHM 104

PHM 105X Pharmaceutical Prep II 3 0 0 3

This course is a continuation of PHM 104 with emphasis on parenteral dosage forms. Topics include injections, biologicals, sterile fluids, aerosols, transdermal delivery systems, topical preparations, ophthalmics, otics, and other miscellaneous preparations. Upon completion, students will be able to describe characteristics of pharmaceutical dosage forms covered.
Prerequisite: PHM 104 Corequisite: PHM 105Y

PHM 105Y PHM-105 Lab 0 4 0 2

This course provides the lab portion for PHM 105X and is a continuation of PHM 104 with special emphasis on parenteral dosage forms. Emphasis is placed on proper techniques in preparing ointments, creams, and intravenous admixtures. Upon completion, students will be able to prepare an ointment, cream, or intravenous admixture properly.
Prerequisite: PHM 104 Corequisite: PHM 105X

PHM 107 Community Pharmacy 3 0 6 5

This course covers non-prescription drug products, their compositions and indications, and provides appropriate lab experiences. Topics include antacids, gastrointestinals, cold and allergy products, analgesics, and diabetes care products. Upon completion, students will be able to identify selected drug products, explain their composition and indications, and perform normal clerical and technician-level responsibilities in a retail or health facility pharmacy. Prerequisites: PHM 103, 105, and 110

PHM 107X Community Pharmacy 3 0 0 3

This course covers non-prescription drug products and their compositions and indications. Topics include antacids, gastrointestinals, cold and allergy products, analgesics, diabetes care products, sleep aids, ophthalmics, and topical anti-infectives. Upon completion, students will be able to identify selected drug products by generic and trade names and explain their composition and indications.
Prerequisites: PHM 103, 105, and 110 Corequisite: PHM 107Y

PHM 107Y PHM-107 Lab 0 0 6 2

This course, the lab portion of PHM 107X, provides students the opportunity to develop skills in the area of retail pharmacy practice. Emphasis is placed on management practices, proper handling of prescription orders, pricing procedures, and third party billing. Upon completion, students will be able to prepare and label prescriptions, file prescription orders, calculate retail pries, and complete third party billing forms properly. Prerequisites: PHM 103, 105, and 110
Corequisite: PHM 107X

PHM 109 Hospital Pharmacy

This course covers hospital pharmacy in depth and introduces patient profiles, unit-dose dispensing and intravenous admixtures. Emphasis is placed on organizational structure, committee functions, use of reference materials, and drug delivery and distribution systems. Upon completion, students will be able to explain hospital organizational structure and drug delivery systems, identify committee functions, fill unit dose carts and prepare intravenous admixtures. Prerequisites: None

PHM 109X Hospital Pharmacy 3 0 0 3

This course covers hospital pharmacy practice in depth. Emphasis is placed on organizational structure, committee functions, use of reference materials, purchasing and inventory control, and drug dispensing systems. Upon completion, students will be able to explain organizational structure of the hospital, identify committee functions, explain drug delivery systems, and describe pharmacy personnel functions. Prerequisites: None
Corequisite: PHM 109Y

PHM 109Y PHM-109 Lab 0 0 3 1

This course provides the lab portion of PHM 109X and introduces patient profiles, unit dose dispensing, and intravenous admixtures. Emphasis is placed on transcribing physician orders, filling unit dose carts, and preparing intravenous admixtures. Upon completion, students will be able to read and transcribe physician orders onto patient profiles, properly fill the unit dose carts, and prepare intravenous admixtures.
Prerequisites: None Corequisite: PHM 109X

PHM 110 Pharmaceutical Calc 5 0 0 5

This course includes introduction to the metric and apothecary systems of measurement and calculations used in pharmacy practice. Topics include dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration problems, and aliquots. Upon completion, students will be able to make appropriate calculations relating to properly filling a prescription order. Prerequisites: None

PHM 111 Pharmacy Seminar 2 0 0 2

This course is designed to provide the students with current trends, concepts, and topics which pertain to contemporary pharmacy practice. Topics include Area Health Education Centers, the role of pharmacy in public health care, nursing home care, and patient education. Upon completion, students will be able to demonstrate conversational knowledge of topics discussed and present a lecture on approved topic.
Prerequisites: All prior PHM courses Corequisite: PHM 107

PHM 200 Hospital Clinical I 0 0 20 2

This course provides an opportunity for the student to actually work in the hospital pharmacy setting under pharmacist supervision. Emphasis is placed on effective communication with personnel, developing proper employee attitude, and dispensing of medications both to inpatients and outpatients. Upon completion, students will be able to demonstrate understanding of department roles in patient care, utilize reference materials, dispense medications, and prepare patient charges.
Prerequisites: PHM 101, 109, and 110

PHM 210 Hospital Clinical II 0 0 20 2

This course is a continuation of PHM 200 with the student in a different hospital pharmacy. Emphasis is placed on the use of computers in pharmacy operation and preparation of intravenous admixtures. Upon completion, students will be able to enter information into computer properly, prepare intravenous admixtures, and dispense medications to inpatients and outpatients. Prerequisites: PHM 200

PHY 101X Properties of Matter 3 0 0 3

This course is an introduction course in the properties of matter. Emphasis is placed on the mechanical properties of matter such as density, elasticity, fluid mechanics, temperature, heat, and thermodynamics. Upon completion, students will be able to explain how these properties affect the technology of the world in which we live. Prerequisite: Algebra
Corequisite: PHY 101Y

PHY 101Y **PHY-101 Lab** 0 2 0 1

This course is an introduction laboratory course that uses selected experiments and observations that will support the instructional material in PHY 101X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHY 101X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 101X because of the concrete examples they observe. Prerequisite: Algebra
Corequisite: PHY 101X

PHY 102X **Work, Energy & Power** 3 0 0 3

This course is an introduction to the physical concepts of work, energy, and power. Topics include statics, forces, translational motion, machines, and rotational motion. Upon completion, students will be able to explain how these concepts affect the technology of the world in which we live.
Prerequisites: Algebra, Trigonometry Corequisite: PHY 102Y

PHY 102Y **PHY-102 Lab** 0 2 0 1

This course is an introductory laboratory course that uses selected experiments and observations to support the instructional material in PHY 102X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHY 102X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 102X because of the concrete examples they observe.
Prerequisites: Algebra, Trigonometry Corequisite: PHY 102X

PHY 103X **Electricity** 3 0 0 3

This course is an introduction to the concepts of electricity and magnetism. Topics include electrostatics, electrodynamics, magnetic fields, induction, AC theory, and power productions. Upon completion, students will be able to explain how these concepts affect the technology of the world in which we live. Prerequisites: Algebra, Trigonometry
Corequisite: PHY 103Y

PHY 103Y **PHY-103 Lab** 0 2 0 1

This course is an introductory laboratory course that uses selected experiments and observations to support the instructional material in PHY 102X. Emphasis is placed on scientific method as students perform experiments and make observations of specific PHY 103X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 103X because of the concrete examples they observe. Prerequisites: Algebra and Trigonometry
Corequisite: PHY 103X

PHY 104X **Light & Sound** 3 0 0 3

This course is an introduction to the physics of sound, light, and modern physics. Topics include harmonic motion, wave theory, physical optics, and selected topics in quantum mechanics and nuclear physics. Upon completion, students will be able to apply many of these concepts in their chosen fields.
Prerequisite: PHY 102 Corequisite: PHY 104Y

PHY 104Y **PHY-104 Lab** 0 2 0 1

This course is an introductory lab that supports the instructional material presented in PHY 104X. Emphasis is placed on scientific observations and data as students observe and perform selected experiments to show PHY 104X concepts. Upon completion, students will be able to apply how these physical concepts affect the technology of today by the observation of concrete examples. Prerequisite: PHY 102 Corequisite: PHY 104X

PHY 120 **Radiographic Physics I** 3 0 0 3

This course is an introduction to electromagnetic waves, electricity, and magnetism. Emphasis is placed on energy of waves, electrical energy, power, circuits, electromagnetism, transformers, and AC electricity relating to radiographic physics. Upon completion, students will be able to explain the operation of the components of an x-ray machine. Prerequisite: Algebra

PHY 121 **Radiographic Physics II** 3 0 0 3

This course examines the mature methods of production and the uses of x-rays. Emphasis is placed on x-ray devices, circuits, targets, filtration, and dosimetry. Upon completion, students will be able to apply these concepts to the diagnostic area of x-ray physics. Prerequisite: PHY 120

PHY 130X **Physics I** 3 0 0 3

This course is an introductory study of work, power, and energy. Topics include vectors, translational motion, machines, and rotational motion. Upon completion, students will be able to explain these concepts to the technology of their chosen vocations. Prerequisite: MAT 100
Corequisite: PHY 130Y

PHY 130Y **PHY-130 Lab** 0 2 0 1

This course is an introductory lab that presents concrete examples for observation and experimentation of the PHY 130X concepts. Emphasis is placed on scientific observations and adaptation of physical concepts to vocational study. Upon completion, students will be able to apply these physical concepts to the technology of their chosen vocations. Prerequisite: MAT 100

PHY 131X **Physics II** 3 0 0 3

This course is an introductory study of electricity and magnetism. Topics include static electricity, Ohm's law, circuits, power, energy, electromagnetism, induction, and AC theory. Upon completion, students will be able to explain how these concepts affect the technology of their chosen vocations. Prerequisite: MAT 100 Corequisite: PHY 131Y

PHY 131Y **PHY-131 Lab** 0 2 0 1

This course is an introductory lab that presents concrete examples for observation and experimentation of the PHY 131X concepts. Emphasis is placed on scientific observation and adaptation of physical concepts to vocational study. Upon completion, students will be able to apply these physical concepts to the technology of their chosen vocations. Prerequisite: MAT 100 Corequisite: PHY 131X

PHY 132X **Physics III** 3 0 0 3

This course is an introductory presentation of the properties of matter and heat energy. Topics include density, stress, strain, electric modules, fluid flow, and the effects of heat, temperature, and thermodynamics. Upon completion, students will be able to explain how these physical concepts affect the technology of their chosen vocations. Prerequisite: MAT 100 Corequisite: PHY 132Y

PHY 132Y **PHY-132 Lab** 0 2 0 1

This course is an introductory lab that shows concrete examples for observation and experimentation of PHY 132X concepts. Emphasis is placed on scientific observation and adaption of the concepts discussed in PHY 132X to vocational study. Upon completion, students will be able to apply these physical concepts to the technology of their chosen vocation.
Prerequisite: MAT 100 Corequisite: PHY 132X

PHY 221X **General Physics I** 5 0 0 5

This course is an introductory course in classical mechanics, mechanical and thermal properties of matter. Topics include force and motion, circular motion, energy, work, power, momentum, density, elasticity, temperature, and heat. Upon completion, students will be able to explain how these concepts affect the technology of the world in which we live. Prerequisite: College Algebra Corequisite: PHY 221Y

PHY 221Y **General Physics I Lab** 5 0 0 5

This course is an introductory laboratory course that uses selected experiments and observations that will support material in PHY 221X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHY 221X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 221X because of the concrete examples they observe. Prerequisite: College Algebra
Corequisite: PHY 221X

PHY 222X **General Physics II** 5 0 0 5

This course is a continuation of PHY 221X which includes electricity, magnetism, physical optics, and modern physics. Topics include electrical field, electric current, magnetic field, AC and DC circuits, light, relativity, particles and waves, and quantum mechanics. Upon completion, students will be able to explain how these concepts affect the technology of the world in which we live. Prerequisites: College Algebra, PHY 221X
Corequisite: PHY 222Y

PHY 222Y **General Physics II Lab** 5 0 0 5

This course is an introductory laboratory course that uses selected experiments and observations that will support material in PHY 222X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHY 222X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 222X because of the concrete examples they observe. Prerequisite: College Algebra
Corequisite: PHY 221X

PHY 231X **Fiber Optics** 4 0 0 4

This course includes a discussion of optical fibers, physical optics, communications, optical communications, and fiber optic communications. Topics include the nature of light, optical cables, light sources and detectors, modulation formats, and communication system design. Upon completion, students will be able to apply new communication technology to their present areas of employment in the communication field.
Prerequisites: None Corequisite: PHY 231Y

PHY 231Y **PHY 231-LAB** 0 2 0 1

This course is a laboratory course to enhance the topics presented in PHY 231X. Emphasis is placed on selected experiments and demonstrations and applications of the material presented in lecture. Upon completion, students will be able to apply the concepts introduced in PHY 231X as a result of concrete examples observed. Prerequisites: None Corequisite: PHY 231X

PHY 1101X Properties of Matter 3 0 0 3

This course is an introductory course in the properties of matter and heat transfer. Topics include states of matter, physical properties of matter, temperature, heat, and energy transfer. Upon completion, students will be able to explain how these concepts relate to the physical environment and their chosen vocations. Prerequisites: None Corequisite: PHY 1101Y

PHY 1101Y PHY-1101 Lab 0 2 0 1

This course is an introductory laboratory course to enhance the topics presented in PHY 1101X. Emphasis is placed on the scientific approach using selected experiments and demonstrations for observations and calculations. Upon completion, students will be able to apply the concepts introduced in PHY 1101X as a result of concrete examples observed. Prerequisites: None Corequisite: PHY 1101X

PHY 1102X Electricity 3 0 0 3

This course is an introduction to the concepts of electricity and magnetism. Topics include electrostatics, Ohm's law, circuit analysis, magnetic fields, induction transformers, and an introduction to magnetic fields. Upon completion, students will be able to explain how the concepts of electromagnetism affect the technology in their chosen vocations.
Prerequisites: None Corequisite: PHY 1102Y

PHY 1102Y PHY-1102 Lab 0 2 0 1

This course is a laboratory course that uses selected experiments and observations to support the instruction in PHY 1102X. Emphasis is placed on the scientific approach using selected experiments for observation and calculation. Upon completion, students will be able to apply the concepts introduced in PHY 1102X as a result of concrete examples observed.
Prerequisites: None Corequisite: PHY 1102X

PHY 1103X Work, Energy & Power 3 0 0 3

This course is an introductory course in the laws associated with the concepts of mechanics. Topics include motion, Newton's Laws, energy, work, power, and machines. Upon completion, students will be able to explain how these concepts affect the technology of the physical world.
Prerequisite: MAT 1101 Corequisite: PHY 1103Y

PHY 1103Y PHY-1103 Lab 0 2 0 1

This course is a laboratory course that uses selected experiments and demonstrations to support the instructional materials in PHY 1103X. Emphasis is placed on the scientific approach using selected experiments for observation and calculation. Upon completion, students will be able to apply the concepts introduced in PHY 1103X as a result of concrete examples observed. Prerequisite: MAT 1101 Corequisite: PHY 1103X

PHY 91X Physical Sci I Level I 3 0 0 3

This course presents laws of motion, work, energy, power relationships, gravitation, and properties of solids, liquids, and gases. Emphasis is placed on concepts with emphasis on mathematical calculations. Upon completion, students will be able to explain basic physical phenomena of the real world.
Prerequisites: None Corequisites: PHY 91Y and MAT 91

PHY 91Y PHY-91 Lab 0 2 0 1

This course is designed to develop an understanding of laboratory methods and techniques. Emphasis is placed on a practical approach by use of suitably chosen laboratory exercises, demonstrations, experiments, and appropriate audiovisual aids. Upon completion, students will be able to apply the concepts presented in MAT 91 and PHY 91X. Prerequisites: None
Corequisites: PHY 91X and MAT 91

PHY 92X Physical Sci II Level I 3 0 0 3

This course presents the basic concepts of heat, sound, and light. Emphasis is placed on mathematical calculations. Upon completion, students will be able to explain basic concepts of the physical environment.
Prerequisites: None Corequisites: PHY 92Y and MAT 92

PHY 92Y PHY-92 Lab 0 2 0 1

This course is designed to develop a better understanding of the mathematical concepts presented in PHY 92X. Emphasis is placed on a practical approach by use of suitably chosen laboratory experiments, demonstrations, and appropriate audiovisual aids. Upon completion, students will be able to apply the concepts presented in MAT 92 and PHY 92X. Prerequisites: None
Corequisites: PHY 92X and MAT 92

PHY 93X **Physical Sci III Level I** 3 0 0 3

This course presents the basic concepts of electricity and magnetism, atomic and nuclear physics, and relativity. Emphasis is placed on mathematical calculations. Upon completion, students will be able to explain basic concepts of the physical world in which they live. Prerequisites: None Corequisites: PHY 93Y and MAT 93

PHY 93Y **PHY-93 Lab** 0 2 0 1

This course provides experience in laboratory techniques and methods as they relate to the instructional materials in PHY 93X. Emphasis is placed on an inquiry approach using selected experiments, demonstration experiments, and appropriate audiovisual aids. Upon completion, students will be able to apply the material presented in PHY 93X. Prerequisites: None
Corequisites: PHY 93X and MAT 93

PHY 94X **Physical Sci I Level II** 3 0 0 3

This course is an introduction to some mathematical concepts of physics. Topics include work, energy, power, simple machines, fluids, and heat. Upon completion, students will be able to apply practical, problem-solving methodology. Prerequisite: MAT 94 Corequisites: PHY 94Y and MAT 95

PHY 94Y **PHY-94 Lab** 0 2 0 1

This course is an introductory laboratory course that uses selected experiments and observations to support the instructional materials in PHY 94X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHY 94X concepts. Upon completion, students will be able to apply mathematical concepts introduced in PHY 94X and MAT 95 as a result of the concrete examples observed.
Prerequisite: MAT 94 Corequisites: PHY 94Y and MAT 95

PHY 95X **Physical Sci III Level II** 3 0 0 3

This course is a mathematical approach to electricity and magnetism. Topics include electrostatics, electricity, electromagnetism, induction, and power transfer. Upon completion, students will be able to explain how these concepts affect the technology of the physical world.
Prerequisite: MAT 95 Corequisites: PHY 95Y and MAT 96

PHY 95Y **PHY-95 Lab** 0 2 0 1

This course is a laboratory course that uses selected experiments and observations to support the instructional materials in PHY 95X. Emphasis is placed on the scientific approach using selected experiments on PHY 95X concepts for observation and calculation. Upon completion, students will be able to apply the concepts introduced in PHY 95X and MAT 96 as a result of the concrete examples observed. Prerequisite: MAT 95 Corequisites: PHY 95X and MAT 96

PLU 1110 **Plumbing Pipework** 5 0 15 10

This course introduces the student to the use of plumbing tools, equipment, pipe, fittings, and system design. Emphasis is placed on recognition of the various types and kinds of pipe and fittings and shop work. Upon completion, students will be able to assemble the various pipes and fittings into small projects. Prerequisites: None

PLU 1110A **Plumbing Pipework** 3 0 3 4

This course introduces the student to the safe and proper use of tools and equipment; recognition of pipe and fittings is also stressed. Emphasis is placed on proper use of hand tools, motorized equipment, and types of pipe and fittings. Upon completion, students will be able to use the proper tools for joining various types of pipe. Prerequisites: None

PLU 1110B **Plumbing Pipework** 1 0 6 3

This course is a continuation of PLU 1110A and covers plumbing codes, system designs, and techniques for installing small systems. Emphasis is placed on the use of codes in plumbing schematics and system designs. Upon completion, students will be able to install a simple plumbing system within the plumbing code. Prerequisite: PLU 1110A

PLU 1110C **Plumbing Pipework** 1 0 6 3

This course is a continuation of PLU 1110B and covers water and drain piping design, as well as installing and servicing some fixtures. Emphasis is placed on the use of codes in plumbing drainage and venting and also on fixture installation. Upon completion, students will be able to install the drains and vents for some fixtures according to the plumbing code.
Prerequisite: PLU 1110B

PLU 1111 Domestic Water Systems 2 0 9 5

This course covers private and public water and sewer distribution systems; water heating devices are also studied. Topics include water and sewage treatment in cities, and pumps, wells, and septic tanks in rural areas. Upon completion, students will be able to discuss purification of water from source through final distribution. Prerequisite: PLU 1110

PLU 1112 Install of Plumb Fixtures 3 0 9 6

This course enables students to become familiar with major manufacturers of plumbing fixtures and accessories, as well as ways of installation and servicing. Emphasis is placed on the many types of fixtures and the materials and tools needed for installation and service. Upon completion, students will be able to install and service the major fixtures available to the trade. Prerequisite: PLU 1111

PLU 1120 Low Pressure Steam Sys 2 0 6 4

This course introduces the student to hydronic heating systems; different types of boilers and fuels are also studied. Emphasis is placed on oil and gas fired boilers and their operation. Upon completion, students will be able to operate a small boiler. Prerequisite: PLU 1110

PLU 1121 High Pressure Steam Sys 3 0 9 6

This course is a continuation of PLU 1120 and covers principles of low and high pressure steam. Emphasis is placed on piping of different systems and radiation. Upon completion, students will be able to discuss how most steam systems operate. Prerequisite: PLU 1120

PLU 1123 Hot Water & Panel Heating 3 0 6 5

This course introduces students to a different phase of hydronic heat as it applies to residential heating; practical applications will be made in the shop. Emphasis is placed on the theory of circulation and the different types of systems. Upon completion, students will be able to make minor repairs on hydronic residential heating systems. Prerequisites: PLU 1111 and 1120

PLU 1125 Industrial Piping 3 0 6 5

This course covers piping in commercial and industrial buildings, as well as steam systems, area drains, valves, and hangers. Topics include design of plumbing systems in multi-story buildings and fixtures and other materials used in public buildings. Upon completion, students will be able to design the plumbing system for a small multi-story building.
Prerequisites: PLU 1112, WLD 1180

PLU 1127 Plumbing Estimates 2 0 3 3

This course is designed to help the student make estimates of quantities of materials and cost of installation of various types of plumbing systems. Topics include design of systems, codes, material take-offs, pricing, and public relations. Upon completion, students will be able to design a plumbing system and order materials needed for installation.
Prerequisites: PLU 1112, BMS 1134, and DFT 1115

PME 1101 Automotive Engines 3 0 12 7

This course develops a thorough knowledge of the construction and operation of automobile engines. Topics include how to make necessary repairs to engines. Upon completion, students will be able to recondition automobile engines. Prerequisites: None

PME 1101A Automotive Engines 1 0 6 3

This course develops a knowledge of the operation and repair of automotive engines. Topics include hand and measuring tools, construction, and the operation and repair of automotive engines. Upon completion, students will be able to use hand and measuring tools, valve equipment, and engine tools. Prerequisites: None

PME 1101B Automotive Engines 2 0 6 4

This course covers engine overhaul. Topics include piston, valve, crankshaft, block, and camshaft service. Upon completion, students will be able to diagnose and repair major engine problems. Prerequisite: PME 1101A

PME 1102 Engine Electrical Systems 6 0 9 9

This course teaches concepts of basic electricity and engine related electrical devices. Topics include basic electricity, charging, cranking, and ignition systems. Upon completion, students will be able to diagnose and repair engine electrical system problems. Prerequisite: PME 1101

PME 1102A Engine Electrical Systems 4 0 3 5

This course teaches concepts of basic electricity and engine related electrical devices. Emphasis is placed on classroom work and teacher demonstrations. Upon completion, students will be able to demonstrate proper use of test equipment on components. Prerequisite: PME 1101

PME 1102B Engine Electrical Systems 2 0 6 4

This course covers repair procedures for electrical engine systems. Topics include alternators, batteries, cranking motors, and ignition systems. Upon completion, students will be able to test and repair engine electrical components. Prerequisite: PME 1102A

PME 1110 Automotive Repair 3 0 6 5

This course teaches students to remove and replace automobile components. Topics include front end, chassis wiring, and drive line component replacement. Upon completion, students will be able to replace damaged parts from a collision. Prerequisites: None

PME 1123A Auto Chassis & Suspension 4 0 3 5

This course covers the principles of front end alignment. Topics include manual steering, power steering, and suspension systems. Upon completion, students will be able to align front ends and repair suspensions. Prerequisites: None

PME 1123B Auto Chassis & Suspension 1 0 6 3

This course covers the principles of drum and disc braking systems. Topics include drum and disc brakes and how to turn rotors. Upon completion, students will be able to repair or replace drum or disc braking systems. Prerequisite: PME 1123A

PME 1123X Auto Chassis & Suspension 5 0 0 5

This course covers principles and functions of steering and braking systems. Topics include shock absorbers, springs, and drum and disc brakes. Upon completion, students will be able to repair brakes and align front ends. Prerequisites: None Corequisite: PME 1123Y

PME 1123Y PME-1123 Lab 0 0 9 3

This course allows the students to apply the classroom principles acquired in PME 1123X. Topics include master cylinders, wheel cylinders, power steering, and springs. Upon completion, students will be able to repair brakes and suspension systems. Prerequisites: None Corequisite: PME 1123X

PME 1124 Power Train Systems 3 0 9 6

This course teaches concepts concerning the flow of power from engine to drive wheels. Topics include clutches, manual transmissions, drive shafts, rear axles, and transaxles. Upon completion, students will be able to diagnose and repair drive line problems. Prerequisites: None

PME 1124A Power Train Systems 2 0 3 3

This course teaches concepts concerning the flow of power from engine to drive wheels. Topics include clutches, manual transmissions, drive shafts, rear axles, and transaxles. Upon completion, students will be able to identify drive line components and disassemble and assemble components. Prerequisites: None

PME 1124B Power Train Systems 1 0 6 3

This course, a continuation of PME 1124A, covers repair procedures on power train systems. Topics include removal and replacement of clutch, transmission, rear axle, and transaxle. Upon completion, students will be able to disassemble and repair manual transmissions, rear axles, transaxles, and clutches. Prerequisite: PME 1124A

PME 1125X Auto Servicing II 3 0 0 3

This course is designed to train the student in proper shop procedures required in trouble-shooting the various vehicle systems. Emphasis is placed on the effective use of engine analyzers, electrical test meters, and computer test equipment. Upon completion, students will be able to trouble-shoot effectively problems in the vehicle systems and use available test equipment in the process. Prerequisites: PME 1123, 1133, and 1183
Corequisite: PME 1125Y

PME 1125Y PME-1125 Lab 0 0 9 3

This course is designed to provide the student with as much hands-on work as is practical during the final quarter. Emphasis is placed on completing the job correctly and keeping the vehicle and work space clean and orderly. Upon completion, students will be able to utilize valuable hands-on work experience in being more competitive in the work force.
Prerequisites: PME 1123, 1133, and 1183 Corequisite: PME 1125X

PME 1132 Auto Fuel Systems 3 0 3 4

This course is designed to teach the fundamentals of gasoline fuel systems. Topics include fuel characteristics, types of systems, pumps, and equipment. Upon completion, students will be able to diagnose and repair fuel system problems. Prerequisite: PME 1102

PME 1133X Computers and Emissions 3 0 0 3

This course will provide the student with an in-depth look at the introduction, description, operation, and servicing of emission control and computer systems. Emphasis is placed on how to apply the fundamentals of these systems as he goes about his job as a mechanic. Upon completion, students will be able to diagnose and repair problems within the emissions and comptuer systems. Prerequisites: None

PME 1133Y PME-1133 Lab 0 0 3 1

This course is the hands-on part of emission controls, designed to give the student actual on-vehicle experience. Emphasis is placed on the proper use of engine analyzers, exhaust analyzers, and computer testers necessary for effective testing of this system. Upon completion, students will be able to identify service, trouble-shoot, and repair emission control systems.
Prerequisite: PME 1181 Corequisite: PME 1133X

PME 1134 Electronic Fuel Injection 3 0 0 3

This course is designed to familiarize the student with electronic fuel injection systems used on domestic vehicles. Topics include "Port Fuel Injection Systems" as well as "Throttle Body Fuel Injection Systems." Upon completion, students will be able to diagnose and repair fuel injection systems using repair manuals, diagnostic charts and test equipment related to fuel injection. Prerequisites: PME 1181 and 1133

PME 1135X Auto Air Conditioning 3 0 0 3

This course is a study of the principles of refrigeration. Topics include compressors, receiver-dryers, and expansion valves. Upon completion, students will be able to service air conditioners. Prerequisites: None
Corequisite: PME 1135Y

PME 1135Y PME-1135 Lab 0 0 3 1

This course is designed to provide the students with hands-on experience with refrigeration systems in automobiles. Emphasis is placed on service procedures for automotive air conditioning systems. Upon completion, students will be able to diagnose and service air conditioning systems.
Prerequisites: None Corequisite: PME 1135X

PME 1158 Hydraulics & Pneumatics 3 0 3 4

This course covers basic theories of hydraulic and pneumatic systems used in industry. Topics include use of standard hydraulic symbols, pumps, control valves, control assemblies, and actuators used in hydraulic circuits. Upon completion, students will be able to explain sizing of piping, controls, fluids, and reservoirs required for successful operation of hydraulic and pneumatic circuits. Prerequisites: None

PME 1170A Power Plant Trouble-Shoot 2 0 3 3

This course is designed to offer the fundamentals of proper trouble-shooting. Emphasis is placed on the proper use of test equipment. Upon completion, students will be able to operate test equipment in diagnosing auto trouble. Prerequisites: PME 1123, 1133, 1182, and 1183

PME 1170B Power Plant Trouble-Shoot 1 0 3 2

This course is designed to offer the student opportunities to practice trouble-shooting. Emphasis is placed on using test equipment in trouble-shooting. Upon completion, students will be able to diagnose auto difficulties efficiently. Prerequisite: PME 1170A

PME 1170X Power Plant Trouble-Shoot 3 0 0 3

This course is designed to train the students in proper trouble-shooting. Emphasis is placed on the use of test equipment. Upon completion, students will be able to efficiently trouble-shoot.
Prerequisites: PME 1123, 1133, 1182, and 1183 Corequisite: PME 1170Y

PME 1170Y PME-1170 Lab 0 0 6 2

This course is designed to train the student in proper procedures of trouble-shooting. Emphasis is placed on proper procedures for trouble-shooting. Upon completion, students will be able to gain experience in trouble-shooting. Prerequisites: PME 1123, 1133, 1182, and 1183
Corequisite: PME 1170X

PME 1181X Auto Tune Up 3 0 0 3

This course is designed to give the student advanced training in the area of preventive maintenance on the vehicle and engine systems. Topics include a review of the engine's mechanical, starting, ignition, charging, and fuel systems and proper use of test equipment and analyzers. Upon completion, students will be able to use test equipment for analyzing the engine and make repairs or adjustments to correct any defects. Prerequisite: PME 1102
Corequisite: PME 1181Y

PME 1181Y PME-1181 Lab 0 0 3 1

This course is a practical application in the shop to apply classroom instruction on live projects. Emphasis is placed on the correct use of test equipment and analyzers to detect any problems in engine systems. Upon completion, students will be able to use test equipment correctly to analyze the engine and make proper repairs or adjustments needed.
Prerequisite: PME 1102 Corequisite: PME 1181X

PME 1182A Automatic Transmissions 3 0 3 4

This course covers the fundamentals of servicing automatic transmissions. Topics include servos, band adjustments, and filter changes. Upon completion, students will be able to service automatic transmissions.
Prerequisites: None

PME 1182B Automatic Transmissions 3 0 3 4

This course covers the fundamentals of repairing and replacing automatic transmissions. Topics include cleaning and servicing valve bodies and seal replacement. Upon completion, students will be able to rebuild and adjust automatic transmissions. Prerequisite: PME 1182A

PME 1182X Automatic Transmissions 6 0 0 6

This course covers fundamentals of servicing automatic transmissions. Topics include servos, valve bodies, and clutch packs. Upon completion, students will be able to service automatic transmissions.
Prerequisite: PME 1124 Corequisite: PME 1182Y

PME 1182Y PME-1182 Lab 0 0 6 2

This course allows the students to assemble and disassemble transmissions. Emphasis is placed on procedures for rebuilding automatic transmissions. Upon completion, students will be able to rebuild automatic transmissions. Prerequisite: PME 1124 Corequisite: PME 1182Y

PME 1183A Chassis Electrical Circ 2 0 3 3

This course will acquaint the student with the chassis electrical systems and their construction. Topics include the headlight, park light, stop light, turn signal, dash light, power window, power seat, and windshield wiper systems. Upon completion, students will be able to trouble-shoot and make repairs to these electrical systems using the proper test equipment.
Prerequisite: PME 1102

PME 1183B Chassis Electrical Circ 2 0 3 3

This course is provided to give the student practical training on the vehicle chassis electrical systems. Emphasis is placed on the use of test equipment and proper sequence of steps to locate problems in the electrical circuits. Upon completion, students will be able to diagnose problems in the chassis electrical circuits and repair any defects causing problems.
Prerequisites: PME 1102 and 1183A

PME 1183X Chassis Electrical Circ 4 0 0 4

This course will acquaint the student with the chassis electrical systems and their construction. Topics include the headlight, park light, stop light, turn signal, dash light, power window, power seat, and windshield wiper systems. Upon completion, students will be able to trouble-shoot and make repairs to these electrical systems using the proper test equipment.
Prerequisite: PME 1102 Corequisite: PME 1183Y

PME 1183Y PME-1183 Lab 0 0 6 2

This course is provided to give the student practical training on the vehicle chassis electrical systems. Emphasis is placed on the use of test equipment and proper sequence of steps to locate problems in the electrical circuits. Upon completion, students will be able to diagnose problems effectively in the chassis electrical circuits and repair any defects causing problems. Prerequisite: PME 1102 Corequisite: PME 1183X

PME 93 Intro to Auto Mechanics 2 0 3 3

This course is designed to familiarize students with auto mechanics. Topics include engines, transmissions, suspension, and electrical. Upon completion, students will be able to do minor servicing of automobiles.
Prerequisites: None

PNE 1103X Nursing Skills I 4 0 0 4

This course is designed to teach the student principles underlying nursing actions. Topics include hygienic care of the hospitalized patient, assessment of vital signs, and performance of basic nursing skills. Upon completion, students will be able to define and apply scientific principles that govern basic nursing actions. Prerequisites: None
Corequisite: PNE 1103Y

PNE 1103Y PNE-1103 Lab 0 6 6 5

This course requires the student to apply those principles learned in Nursing Skills I to actual patient care situations. Emphasis is placed on the student's gaining confidence in the performance of basic nursing skills. Upon completion, students will be able to identify basic needs of assigned patients and implement nursing actions to meet those needs.
Prerequisites: None Corequisite: PNE 1103X

PNE 1106X Nursing Skills II 3 0 0 3

This course is a continuation of Nursing Skills I. Topics include principles governing performance of more complex nursing actions, such as sterile dressing changes, catheterization, and gastric gavage. Upon completion, students will be able to demonstrate understanding of these principles by providing skilled and safe nursing care to assigned patients.
Prerequisites: All first quarter courses Corequisite: PNE 1106Y

PNE 1106Y PNE-1106 Lab 0 4 0 2

This course provides the student with the opportunity to practice those skills discussed in Nursing Skills II. Emphasis is placed on developing proficiency in the performance of these skills prior to applying them in the clinical setting. Upon completion, students will be able to utilize these skills in the provision of nursing care for assigned patients.
Prerequisites: All first quarter courses Corequisite: PNE 1106X

PNE 1107 Medical & Surg Nursing I 5 0 15 10

This course deals with the causes, prevention, treatment, and nursing interventions for diseases and disorders of various body systems. Topics include physiologic and psychologic aspects of patient care and nursing the patient with general manifestations of illness. Upon completion, students will be able to provide care for patients with a variety of medical and surgical conditions. Prerequisites: All first quarter courses

PNE 1108 Nursing Care of Children 3 4 3 6

This course provides an introduction to pediatric nursing and basic principles of growth and development and the prevention and treatment of common childhood health problems. Topics include changing concepts in child health care, health problems of the well child, and the nursing care of children. Upon completion, students will be able to apply understanding of growth and development and maturational and childhood health problems in helping children achieve optimal health status.
Prerequisites: All second quarter courses

PNE 1109 Nursing Care of Mother 3 4 3 6

This course deals with care of the child-bearing woman. Topics include conception, pregnancy, labor and delivery, the puerperium, the normal newborn, and the newborn with special needs. Upon completion, students will be able to provide family centered maternity care during pregnancy, parturition, and after the birth of the baby. Prerequisites: All second quarter courses

PNE 1110 Medical & Surg Nursing II 5 0 21 12

This course is a continuation of Medical and Surgical Nursing I. Topics include care of the patient with respiratory, circulatory, gastro-intestinal, genito-urinary, endocrine, neurologic, sensory, and orthopedic problems. Upon completion, students will be able to provide nursing care for patients with problems affecting these systems. Prerequisites: All third quarter courses

PNE 1111 Drugs & Administration 3 0 0 3

This course includes the laws and techniques regarding the safe administration of drugs, the physiologic factors necessary to recognize adverse reactions, and the classification of drugs. Topics include drug legislation, drug categories, concepts of drug action, principles in safe administration of medications, and drug classification. Upon completion, students will be able to apply understanding of the basic principles to administer medication, as prescribed, safely and with attention to physiologic factors. Prerequisites: All first quarter courses

PNE 1115 Mental Health 3 0 0 3

This course includes the basic mental health concepts applicable to understanding the reactions of self and others under stress during periods in the lifespan. Topics include personality development, hierarchy of needs, adjustment mechanisms, stress and continuum of behavioral reactions to stress, and therapeutic communications. Upon completion, students will be able to apply understanding of the basic concepts necessary to establish a therapeutic relationship with clients through problem-solving techniques.
Prerequisites: All second quarter courses

PNE 1116 Vocational Development 4 0 0 4

This course is a continuation of Vocational Adjustments I and presents the ethical, moral, and legal aspects inherent in the role of the licensed practical nurse. Topics include the Nursing Practice Act, the practice of nursing by a licensed practical nurse, licensure by examination, and job applications. Upon completion, students will be able to obtain employment as a licensed practical nurse, working under the supervision of a registered nurse or licensed physician. Prerequisites: All third quarter courses

POL 102 State & Local Government 3 0 0 3

This course examines state and local politics and includes an overview of executive, legislative, and judicial procedures for most states in the U.S. Emphasis is placed on the procedural differences as they pertain to North Carolina politics; national and state government relationships are also discussed. Upon completion, students will be able to discuss political power and political relationships within the state and between states and national government. Prerequisites: None

POL 103 National Government 3 0 0 3

This course introduces the student to an examination of all major functions and branches of U.S. government including the executive, legislative, and judicial branches. Emphasis is placed on outlining the basic processes of the federal bureaucracy, political parties, national campaigning, and national elections. Upon completion, students will be able to explain the major aspects and functions of the federal government including most decision making processes. Prerequisites: None

POL 221 American Government 5 0 0 5

This course introduces the student to an examination of all major functions and branches of U.S. government including the executive, legislative, and judicial branches. Emphasis is placed on outlining the basic processes of the federal bureaucracy, political parties, national campaigning, and national elections. Upon completion, students will be able to explain the major aspects and functions of the federal government including most decision making processes. Prerequisites: None

POL 231 State and Local Government 5 0 0 5

This course examines state and local politics and includes an overview of executive, legislative, and judicial procedures for most states in the U.S. Emphasis is placed on the procedural differences as they pertain to North Carolina politics; national and state government relationships are also discussed. Upon completion, students will be able to discuss political power and political relationships within the state and between states and national government. Prerequisites: None

POL 241 Comparative Government 5 0 0 5

This course develops a political comparison of policy and action for the countries of England, France, West Germany, Russia, China, Brazil, and South Africa. Topics include each countries' historical past, key institutions, political attitudes, patterns of interaction, and what the countries quarrel about. Upon completion, students will be able to gage the importance of American foreign relations and better understand the international setting for political decision making. Prerequisite: POL 221 American Government

POS 101 Postal History & Organiz 3 0 0 3

This course is designed to trace the delivery of written communication through present day modes. Topics include private and governmental agencies which have been and are responsible for mail throughout the world, including the Postal Reorganization Act. Upon completion, students will be able to explain the ancient history affecting the present organization of the Postal Service. Prerequisites: None

POS 103 Postal Serv Mail Proc I 2 0 0 2

This course is designed to provide the participant with an awareness of the interrelated factors necessary to separate large amounts of mail. Topics include bulk mail center operations, ADC operation, and MSC operations. Upon completion, students will be able to explain the flow of mail from customer to customer while learning the importance of service standards.
Prerequisites: None

POS 105 Postal Serv Mail Proc II 3 0 0 3

This course is designed to provide the student with an in-depth view of the flow of mail from area distribution centers to individual post offices. Topics include bulk mail center operations, ADC operation, and MSC operations with emphasis on meeting service standards between operations. Upon completion, students will be able to explain the flow of mail from customer to customer and discuss the importance of service standards.
Prerequisites: None

POS 201 Postal Serv Labor Relat 3 0 0 3

This course introduces the student to labor activities in this country and gives an overview of labor relations in the Postal Service. Emphasis is placed on the national agreements between the Postal Service and the bargaining unions. Upon completion, students will be able to understand labor relations activities in the Postal Service and administer the grievance-arbitration procedures set forth in the national agreements.
Prerequisites: None

POS 202 Postal Service Finance 3 0 0 3

This course covers the ancillary functions of the finance operation at the MSC level and teaches correct methods used to make daily financial transactions in the Postal Service. Topics include use of daily accounting procedures, postal auditing procedures, and an overview of the total financial operation in the Postal Service. Upon completion, students will be able to discuss correct financial procedures used to operate a post office and explain the administrative support provided by a finance section.
Prerequisites: None

POS 203 Postal Customer Service 3 0 0 3

This course is designed to provide the student with an in-depth knowledge of all services provided to postal customers. Emphasis is placed on customer relations and retail sales and services. Upon completion, students will be able to discuss the customer services function and the role customer services plays in the overall operation of the Postal Service system.
Prerequisites: None

POS 205 Postal Delivery & Collect 3 0 0 3

This course introduces the student to the problems and solutions encountered in collecting mail, transporting mail, and delivering mail to customers in an economic and proficient way. Topics include carrier operation, delivery standards, and the Delivery and Collection Efficiency Analysis (DCEA) system used in the Postal Service. Upon completion, students will be able to explain a delivery operation and the DCEA system.
Prerequisites: None

POS 207 Postal Serv Empl Relation 3 0 0 3

This course introduces students to the personnel organizational structure of the Postal Service and all the functions associated with a personnel operation. Topics include hiring procedures, training, affirmative action, safety, promotion, and the federal retirement system. Upon completion, students will be able to explain the complete personnel operation used in the Postal Service and how employee relations intergrate in the total postal operation. Prerequisites: None

POS 208 Postal Problem Analysis 3 0 0 3

This course presents the students with different methods used in the Postal Service to analyze and solve problems in a systematic manner. Topics include the management by objectives concept (MBO), problem accessment, and the use of action plans. Upon completion, students will be able to identify both postal and non-postal problems and use a systematic approach to come up with attainable solutions.
Prerequisites: None (all other postal courses encouraged)

PSY 101 Intro to Psychology 3 0 0 3

This course is an introductory survey of the field of psychology wherein the student becomes acquainted with the human being as a biological-social organism. Topics include history and development of psychology, scientific method, theory of statistical concepts, intelligence, motivation, emotions, and learning. Upon completion, students will be able to develop a better understanding of the total human being in a social setting as a biological-social organism. Prerequisites: None

PSY 104 Dynamics of Human Behav 3 2 0 4

This course is designed to provide the student with a rather detailed study of human behavior in various size groups. Emphasis is placed on aspects of personality, motivation, behavioral patterns, and the roles of psychological defense mechanisms in normal human behavior. Upon completion, students will be able to discuss the developmental aspects of personality, interpersonal communications, and leadership techniques displayed in different behavior patterns. Prerequisite: PSY 101

PSY 121 General Psychology 5 0 0 5

This course is an introductory survey of the field of psychology wherein the student becomes acquainted with the human being as a biological-social organism. Topics include history and development of psychology, scientific method, theory of statistical concepts, intelligence, motivation, emotions, and learning. Upon completion, students will be able to develop a better understanding of the total human being in a social setting as a biological social organism. Prerequisites: None

PSY 201 Applied Stress Management 3 0 0 3

This course is designed to provide understanding of and remediation for types of stress found in the home, at work, and within personality types. Emphasis is placed on helping all adults from whatever walk of life using different mental and physical exercises. Upon completion, students will be able to help themselves overcome debilitating stress by understanding its causes and then eliminating the causes. Prerequisites: None

PSY 202 Human Growth & Develop 3 0 0 3

This course is designed to incorporate all human physical and psychological growth and developmental stages from infancy through old age. Emphasis is placed on the psychological and integrated with the social, biological, and cultural influences upon human growth and development. Upon completion, students will be able to discuss the bio-psychological development of humans from infancy through old age. Prerequisite: PSY 101

PSY 204 Abnormal Psychology 3 0 0 3

This course is a study of principal abnormal phases of behavior and the ways by which individuals develop abnormal habits of thinking and acting. Emphasis is placed on the various deviations of abnormal psychology and familiarizing the student with proper abnormal terminology. Upon completion, students will be able to distinguish between normal and abnormal adjustment mechanisms and explain the prevention and treatment of behavior disorders. Prerequisite: PSY 101

PSY 206 Applied Psychology 3 0 0 3

This course covers the principles of applied psychology that will be of assistance in understanding interpersonal relations on the job. Emphasis is placed on employer/employee relations, supervision, job satisfaction, and industrial conflicts; motivational problems and adjustments are also investigated. Upon completion, students will be able to apply the principles of mental hygiene to adjustment problems as a worker and community member. Prerequisites: None

PSY 208 Grief Psychology 3 0 0 3

This course presents the role of the funeral director in grief counseling. Emphasis is placed on making the funeral director more aware of the psychological needs the impact of death creates in the bereaved. Upon completion, students will be able to apply the concepts of death, dying, immortality, grief management, religion, and the funeral in a funeral services vocation. Prerequisite: PSY 101

PSY 210 Human Relations 3 0 0 3

This course is a study of the basic principles of human behavior, explaining the biological and cultural roots of behavior and social drive. Emphasis is placed on the elements of social behavior, perception during interaction, two-person interaction, small social groups, and social organizations. Upon completion, students will be able to utilize their understanding of behavior and individual relationships to improve social competence in work situations. Prerequisite: PSY 101

PSY 221 Abnormal Psychology 5 0 0 5

This course is a study of principal abnormal phases of behavior and the ways by which individuals develop abnormal habits of thinking and acting. Emphasis is placed on various deviations of abnormal psychology and familiarizing the student with proper abnormal terminology. Upon completion, students will be able to distinguish between normal and abnormal adjustment mechanisms and explain the prevention and treatment of behavior disorders. Prerequisite: PSY 101

PSY 230 Personality 3 0 0 3

This course involves the study of the major theories of personality, methods of measurement, and the means of modifying personality. Emphasis is placed on the theories of personality developed by Freud, Jung, Adler, Horney, Erickson, Allport, Kelly, Rogers, and Maslow. Upon completion, students will be able to discuss psychological theories on personality developed by early psychologists and the methods used to measure and modify personality. Prerequisite: PSY 101 or 206

PSY 231 Human Growth and Development 5 0 0 5

This course is designed to incorporate all human physical and psychological growth and developmental stages from infancy through old age. Emphasis is placed on the psychological and integrated with the social, biological, and cultural influences upon human growth and development. Upon completion, students will be able to discuss the bio-psychological development of humans from infancy through old age. Prerequisites: PSY 101 or equivalent

PSY 241 Grief Psychology 5 0 0 5

This course presents the role of the funeral director in grief counseling. Emphasis is placed on making the funeral director more aware of the psychological needs the impact of death creates in the bereaved. Upon completion, students will be able to apply the concepts of death, dying, immortality, grief management, religion, and the funeral in a funeral services vocation. Prerequisite: PSY 101

PSY 250 Industrial Psychology 3 0 0 3

This course is concerned with the study of how business and organizational structure affects the behavior of individuals. Emphasis is placed on the relationships between the motives of individuals and the psychological climate of industry including managerial leadership skills. Upon completion, students will be able to investigate relationships among various levels of management and identify skills needed to be successful in industry today. Prerequisite: PSY 101

PSY 251 Stess Management 5 0 0 5

This course is designed to provide understanding of and remediation for types of stress found in the home, at work, and within personality types. Emphasis is placed on helping all adults from whatever walk of life using different mental and physical exercises. Upon completion, students will be able to help themselves overcome debilitating stress by understanding its causes and then eliminating the causes. Prerequisites: None

PSY 252 Organizational Psychology 3 0 0 3

This course is an introductory survey and a subdivision of the wider field of general psychology and develops organizational skills. Emphasis is placed on exercises, games, role playing, and making insights of this behavioral science meaningful and relevant to organizational behavior. Upon completion, students will be able to discuss organizational psychology, including the need for student participation necessary for student success. Prerequisite: PSY 101 or 206

PSY 260 Social Psychology 3 0 0 3

This course is concerned with the ways individuals and groups of individuals influence each other and the reasons for this influence. Emphasis is placed on the process of observing and studying human behavior and interaction from a sociological perspective facilitating student self-awareness. Upon completion, students will be able to discuss recent research projects along with the way people influence and affect each other socially and psychologically. Prerequisite: PSY 101

PSY 261 Human Relations 5 0 0 5

This course is a study of the basic principles of human behavior, explaining the biological and cultural roots of behavior and social drive. Emphasis is placed on the elements of social behavior, perception during interaction, two-person interaction, small social groups, and social organizations. Upon completion, students will be able to utilize their understanding of behavior and individual relationships to improve social competence in work situations. Prerequisites: PSY 101

PSY 270 Motivation 3 0 0 3

This course provides the student with an examination of the major theories of motivation and the application of techniques that affect motivation. Emphasis is placed on a biological theory of research in animal and human motivation which includes rewards, reinforcers, incentives, and avoidance conditioning. Upon completion, students will be able to explore philosophical and pragmatic questions regarding motivation that affects individual behavior differently. Prerequisite: PSY 101

PSY 271 Structured Psychology 5 0 0 5

This course covers the principles of structured psychology that will be of assistance in understanding interpersonal relations on the job. Emphasis is placed on employer/employee relations, supervision, job satisfaction, and industrial conflicts; motivational problems and adjustments are also investigated. Upon completion, students will be able to apply the principles of mental hygiene to adjustment problems as a worker and community members. Prerequisites: None

PSY 280 Forensic Psychology 5 0 0 5

This course is a study in the psychological causes of crime, to include many of the defensive psychological devices employed by criminals. Emphasis is placed on abnormal psychological personality traits of criminals such as drug abuse, alcoholism, rape, and other deviant behavior. Upon completion, students will be able to analyze human nature and criminal behavior including special problems found in police work and corrections.
Prerequisites: PSY 101; PSY 204 recommended

PSY 1101 Human Relations 3 0 0 3

This course examines the basic aspects of human relations, namely the practical, cognitive, and affective domain of interpersonal relationships as they apply to individuals. Emphasis is placed on the total world relationships of occupation, home, and society, examining the self-concept and intergroup experiences. Upon completion, students will be able to involve themselves academically in stress resolution and problem solving, including appreciating different life styles and occupational choices.
Prerequisites: None

PSY 1106 Applied Psychology 3 0 0 3

This course is a study of the principles of psychology that will be of assistance in understanding interpersonal relations on the job. Emphasis is placed on individual motivation, feelings, and emotions as well as industrial problems of influence, authority, and employee supervision. Upon completion, students will be able to discuss personal and group dynamics and apply principles of mental hygiene to adjustment problems of workers in the community. Prerequisites: None

PTH 101 Intro to Physical Therapy 3 0 3 4

This course includes an introduction to the health care system, physical therapy, the role of the physical therapist assistant, basic patient care and transfer skills, and a review of skeletal structures. Topics include surface anatomy, professional ethics, history, clinic visits, and basic patient care skills. Upon completion, students will be able to explain the role of the assistant, demonstrate competence in basic patient care skills, and identify skeletal anatomy. Prerequisite: Consent of Chairperson Corequisites: BIO 103X and BIO 103Y

PTH 102 Physical Therapy Proc I 3 0 6 5

This course, a continuation of PTH 101, includes heat procedures, massage, a review of the muscular system, and initial clinical experience. Emphasis is placed on physiological effects, indications and contraindications, and clinical skill development of the above techniques. Upon completion, students will be able to apply superficial heat modalities, ultrasound, and massage safely and correctly in lab and clinic, and identify muscles. Prerequisite: PTH 101 Corequisites: BIO 104X and BIO 104Y

PTH 103 Physical Therapy Proc II 3 0 6 5

This course, a continuation of PTH 102, emphasizes theory and practice of electrotherapy, cryotherapy, thermotherapy, biofeedback, and actinotherapy. Topics include low and high frequency currents, deep heat, cold, ultraviolet, and edema reduction. Upon completion, students will be able to apply these modalities and treatment techniques effectively, efficiently, and safely and demonstrate knowledge of physiological principles involved. Prerequisite: PTH 102

PTH 104 Physical Therapy Proc III 3 0 9 6

This course, a continuation of PTH 103, includes selected topics and procedures and part-time clinical experiences. Topics include spinal orthopedics, gait, orthotics, amputee care, ADL, and problem-oriented record keeping. Upon completion, students will be able to safely and appropriately apply knowledge of spinal orthopedics, gait, orthotics, and prosthetics to patient problems, write a progress note, and satisfactorily complete the clinic rotation. Prerequisite: PTH 103

PTH 105 Physical Therapy Proc IV 3 0 12 7

This course, a continuation of PTH 104, emphasizes physical skill aquisiton, physiological principles of selected physical therapy techniques and part-time clinical rotations. Topics include neurology review, treatment of adult and pediatric CNS patients, spinal cord, burns, amputees, and cardiopulmonary conditions. Upon completion, students will be able to demonstrate safe and correct application of selected therapeutic techniques in lab and in the clinic. Prerequisite: PTH 104

PTH 106 Seminar in Physical Therapy Proc 3 0 0 3

This course consists of reports and seminars in the latest physical therapy techniques and equipment and allied health specialities. Topics include reports on extra departmental experience (observing an operation, for example), case studies, and guest lecturers. Upon completion, students will be able to discuss specialized physical therapy techniques or equipment, related health fields, and display competence in writing skills. Prerequisite: PTH 105

PTH 110 Therapeutic Exercise 3 0 6 5

This course covers basic kinesiologic principles and their application to exercises and ambulation. Emphasis is placed on skeletal and muscle review, innervations, kinesiology, therapeutic exercises, postural alignment, ambulation techniques, and relaxation techniques. Upon completion, students will be able to apply therapeutic exercises, teach and apply ambulation skills appropriately and safely, and describe the anatomy and kinesiology pertaining to patient problems. Prerequisite: BIO 107

PTH 201 Path/Phys for PT Asst 4 0 0 4

This course is designed to present a survey of basic pathology with emphasis on conditions most frequently observed and treated in physical therapy. Topics include etiology, pathology, manifestations, treatment, and prognosis. Upon completion, students will be able to explain repair processes, categorize diseases, define pathology, identify organ/body systems involved, and discuss treatment and prognosis. Prerequisites: BIO 103, 104, and ENG 115

PTH 202 Functional Anatomy 2 2 0 3

This course provides a study of applied anatomy and kinesiology with emphasis on joint function and dysfunction as seen in a rehabilitation facility. Topics include individual and group muscle locations and functions, measurement of joint motion using a goniometer, and advanced exercises. Upon completion, students will be able to know the function, location, and innervation of all major muscles and to use a goniometer in joint range. Prerequisite: PTH 110

PTH 210 Psychology of Adjustment 3 0 0 3

This course is designed to assist the student in developing interpersonal relationship skills for effective participation in the health field. Topics include reactions to disability, the grieving process, communication, motivation, health promotion, prevention, and aging. Upon completion, students will be able to discuss the basis of and methods for achieving effective interaction with the patients, families, and staff. Prerequisites: PSY 101 and SOC 101

PTH 215 Community Health/Welfare 3 0 0 3

This course is designed to survey, identify, and describe various health and welfare resources within the community and includes field trips to selected agencies. Topics include public, private, and voluntary health organizations and their functions, future trends of health care, and basic health problems. Upon completion, students will be able to discuss the functions, resources, and proper utilization of community health agencies and the need for such agencies. Prerequisites: None

PTH 298 Clinical Education 4 0 30 14

This course is designed to place students in two different affiliations for planned learning experiences and practice under supervision. Emphasis is placed on reinforcement of learned skills in direct patient care and presentation of case studies. Upon completion, the student will be able to demonstrate satisfactory performance as a physical therapist assistant and a member of the physical therapy team. Prerequisite: PTH 105

RDT 101 Radiologic Technology I 4 0 3 5

This course is an orientation to the field of radiologic technology. Topics include the principles of ethics, radiation protection, radiographic exposure, darkroom chemistry, medical terminology, and upper and lower extremity positioning. Upon completion, students will be able to utilize medical terminology, process films, demonstrate radiation safety, manipulate exposure factors, demonstrate extremity positioning, and discuss patient care. Prerequisite: Curriculum admission

RDT 102 Radiologic Technology II 3 6 0 6

This course provides the student with additional basic principles of radiologic technology. Topics include the principles of radiographic exposure techniques, nursing procedures, medical terminology, and positioning of the bony thorax and pelvis. Upon completion, students will be able to utilize medical terminology, calculate radiographic exposure techniques, and demonstrate positioning of the bony thorax and the pelvic girdle. Prerequisite: RDT 101

RDT 103 Radiologic Technology III 3 6 0 6

This course provides the student with the complete basic principles of radiologic technology. Topics include the principles of positioning the vertebral column and the cranium, the principles of fluoroscopy, and a comprehensive review. Upon completion, students will be able to demonstrate positioning of the vertebral column and the cranium and utilize the principles of fluoroscopy and equipment. Prerequisite: RDT 102

RDT 111 Clinical Education I 0 0 12 4

This course is performed in the clinical setting providing the student with an orientation to the radiology department, radiographic equipment, and patient contact. Emphasis is placed on processing radiographs, transporting patients, practicing radiation safety principles, and positioning patients for chest, abdomen, and extremity radiographs. Upon completion, students will be able to process radiographs, transport patients, practice radiation safety techniques, and prepare radiographs of chest, abdomen, and extremities. Prerequisite: Curriculum admission

RDT 112 Clinical Education II 0 0 12 4

This course is provided in the clinical setting giving opportunities for varied patient interaction, with the student choosing examinations to perform for clinical competency. Emphasis is placed on practical experience of positioning of the upper and lower extremities, bony thorax, and the pelvic girdle. Upon completion, students will be able to perform examinations for clinical competency, especially of the upper and lower extremities and thorax. Prerequisite: RDT 111

RDT 113 Clinical Education III 0 0 15 5

This course is provided in the clinical setting giving opportunities for varied patient interaction, with the student choosing examinations to perform for clinical competency. Emphasis is placed on practical experience of positioning of the vertebral column, the thoracic and abdominal viscera, mammography, and fluoroscopic procedures. Upon completion, students will be able to perform examinations for clinical competency, especially of the vertebral column and thoracic-abdominal viscera. Prerequisite: RDT 112

RDT 114 Clinical Education IV 1 0 39 14

This course is provided in the clinical setting giving opportunities for varied patient interaction, with the student choosing examinations to perform for clinical competency. Emphasis is placed on practical experience of positioning of the cranium and fluroscopic examinations of the gastro-intestinal tract including previous examinations. Upon completion, students will be able to perform examinations for clinical competency, especially fluroscopic studies and cranial examinations. Prerequisite: RDT 113

RDT 204 Radiologic Technology IV 7 0 0 7

This course covers advanced radiography as employed in a clinical setting. Topics include contrast media examinations, advanced radiation protection, radiobiology, advanced positioning, and pediatric radiography. Upon completion, students will be able to describe and perform contrast media examinations, advanced positioning, and pediatric radiographs and discuss principles of protection and radiobiology. Prerequisites: RDT 103 and 114

RDT 205 Radiologic Technology V 7 0 0 7

This course provides the student with the principles of imaging modalities. Topics include image intensification, tomography, special radiographic procedures, interventional techniques, computerized tomography, digital imaging, ultrasound, and magnetic resonance imaging. Upon completion, students will be able to describe the utilization of various imaging modalities, identify components of those systems, and identify images from those modalities. Prerequisites: RDT 204 and 215

RDT 206 Radiologic Technology VI 5 0 0 5

This course is an overview of the preceding RDT courses with an introduction to radionuclides. Topics include principles of nuclear medicine, quality assurance, and review for the registry. Upon completion, students will be able to describe principles of nuclear medicine, test radiographic equipment for calibration, and sit for the registry exam.
Prerequisites: RDT 205 and 216

RDT 207 Pathology for RDT 3 0 0 3

This course introduces systemic pathology relating radiographic procedures to pathology when applicable. Topics include most frequent and serious problems, major manifestations, and specific diseases of the various systems. Upon completion, students will be able to identify various pathologic conditions by radiograph and describe systemic disease process, growth disturbances, and the inflammatory process.
Prerequisites: RDT 205 and 216

RDT 215 Clinical Education V 0 0 24 8

This course is performed in the clinical setting providing varied patient interaction, with the student choosing those examinations to perform for clinical competency. Emphasis is placed on practical experience with pediatric patients, special positions, contrast media, cranial radiography, and radiation protection. Upon completion, students will be able to perform examinations chosen for clinical competency. Prerequisite: RDT 114

RDT 216 Clinical Education VI 0 0 24 8

This course is performed in the clinical setting providing varied patient interaction, with the student choosing those examinations to perform for clinical competency. Emphasis is placed on special radiographic procedures, operating room radiography, and general diagnostic procedures. Upon completion, students will be able to assist and explain special radiographic procedures, perform operating room radiography, and perform examinations chosen for clinical competency. Prerequisite: RDT 215

RDT 217 Clinical Education VII 1 0 33 12

This course is performed in the clinical setting providing varied patient interaction, with the student choosing those examinations to perform for clinical competency. Emphasis is placed on C-T scan, special procedures, lithotripsy, ultrasound, quality assurance, and general diagnostic radiography. Upon completion, students will be able to perform competencies in general diagnostic procedures and in identified special rotations.
Prerequisite: RDT 216

RDT 218 Clinical Education VIII 0 0 30 10

This course is performed in the clinical setting providing varied patient interaction, with the student choosing those examinations to perform for clinical competency. Emphasis is placed on C-T scan, ultrasound, quality assurance, and radiation therapy; rotations vary according to the students' needs in clinical competency. Upon completion, students will be able to perform competencies in deficient areas and improve clinical performance to provide a smooth transition to graduate technologist status.
Prerequisite: RDT 217

REC 101 First Aid and Safety 3 2 0 4

This course is designed to provide knowledge, techniques, and procedures for administering basic first aid assistance, and includes CPR certification. Emphasis is placed on prevention of accidents, identification of emergencies, and procedures to follow in first aid crises. Upon completion, students will be able to perform artificial respiration and cardiopulmonary rescusitation, identify and bandage wounds, and treat for shock, choking, burns, and other emergencies. Prerequisites: None

REC 108 Maintenance in Recreation 2 0 3 3

This course is designed to provide practical application for taking care of and having knowledge of various equipment found in recreation settings. Emphasis is placed on indoor and outdoor use of equipment and repairs on facilities. Upon completion, students will be able to use various recreational equipment and perform practical tasks inside and outside recreational facilities. Prerequisites: None

REC 109 Facility Management 3 0 0 3

This course is designed to provide students with guidelines used in planning and managing recreational facilities. Emphasis is placed on facility planning and management techniques with practical experience in measuring and laying out athletic fields, courts, and floors. Upon completion, students will be able to work with an architect in planning recreational constructions to include landscaping and outdoor facilities. Prerequisites: None

REC 110 Intro to Resources 3 0 0 3

This course is designed to familiarize the student with the natural and economic resources in the immediate area. Emphasis is placed on recognizing local assets, ecological studies, environmental impacts, and on developing the ability to do an area survey. Upon completion, students will be able to conduct a safe and informative field trip and demonstrate proper courtesy and provide factual information to the community. Prerequisites: None

REC 111 Intro to Recreation 5 0 0 5

This course provides definitions of leisure, play, and recreation and enables the student to focus on the vast scope of recreation. Emphasis is placed on the terminology in and history of recreation and changes in society that have affected the philosophy of recreation. Upon completion, students will be able to recognize the difference between private, public, and commercial recreation and discuss the history pertaining to each. Prerequisites: None

REC 112 Arts and Crafts I 1 0 3 2

This course is designed to instruct the student in the various mediums of art. Emphasis is placed on practical experience in paints, crayon, and chalk projects, as well as ceramics, pottery, and cloth art. Upon completion, students will be able to program arts and crafts in a recreational setting and demonstrate familiarity with the different arts and crafts forms. Prerequisites: None

REC 113 Arts and Crafts II 1 0 3 2

This course is designed to allow the student to work on art projects in different art mediums and organize art programs. Emphasis is placed on practical application as well as teaching, organizing, and demonstrating various art projects. Upon completion, students will be able to teach an art skill and organize an art program for a recreational setting. Prerequisites: None

REC 116 Horseshoes/SBoard/Croquet 2 0 0 2

This course is designed to teach the fundamentals of horseshoes, croquet, and shuffleboard. Emphasis is placed on basic game concepts, rules, safety, and techniques. Upon completion, students will be able to perform skills necessary in playing the above mentioned activities as well as know all regulations of each activity. Prerequisites: None

REC 119 Team Sports 2 4 0 4

This course is designed to offer a survey of basic rules, skills, and terminology in selected team sports that are popular in recreation settings. Emphasis is placed on knowledge and understanding of organization, administration, and promotion of sports rather than on performance. Upon completion, students will be able to evaluate a good team sports program and know the basics of football, basketball, volleyball, and soccer. Prerequisites: None

REC 120 Cultural Art 2 0 3 3

This course is designed to provide a general knowledge of the fields of arts and crafts, music, dance, and drama. Emphasis is placed on activity planning and practical skills in all related fields of cultural arts. Upon completion, students will be able to discuss values, scope, and organizational patterns for all areas of cultural programming. Prerequisites: None

REC 121 Program Plan and Organiz 5 0 0 5

This course is designed to prepare students in planning recreational activities in sports, social, cultural, and special events. Emphasis is placed on acquiring skills in programming for park systems and private, commercial, and industrial recreational facilities. Upon completion, students will be able to recognize major factors that govern program planning and discuss processes involved in promotion and evaluation. Prerequisites: None

REC 122 Public Relations 2 4 0 4

This course is designed to teach the students the value of good marketing procedures and the use of visual aids to accomplish this. Promotional techniques to enhance participation levels and provide information will be emphasized. Prerequisites: None

REC 123 Commercial Recreation 3 0 0 3

This course is designed to introduce the recreation student to the enterprise system in the field of leisure. Emphasis is placed on financial management, travel and tourism entertainment services, career development, creating a new business and marketing techniques. Upon completion, students will be able to assess the value of beginning a commercial enterprise in the field of recreation. Prerequisites: None

REC 124 Fitness Management 3 2 0 4

This course introduces students to basic fitness principles and evaluation techniques so that students will be knowledgeable in progressive maintenance programming. Emphasis is placed on testing for physical fitness, cardiovascular conditioning, evaluation of isometric and isotonic strength, and assessing exercise programs for lifetime value. Upon completion, students will be able to assess fitness programs for their personal use and plan programs for public's use in various recreational settings. Prerequisites: None

REC 136 Archery/Golf/Tennis 2 0 0 2

This course is designed to teach the student the basic skills and rules for playing archery, golf and tennis. Emphasis is placed on safety, equipment and technique in each of the three activities. Upon completion, students will be able to demonstrate proper techniques, be aware of proper rules, and proper safety precautions in all three activities. Prerequisites: None

REC 146 Badminton/Racquetball 2 0 0 2

This course is designed to teach the student the basic skills and techniques necessary for playing badminton and racquetball. Emphasis is placed on rules, safety, equipment and strategy associated with racquetball and badminton. Upon completion, students will be able to execute proper methods and procedures necessary to complete a fundamentally sound game of racquetball and badminton. Prerequisites: None

REC 201 Group Leadership 3 0 0 3

This course is designed to provide a general orientation to recreational group leadership and basic leadership methods. Emphasis is placed on group dynamics, problem solving techniques, and activity leadership methods. Upon completion, students will able to lead other students in a recreational activity and discuss leadership principles. Prerequisites: None

REC 202 Intro to Ill/Handicapped 5 0 0 5

This course is designed to introduce the student to the special recreational needs of exceptional and disabled persons. Emphasis is placed on different disabilities, their causes, limitations, and treatments. Upon completion, students will be able to describe general characteristics, precautions, and treatment concerns of various disabilities. Prerequisites: None

REC 203 Recreation Sign Language 2 2 0 3

This course provides students with insight into the problems of the hearing impaired and the various methods used in communicating in basic sign language. Emphasis is placed on communication skills through various pieces of equipment and the American Sign Language instruction. Upon completion, students will be able to discuss causes, degrees, and types of hearing impairments as well as use the American Sign Language. Prerequisites: None

REC 204 Outdoor Recreation 2 0 3 3

This course is designed to familiarize the student with the many conservation agencies and organizations and camping survival techniques. Emphasis is placed on the history of, objectives of, and federal and state involvement with outdoor recreation and on shelters, fires, and other survival necessities. Upon completion, students will be able to discuss agencies that control conservation in our country and apply the practice of basic survival procedures. Prerequisites: None

REC 206 Recreational Drama 2 2 0 3

This course is designed to teach different techniques in presenting various art forms of drama. Emphasis is placed on puppetry, storytelling, and improvisations and includes the history and scope of drama. Upon completion, students will be able to direct and teach creative drama, demonstrate role playing, and explain the uses of each. Prerequisites: None

REC 207 Sports Officiating 2 2 0 3

This course is designed to familiarize the student with the rules and regulations of football and softball. Emphasis is placed on officiating mechanics on official's responsibilities and recruiting and training officials. Upon completion, students will be able to officiate basketball, football, and softball games proficiently. Prerequisites: None

REC 210 Med Term and Kinesiology 3 0 0 3

This course is designed to build a workable base medical vocabulary for students interested in the therapeutic recreation field. Emphasis is placed on terminology commonly used in medical settings and assessment and documentation techniques used in medical facilities. Upon completion, students will be able to converse with people in the health-related fields to communicate therapeutic needs and instructions. Prerequisites: None

REC 212 Adaptive Phys Ed and Rec 3 2 0 4

This course is designed to teach modifications and adaptations used in physical and recreational activities for handicapped persons. Emphasis is placed on techniques and equipment used to adapt various sports, games, and activities for handicapped participants. Upon completion, students will be able to demonstrate proper programming, adaptations, and goal setting for physical and recreational activities designed for handicapped individuals. Prerequisites: None

REC 213 Rehabilitative Team 3 0 0 3

This course is designed to give insight into the number and types of professionals working with handicapped individuals. Emphasis is placed on local and state agencies providing recreational services as part of their programs. Upon completion, students will be able to discuss various agencies and professionals and their responsibilities in working with the handicapped. Prerequisites: None

REC 214 Recreational Music 3 2 0 4

This course is designed to increase students' knowledge and awareness of recreational music activities. Emphasis is placed on leadership techniques, methods of programming and organization, and fundamental skills in music. Upon completion, students will be able to discuss various musical notations, rhythms, and singing leadership techniques and will have a working knowledge of band instruments. Prerequisites: None

REC 220 Camp Counseling 2 0 3 3

This course provides the student with the skills and knowledge needed to work effectively in various types of camping situations. Emphasis is placed on outdoor camping equipment, responsibilities of a camp counselor, and developing the ability to relate information to special populations. Upon completion, students will be able to erect various types of tents and other equipment and develop a competent camping program. Prerequisites: None

REC 221 Indiv Lifetime Rec Activ 1 0 3 2

This course is designed to demonstrate to students the varied recreational opportunities that can be done on an individual basis. Emphasis is placed on social activities, such as cards and board games, darts, checkers, and chess. Upon completion, students will be able to program individual activities by using a variety of games. Prerequisites: None

REC 223 Folk/Square/Social Dance 1 4 0 3

This course provides students an understanding of the cultural values of dance and provides practice in the basic skills and techniques of dance. Emphasis is placed on teaching methods and procedures and programming for dance instruction. Upon completion, students will be able to instruct in different types of dancing techniques and provide a history of the cultural background of learned dances. Prerequisites: None

REC 225 Scheduling Activities 3 0 0 3

This course is designed to instruct students in selecting, planning, and conducting tournaments in all sports. Emphasis is placed on selection of appropriate types of tournaments for industries, schools, and recreation agencies. Upon completion, students will be able to draw up a schedule, record results, and plan and conduct whole tournaments. Prerequisites: None

REC 231 Social Recreation 1 4 0 3

This course is designed to teach students how to plan, organize, and lead social recreational activities and programs. Emphasis is placed on understanding group dynamics and incorporating these techniques in social activities. Upon completion, students will be able to organize and carry out social events for all age groups in various social settings. Prerequisites: None

REC 236 Low Organized Games 1 0 3 2

This course presents materials and strategies necessary to conduct structured activities for youth, ages two through twelve. Emphasis is placed on characteristics, both mental and physical, of this age group so that activities will enhance social growth. Upon completion, students will be able to plan, schedule, and conduct actual activities for ages two through twelve. Prerequisites: None

REC 250 Community Health Resources 3 0 0 3

This course is designed to study the on-going process of staying mentally, physically, and socially healthy. Emphasis is placed on the well-being of individuals and communities. Upon completion, students will be able to discuss how heredity, stress, fitness, nutrition, life-style, and environment affects individuals. Prerequisites: None

REC 251 Gerontology 3 0 0 3

This course is designed to acquaint students with all aspects of the aging process. Emphasis is placed on characteristics of aging, methods of recreational programming, and guidelines for various institutional settings. Upon completion, students will be able to work effectively with the elderly in planning programs and carrying these programs to completion. Prerequisites: None

REC 299 Recreation Internship 0 0 20 2

This course is designed to give students practical experience on location in a recreational setting. Emphasis is placed on developing leadership characteristics, planning and organizing programs, and working with others in the field. Upon completion, students will be able to lead a summer program of activities that has been designed by the student himself/herself.
Prerequisites: None

REL 221 Survey of Old Testament 5 0 0 5

A survey of the Old Testament writings, with emphasis on Hebrew history and faith. Consideration of theologies of covenant, presence, kingship, prophecy, priesthood, and wisdom. Historical and literacy criticism which to bring deeper understanding of the Old Testament. Prerequisites: None

REL 222 Survey of New Testament 5 0 0 5

A study of the New Testament writings, with emphasis on the faith of the early Christian community. Topics include the social, political, cultural, and religious milieu out of which Christianity arose...historical-critical viewpoints brought to bear on questions of provenance and meaning.
Prerequisites: None

RLS 164 Real Estate Law 3 0 0 3

This course is an advanced level instructional course in real property ownership and interests and includes NCRE Licensing Law and Rules and Regulations. Topics include land use control, law of the agency, contracts, landlord and tenant law, and mortgages/deeds of trust. Upon completion, students will be able to apply their understanding of real estate law to real estate situations. Prerequisite: RLS 285 or equiv. or real estate license

RLS 202 Real Estate Mathematics 3 0 0 3

This course reviews basic math concepts through the complicated mathematical computations and is an essential and necessary course for all advanced real estate courses. Topics include computations such as profit, loss, commissions, appraisal, area and volumn, interest, discount points, prorations, and capitalization. Upon completion, students will be able to do all math problems pertaining to real estate functions and problems.
Prerequisites: None Corequisite: RLS 285

RLS 209 Real Estate Finance 3 2 0 4

This course includes an overview of the economics of finance, location of money, the influence of economic activities, and governmental influences on finance. Topics include sources of mortgage money, mathematics of mortgage financing, primary and secondary money markets, and governmental influences. Upon completion, students will be able to apply their understanding of finance to serve their customers more effectively.
Prerequisite: RLS 285 or equiv. or real estate license

RLS 216 Real Estate Selling Tech 3 2 0 4

This course includes an overview of the most efficient selling techniques; salesmanship and a complete analysis of the selling process is studied. Topics include methods to increase sales and listing productivity, efficient time management, advertising techniques, and maximizing sales efforts. Upon completion, students will be able to apply selling techniques covered to increase sales and overall productivity.
Prerequisite: RLS 285 or equiv. or real estate license

RLS 221 Real Estate Invest & Tax 3 0 0 3

This course includes an overview of local and national tax effects on real estate and an analysis of real estate as a total investment. Topics include the research, analysis, and correlation affecting real estate as an investment and the tax ramifications of real estate investing. Upon completion, students will be able to apply their basic understanding of real estate investments to selected properties.
Prerequisite: RLS 285 or equiv. or real estate license

RLS 226 Land Development 3 2 0 4

This course includes an overview of land development, population make-up, and socio-economic factors. Topics include land and population economics of land utilization, site selection, and topographical utilization. Upon completion, students will be able to analyze and select a site for development and make ecological considerations.
Prerequisite: RLS 285 or equiv. or real estate license

RLS 228 Land Use Policy & Govt 3 2 0 4

This course includes an overview of local and national trends in land use and governmental policies and their effects on real estate. Topics include developing skills in analyses, research, and correlation of the various trends and policies affecting real estate. Upon completion, students will be able to apply their understanding of the influence of governmental influence on real estate. Prerequisite: RLS 285 or equiv. or real estate license

RLS 231 Real Estate Brokerage 3 2 0 4

This course includes brokerage operations, establishing a brokerage firm, bookkeeping systems, management concepts and practices, personnel and training, marketing operations, and trust. Topics include management, personnel, operations, records and bookkeeping systems, and financial operations. Upon completion, students will be able to operate or manage a real estate brokerage practice effectively.
Prerequisite: RLS 285 or equiv. or real estate license

RLS 285 Real Estate Fundamentals 4 2 0 5

This course studies the fundamentals and principles of real estate for the person who wishes to become a real estate salesperson or broker. Topics include real estate laws, rules and regulations, financing, ownership, brokerage, and property valuation and ownership. Upon completion, students will be able to sit for the North Carolina real estate salesman's examination.
Prerequisite: None Corequisite: RLS 202

RLS 292 Intro Real Estate Apprais 4 2 0 5

This course includes a study of the functions of a real estate appraiser, planning, and the process of appraisal site evaluation and materials. Topics include application of the income approach, market data approach, and the cost approach, including depreciation and renovation. Upon completion, students will be able to appraise properties using the correct appraisal technique to estimate value. Prerequisite: RLS 285 or equiv. or real estate license

RLS 293 Residential R E Appraisal 3 2 0 4

This course includes estimating the value of residential properties and the preparation of a residential appraisal report. Topics include analysis of factors affecting the value of real estate and actual preparation of practice residential appraisals reports. Upon completion, students will be able to complete a residential appraisal report with a high degree of competence.
Prerequisites: RLS 285 or equiv. and RLS 292

RLS 294 Commercial R E Appraisal 3 2 0 4

This course provides a study of the capitalization of income and the income approach to value leverage techniques to insure maximum profitability. Topics include a study of income producing properties, capitalization rates, and appraisal of lease interests. Upon completion, students will be able to select an investment and maximize the earning capacity of the property.
Prerequisites: RLS 285 or equiv. and RLS 292

RLS 295 Adv Commercial Appraisal 3 2 0 4

This course provides a study of the management of real estate as an investment taught at the executive level. Topics include valuation, financial implications, present value theory, after-tax financial analysis, and long-range management plan. Upon completion, students will be able to develop ownership objectives through the analytical aspects of owning investment properties. Prerequisites: RLS 285 or equiv. and RLS 294

RLS 296 Property Management 4 0 0 4

This course includes physical, economic, and institutional factors of property management, and an analysis of the property manager and his/her responsibilities. Topics include tenant selection and supervision, office management, budget preparation, reports, and office management. Upon completion, students will be able to manage a property management office and/or selective rental properties.
Prerequisite: RLS 285 or equiv. or real estate license

RTH 105 Resp Ther Theory/Equip I 1 0 3 2

This course is designed to give the learner a thorough knowledge of the biological and physical principles on which humid and aerosol therapy is based. Topics include procedures for the general comfort and safety of the patient and the assembly and operation of humidifiers and nebulizers. Upon completion, students will be able to display mastery of concepts and procedures through demonstration and written evaluation.
Prerequisite: Admission to the Respiratory Therapy program

RTH 106 Resp Ther Theory/Equip II 1 2 12 6

This course is designed to introduce the student to medical gas therapy and the physiology of ventilation; clinical observation is included. Topics include medical gas therapy, physiology, IPPB, incentive spirometry, and oxygen analyzers. Upon completion, students will be able to apply their understanding of the basics of these devices and the physiology involved through demonstration and written evaluation.
Prerequisite: RTH 105

RTH 107 Resp Ther Theory/Equip III 1 4 0 3

This course covers life saving maneuvers such as relieving airway obstruction and cardiopulmonary resuscitation. Emphasis is placed on adjunct equipment for airway maintenance and the use of emergency equipment. Upon completion, students will be able to demonstrate competency in CPR and intubation as demonstrated in manikin practice and written evaluation.
Prerequisite: RTH 106

RTH 111 Clinical Practice I 2 2 15 8

This course covers the knowledge and skills necessary for performing chest physical therapy and pulmonary function testing. Emphasis is placed on performance of pulmonary drainage procedures and performance and calculation of Pulmonary Function Test. Upon completion, students will be able to position patients and perform CPT as well as perform and calculate P.F.T. Prerequisite: RTH 106

RTH 112 Clinical Practice II 2 0 33 13

This course provides an introduction to acid base balance and blood gas interpretation and collection, as well as pulmonary function assessment and mechanical ventilation. Topics include performance and interpretation of arterial puncture, analysis of pulmonary functions, and an introduction to mechanical ventilation. Upon completion, students will be able to describe and demonstrate competency in performing procedures with arterial puncture, blood gas analysis, and mechanical ventilation.
Prerequisites: All third quarter courses

RTH 151 Pharmacology 3 0 0 3

This course includes effects, mechanisms of action, routes and methods of administration, distribution, metabolism, and excretion of drugs pertinent to respiratory care. Topics include general pharmacology, aerosolization, mucokinetics, sympathomimetics, phosphodiesterase inhibitors, corticosteroids, prophylactics, antibiotics, respiratory stimulants and depressants, diagnostic agents, and respiratory gases. Upon completion, students will be able to use references, compute dosages, interpret prescriptions, and evaluate, describe, or prepare the administration of respiratory drugs.
Prerequisite: RTH 106

RTH 208 Pulmonary Pathophysiology 3 0 0 3

This course is a study in the basic language and concepts in the study of disease. Emphasis is placed on the relationship between structure and function of the diseased lung. Upon completion, students will be able to distinguish among causes, diagnosis, and treatment of the various diseases responsible for pulmonary complication. Prerequisite: RTH 112

RTH 213 Clinical Practice III 3 0 33 14

This course provides the student with a complete comprehensive review of didactic materials and clinical involvement in the critical care areas. Topics include medical gas therapy, continuous ventilatory support, pharmacology, microbiology, and mathematics. Upon completion, students will be able to apply learned skills, solve problems, and evaluate patient progress. Prerequisites: All fifth quarter courses

RTH 241 Pediatrics 2 2 0 3

This course provides an in-depth study of the disease process and treatment of the fetal, neonate, and pediatric age group. Topics include development of the respiratory system, evaluation of the newborn, diseases and treatment, and mechanical ventilation. Upon completion, students will be able to describe and perform techniques for the care of the pediatric patient.
Prerequisites: All fourth quarter courses

RTH 242 Clinical Applications I 1 2 15 7

This course includes study and laboratory practice of the principles underlying clinical evaluation of the pulmonary system. Topics include disease entities of the adult and pediatric patient, artificial ventilation, and application of blood gases. Upon completion, students will be able to recognize basic disease entities and perform techniques used in respiratory care. Prerequisite: RTH 112

RTH 243 Cardiopulmonary Evaluat 2 2 0 3

This course teaches methods and techniques of evaluating respiratory and cardiac functions in the normal and diseased states. Topics include physiology, electrolyte balance, blood gas relationships, shunt and deadspace disease, x-ray, EKG, and P.F.T. evaluation and interpretation. Upon completion, students will be able to collect and combine appropriate information to accurately assess and evaluate patients' cardiopulmonary status. Prerequisite: RTH 112

RTH 251 Clinical Applications II 2 2 15 8

This course includes an in-depth study of the challanges presented by acute respiratory emergencies. Topics include a swift and organized approach to diagnosis and management. Upon completion, students will be able to assess patients' respiratory status, select pertinent data from laboratory tests, and determine appropriateness of prescribed respiratory care plan.
Prerequisites: All fourth quarter courses

RTH 252 Department Organiz Admin 2 0 0 2

This course includes a study of planning, controlling, organizing, and directing a respiratory therapy department and its employees. Emphasis is placed on organization, management, authority, evaluations, fiscal affairs, personnel structure, job descriptions, interviews, and applications. Upon completion, students will be able to utilize skills to plan, organize, direct, and control a respiratory therapy department and its employees.
Prerequisites: All fifth quarter courses

SOC 101 Intro to Sociology 3 0 0 3

This course provides the student with the capability to analyze and relate fundamental concepts of sociology to major elements of social life. Emphasis is placed on the use of the scientific method to study social patterns and institutions: family, religion, education, politics, and economics. Upon completion, students will be able to discuss patterns of socialization, intergroup relations, minority group relations, population growth, and ecosystems. Prerequisites: None

SOC 102 Marriage & Family 3 0 0 3

This course covers a study of the family as a social institution, its origin and development, along with other social institutions in contemporary society. Emphasis is placed on the family form and function in society, gender and sex role differences, and social relationships between the sexes. Upon completion, students will be able to discuss social relationships between the sexes and factors contributing to or mitigation against successful, stable marriages. Prerequisites: None

SOC 105 Social Culture 3 0 0 3

This course introduces the students to social culture using a multidisciplinary approach with attention to basic similarities to other cultures. Emphasis is placed on understanding cultural survival of nation, states, and communities in the most pragmatic manner or method available. Upon completion, students will be able to explain cultural evolution from primitive to modern societies, incorporating configuration, functionalism, and structuralism. Prerequisites: None

SOC 121 General Sociology 5 0 0 5

This course provides the student with the capability to analyze and relate fundamental concepts of sociology to major elements of social life. Emphasis is placed on the use of the scientific method to study social patterns and institutions: family, religion, education, politics, and economics. Upon completion, students will be able to discuss patterns of socialization, intergroup relations, minority group relations, population growth, and ecosystems. Prerequisites: None

SOC 203 Sociology of Death/Dying 3 0 0 3

This course is designed to present sociological backgrounds and frustrations that are incorporated into the consequences of death and dying. Emphasis is placed on analyzing the different death rates among various groups, races, and societies, as well as various types of death. Upon completion, students will be able to discuss the social rituals of death, both cultural and religious, including current death and dying issues. Prerequisites: None

SOC 210 Contemporary Social Prob 3 0 0 3

This course explores most of the facets of current social problems and involves the student in the analysis of social problems using sociological theory. Emphasis is placed on social disorganization, pathology, conflict, violence, and labeling deviants in contemporary society, including insight into values, goals, and norms. Upon completion, students will be able to recognize social problems related to physical and mental health, chemical dependency, crime, deviance, inequality, and environmental crisis. Prerequisite: SOC 101

SOC 221 Marriage and Family 5 0 0 5

This course covers a study of the family as a social institution, its origin and development, along with other social institutions in contemporary society. Emphasis is placed on the family form and function in society, gender and sex role differences, and social relationships between the sexes. Upon completion, students will be able to discuss social relationships between the sexes and factors contributing to or mitigation against successful, stable marriages. Prerequisites: None

SOC 231 Social Problems 5 0 0 5

The course explores most of the facets of current social problems and involves the student in the analysis of social problems using sociological theory. Emphasis is placed on social disorganization, pathology, conflict, violence, and labeling deviants in contemporary society, including insight into values, goals, and norms. Upon completion, students will be able to recognize social problems related to physical and metnal health, chemical dependency, crime, deviance, inequality, and environmental crisis. Prerequisite: SOC 121

SOC 241 Death & Dying 5 0 0 5

This course is designed to present sociological backgrounds and frustrations that are incorporated into the consequences of death and dying. Emphasis is placed on analyzing the different death rates among various groups, races, and societies, as well as various types of death. Upon completion, students will be able to discuss the social rituals of death, both cultural and religious, including current death and dying issues. Prerequisites: None

SOC 251 Social Culture 5 0 0 5

This course introduces the students to social culture using a multidisciplinary approach with attention to basic similarities to other cultures. Emphasis is placed on understanding cultural survival of nation, states, and communities in the most pragmatic manner or method available. Upon completion, students will be able to explain cultural evolution from primitive to modern societies, incorporating configuration, functionalism, and structuralism. Prerequisites: None

SPA 221 Elementary Spanish I 6 0 0 6

Emphasis is placed on the development of the basic skills of reading, writing, speaking, and oral comprehension. The basic elements of grammar, phonetics, common idioms, and vocabulary are stressed. Prerequisites: None

SPA 222 Elementary Spanish II 6 0 0 6

Emphasis is placed on the development of the basic skills of reading, writing, speaking, and oral comprehension. The basic elements of grammar, phonetics, common idioms, and vocabulary are stressed.
Prerequisite: SPA 221

SSC 205 American Institutions 3 0 0 3

This course focuses on the analysis of structure, function, and change in the five basic institutions of family, religion, politics, economics, and education. Emphasis is placed on the distribution and aggregation of identities, roles, and resources along with wealth, power, and prestige in class structure. Upon completion, students will be able to discuss social and institutional relationships as they are structured in contemporary American society. Prerequisite: SOC 101

SSC 90 Intro to Social Science 3 2 0 4

This course offers developmental study students an introduction to the following social sciences: anthropology, economics, history, political science, psychology, sociology, and geography. Emphasis is placed on a historical perspective of the development of the scientific method along with substantive content and practical applications. Upon completion, students will be able to discuss, evaluate, and explain the basic concepts and scientific endeavors associated with each of the social sciences.
Prerequisites: None

SUR 1080 Nursing Procedures 5 0 3 6

This course is designed to acquaint the student with the physical and psychological needs of the patient encountering surgery. Emphasis is placed on the principles involved in caring for the surgical patient during the preoperative, intraoperative, and postoperative periods. Upon completion, students will be able to transport patients, perform skin preparation, assist with positioning, and perform basic postoperative nursing care in the recovery room. Prerequisites: None

SUR 1085 Pharmacology 3 0 0 3

This course covers basic information on pharmacology needed to give effective assistance to the team in the operating room. Topics include drug terminology, laws regarding the use of drugs, weights and measures, pharmacologic agents, toxic reactions, anesthesia, and methods for administering drugs. Upon completion, students will be able to prepare drugs and solutions for use at the operative field and assist the anesthesiologists during induction and emergencies. Prerequisites: All first quarter courses

SUR 1090 Operating Room Techniques 2 0 3 3

This course is designed to assist the student in acquiring basic knowledge and skills in surgical aseptic technique for application in the operating room. Topics include ethical, moral, and legal responsibilities, prevention and control of infection, and duties of the scrub and circulating technician. Upon completion, students will be able to assist in the performance of scrub and circulating technician duties as a team member in the operating room. Prerequisites: None

SUR 1093 Surgical Procedures I 4 4 0 6

This course includes a study in obstetrics, the more common operative procedures related to the body systems, terminology, special considerations, and instrumentation. Topics include anatomy review, wound closure, and total intraoperative care of the surgical patient during general, gynecologic, and genitourinary surgery. Upon completion, students will be able to define surgical terminology, identify abdominal incisions and the layers of tissue penetrated, and instruments and supplies used.
Prerequisites: All first quarter courses
Corequisites: All second quarter courses

SUR 1094 Clinic Practice I 0 0 15 5

This course provides practical experiences in the actual clinical setting with a variety of planned activities to perfect skills learned in the classroom. Emphasis is placed on acquiring skills in scrubbing, gowning, gloving, acquiring dexterity handling instruments, sutures, supplies, and anticipating team members' needs. Upon completion, students will be able to perform as members of the operating team in the scrub and circulating position by applying skills acquired. Prerequisites: All first quarter courses
Corequisites: All second quarter courses

SUR 1095 Clinic Practice II 0 0 15 5

This course is a continuation of SUR 1094, with emphasis on basic skills perfection and planned experiences in the operating, labor, and delivery rooms. Emphasis is placed on applying skills to thoracic, plastic, reconstructive, orthopedic, and neurological procedures, as well as on labor and delivery procedures. Upon completion, students will be able to coach during labor, assist in the delivery room, and perform as team members in the operating room. Prerequisites: All second quarter courses
Corequisites: All third quarter courses

SUR 1097 Surgical Procedures II 4 4 0 6

This course is a continuation of SUR 1093 and covers the more complicated surgical procedures that require greater knowledge and skills. Emphasis is placed on anatomy review, special considerations, and instrumentation in thoracic, plastic, reconstructive, ophthalmic, orthopedic, and neurological surgery. Upon completion, students will be able to define terminology, identify instruments, discuss the general scheme of surgical procedures, and practice patient safety measures. Prerequisites: All second quarter courses
Corequisites: All third quarter courses

SUR 1098 Seminar I 2 0 0 2

This course provides the student with opportunities to verbally relate surgical procedures observed with SUR 1093 and SUR 1094. Topics include preoperative diagnosis, postoperative diagnosis, operation, types of anesthesia, and points of particular interest during the operative procedure. Upon completion, students will be able to discuss the operative procedures assigned, relate their contributions, and give an overall account of room activities. Prerequisites: All first quarter courses
Corequisites: All second quarter courses

SUR 1099 Seminar II 2 0 0 2

This course is a continuation of SUR 1098 with opportunities for the student to verbally relate surgery observed with SUR 1095 and SUR 1097. Topics include preoperative diagnosis, postoperative diagnosis, operation, types of anesthesia, and points of interest during the operative procedure. Upon completion, students will be able to discuss the operative procedures assigned, relate their contributions, and give an overall account of room activities. Prerequisites: All second quarter courses
Corequisites: All third quarter courses

SUR 1100 Surgical Procedures III 4 0 0 4

This course is a continuation of SUR 1097 with emphasis on specialty operative procedures that require greater knowledge and skills. Topics include anatomy review, special considerations, and instrumentation in ear, nose, throat, neck, cardiovascular, and pediatric surgery. Upon completion, students will be able to define terminology, identify instruments, practice patient safety measures, and discuss the general scheme of surgical procedures. Prerequisites: All third quarter courses
Corequisites: All fourth quarter courses

SUR 1101 Clinic Practice III 0 0 24 8

This course is a continuation of SUR 1095 with emphasis on perfecting skills in the operating room, short stay unit, and central service. Emphasis is placed on specialty procedures that require more technical skills, short procedures that require speed and efficiency, and advanced central service responsibilities. Upon completion, students will be able to function at entry level in the work force as a surgical technologist.
Prerequisites: All third quarter courses
Corequisites: All fourth quarter courses

SUR 1102 Seminar III 2 0 0 2

This course provides comprehensive testing to locate didactic weaknesses in preparation for the national certification exam. Topics include a review in anatomy, microbiology, pharmacology, nursing procedures, principles of operating room technique, and theory of surgical procedures. Upon completion, students will be able to determine areas of didactic weakness, prepare and take the exam with confidence, and will have a foundation for gainful employment. Prerequisites: All third quarter courses
Corequisites: All fourth quarter courses

WLD 106 Techniques of Welding 1 0 6 3

This course covers the arc and gas welding processes with practical exercises in welding materials together in all positions. Emphasis is placed on a discussion of arc welding machines, gas components, and safety procedures. Upon completion, students will be able to use arc and gas welding equipment to join metal plates in the flat, horizontal, vertical, and overhead position. Prerequisites: None

WLD 1105 Auto Body Welding 2 0 6 4

This course provides an introduction to the practical operations of the MIG welding system and includes welding practices in all positions. Emphasis is placed on the study of the machines and equipment for MIG welding with practical welding exercises in all welding positions. Upon completion, students will be able to properly set up and operate MIG welding systems and to weld metals efficiently in all the welding positions.
Prerequisite: WLD 1180 or 106

WLD 1112 Mech Testing & Inspection 1 2 3 3

This course covers the mechanical testing and inspection of welds relating to the various tests and procedures used in industrial applications. Emphasis is placed on the physical testing of weld beads in destructive and non-destructive testing through ultrasonic sound and x-ray techniques. Upon completion, students will be able to evaluate weld beads for quality through destructive and non-destructive testing processes. Prerequisite: WLD 1121

WLD 1120 Oxy-Acetylene Welding 3 0 12 7

This course covers the oxy-acetylene welding processes, principles of welding and cutting equipment, care and safe use. Emphasis is placed on familiarization with oxy-acetylene equipment for welding and cutting materials and brazing and soldering processes. Upon completion, students will be able to use essential gas welding equipment safely and weld and braze materials in all welding positions. Prerequisites: None

WLD 1120A Oxy-Acetylene Welding 2 0 6 4

This course covers the processes of gas welding, cutting, brazing, and soldering and describes the safe use of the essential equipment. Emphasis is placed on familiarization with essential equipment for gas welding processes; welding is practiced in the flat and horizontal position. Upon completion, students will be able to use essential gas welding equipment safely and weld and braze materials in flat and horizontal welding positions.
Prerequisites: None

WLD 1120B Oxy-Acetylene Welding 1 0 6 3

This course is a continuation of WLD 1120A and covers the processes of gas welding, cutting, brazing, and soldering and describes the safe operation of equipment. Emphasis is placed on the equipment used for gas welding and cutting processes including practice welding in the vertical and overhead positions. Upon completion, students will be able to use gas welding equipment safely and produce weld or braze joints of materials in all welding positions. Prerequisite: WLD 1120A

WLD 1121 Arc Welding 3 0 15 8

This course covers the operation of arc welding machines, safety, selection of electrodes, and problems encountered in the welding process. Emphasis is placed on machines, their electrical systems, and electrode data evaluation. Upon completion, students will be able to use arc welding machines to weld plates in all positions.
Prerequisite: WLD 1180 or 106 or 1120

WLD 1121A Arc Welding 2 0 6 4

This course covers the operation of arc welding machines, safety and selection of electrodes, and problems encountered in the welding process. Emphasis is placed on machines for welding, electrical systems, electrode data selection, and practice in flat and horizontal position welding. Upon completion, students will be able to use arc welding machines safely to weld steel plates in the flat and horizontal positions.
Prerequisite: WLD 1180 or 106 or 1120

WLD 1121B Arc Welding 1 0 9 4

This course is a continuation of WLD 1121A and includes machines, safety and selection of electrodes, and welding process problems. Emphasis is placed on the operation and electrical systems of arc welders and practice welding in the vertical and overhead position. Upon completion, students will be able to use arc welding machines safely to weld plates in the overhead and vertical positions. Prerequisite: WLD 1121A

WLD 1122 Comm & Industrial Pract 2 0 9 5

This course covers the procedures and practices in field construction and industrial plants and transferring this knowledge to gainful projects. Emphasis is placed on teaching students how to lay out projects including welding procedures in pipe and structural steel units. Upon completion, students will be able to lay out detailed field and structural plans and weld pipe and plates in all positions. Prerequisites: WLD 1123 and 1124

WLD 1123 Inert Gas Welding 1 0 3 2

This course is designed to teach the operation and use of inert-gas-shielded arc welding methods (TIG/MIG). Emphasis is placed on the study of the equipment, its safety and operational demands, and practice in all welding positions. Upon completion, students will be able to set up and operate TIG and MIG welding machines and weld various size metals in all welding positions. Prerequisites: WLD 1180, 106, 1120, and WLD 1121

WLD 1124 Pipe Welding 4 0 12 8

This course provides practice in the preparation and welding procedures essential to joining pipe systems. Emphasis is placed on pipe codes and measurements and specifications and techniques of welding pipe, including layout of pipe joints. Upon completion, students will be able to prepare pipe joints, then weld them together using pipe welding processes in the horizontal and vertical position. Prerequisites: WLD 1120 and 1121

WLD 1124A Pipe Welding 2 0 6 4

This course introduces students to pipe welding techniques and preparation of pipe for welding. Emphasis is placed on studies of pipe codes and specifications and techniques of horizontal pipe welding. Upon completion, students will be able to make templates, lay out pipe joints, and join pipes using proper welding techniques in the horizontal position. Prerequisites: WLD 1120 and 1121

WLD 1124B Pipe Welding 2 0 6 4

This course is a continuation of WLD 1124A and teaches students the procedures of pipe welding. Emphasis is placed on review of pipe codes, laying out of pipe joints, and techniques of vertical pipe welding. Upon completion, students will be able to make templates, lay out pipe joints, and join pipes using proper welding techniques in the vertical position. Prerequisite: WLD 1124A

WLD 1125 Certification Practice 3 0 6 5

This course provides practice in welding metals to meet certification standards as established by specific codes. Emphasis is placed on the various tests established by industry and the American Welding Society using specific principles and welding procedures. Upon completion, students will be able to weld metals in all welding positions and test the welds to determine if quality welds have been produced. Prerequisites: WLD 1123 and 1124

WLD 1180 Basic Welding 1 0 6 3

This course covers the basic arc and gas welding processes alluding to welding machines and equipment. Emphasis is placed on arc welding machines, gas welding components, and flat plate welding is practiced. Upon completion, students will be able to set up arc and gas welding equipment safely and successfully and join metal plates in the flat position. Prerequisites: None

WLD 1181 MIG & TIG 1 0 6 3

This course is a continuation of electric inert gas welding (TIG and MIG) and emphasizes fundamentals of machines and operations. Topics include the TIG and MIG welding details and practice in plate welding in all welding positions. Upon completion, students will be able to use TIG and MIG welding machines to join aluminum, steel, and stainless steel in all welding positions. Prerequisite: WLD 106 or 1180

WLD 95 Intro to Welding 2 0 3 3

This course is designed to provide training in arc and gas welding processes with practical exercises in welding metal in the flat position. Emphasis is placed on an introduction to welding machines, their operation, and accessories, stressing gas welding processes and safety. Upon completion, students will be able to use gas and arc welding equipment safely and properly weld metal in the flat welding position. Prerequisites: None

ADMINISTRATIVE STAFF AND FACULTY

INSTITUTIONAL ADMINISTRATION

Robert Craig Allen President	B.S., Appalachian State University M.Ed., UNC-CH Ed.D., NC State University
Robert L. Carter Vice President for Risk Management	B.S., M.B.A., UNC-CH
Barbara Copeland Director of Communications and Marketing	B.S., M.S., Northern Illinois University
Patricia Hickmon Director of Institutional Resource Development	B.A., Tift College of Mercer University
John E. McDaniels Vice President for Personnel	B.A., Hampton University M.A., Central Michigan University
Larry B. Norris Vice President for Academic Affairs	B.A., Pembroke State University M.A., University of Arkansas Ed.D., NC State University
Sylvia T. Pierce Assistant to the President for Research & Planning	A.A., Wingate College A.B., Queens College M.A.Ed., UNC-C Ed.D., NC State University
Linwood Powell Vice President for Administrative Services	B.S., Campbell University M.Ed., NC State University Ed.D., Nova University
Daniel Prescott Assistant to the President for Management Information Services	B.A., University of Vermont M.S., Troy State University

ACADEMIC AFFAIRS ADMINISTRATIVE STAFF

James C. Basnight Assistant to the Vice President for Academic Affairs	A.S., Chowan College B.S., Atlantic Christian College M.A., East Carolina University
John T. Fernald Associate Vice President for Student Development	A.B., UNC-CH M.Ed., NC State University Ed.D., Nova University
William E. Sease Associate Vice President for Continuing Education	B.S., Appalachian University M.Ed., Virginia Polytechnical Institute

Susan Rushing Curriculum Specialist	B.S., Virginia State University M.A., Central Michigan University
Dave Smathers Institutional Research Specialist	A.A.S., Community College of the Air Force B.A., Saint Leo College M.S., Troy State University
Levarne McLamb Management Data Technician	A.A.S., Fayetteville Technical Community College

VOCATIONAL, TECHNICAL, AND GENERAL EDUCATION DIVISION ADMINISTRATIVE STAFF

John Duncan Director of Curriculum Improvement Project	B.A., St. Andrews Presbyterian College M.Div., Louisville Presbyterian Theological Seminary M.Ed., UNC-G
Ernest G. Fulghum Dean of Curriculum Instruction	B.A., UNC-CH M.Ed., East Carolina University
Edward J. Jackson Director of Off-Campus Curricular Programs	A.A., University of Kentucky B.S., M.Ed., Campbell University Ed.D., Nova University
Barbara Melvin Program Coordinator Cooperative Education	B.S., Fayetteville State University M.S., NC Central University
J. B. Simpson Director of Curricular Data Management	B.S., University of Tennessee M.B.A., University of Utah
Harold B. Thompson Director of Special Programs and Projects	B.S., Fayetteville State University M.Ed., NC State University
Betty J. Williamson Dean of Learning Resources	B.S., M.A., East Carolina University

STUDENT DEVELOPMENT

Administrative Staff

Helen Winstead Dean of Students	B.S., Pembroke State University M.Ed., NC State University Ed.D., Nova University
Catherine Barkley Placement and Alumni Affairs Coordinator	B.A., Atlantic Christian College
Niles Compton, Jr. Veterans Services Coordinator	B.A.S., Methodist College M.Ed., Campbell University
Jeffrey Glendening Assistant Registrar	B.A., Methodist College M.A., Campbell University
Winfred King Financial Aid Coordinator	A.A.S., Fayetteville Technical Community College
Sheila Locklear Registrar, Curriculum	A.A.S., Fayetteville Technical Community College
Shirley Moore Career Center Supervisor	B.S., Fayetteville State University M.Ed., Campbell University
Alvin Pierce Program Coordinator	B.S., J. C. Smith University M.S., NC A & T University
Sandra Sproul Health Services Coordinator	A.A.S., Durham College B.S.N., UNC-CH
Lorace Thomas Admissions Director	B.S.H.E., UNC-G M.S., University of North Dakota Ed.D., Duke University

Counselors/Recruiters

Valeria Collins Counselor Coordinator	B.S., SC State University M.S., Troy State University
Charles Garren Counselor	B.A., Duke University M.A., Ph.D., UNC-CH
Tom R. Graves Student Services Coordinator	B.A., Methodist College M.A., East Carolina University
Shirley Greene Counselor	B.A., NC Central University M.S., NC A & T University
Mary Knutson Counselor	B.S., Old Dominion University M.A., East Carolina University
Frank Pomponi Counselor	B.S., Fayetteville State University
George E. Pope Counselor	B.S., M.A., Appalachian State University
Leonard Shaw Recruiter	B.S., Fayetteville State University M.Ed., East Carolina University
Eddie Smith Counselor	B.S., Florida Memorial College M.A., NC Central University Ed.S., UNC-G
Catherine Tilghman Counselor	B.A., Mars Hills College M.A., Wake Forest University
Doris Warren Counselor	B.S., East Carolina University M.Ed., UNC-G Ed.S., East Carolina University
Ben Watson Counselor	B.A., Barber-Scotia College M.A., Appalachian State University
John Wheelous Counselor	B.S., M.A., Appalachian State University

MANAGEMENT INFORMATION SERVICES

Wanda S. Jones Night Computer Operator	A.A.S., Fayetteville Technical Community College
Dorsey Mellott Computer Programmer/Analyst	A.A.S., Fayetteville Technical Community College B.S., LaRoche College
Donnie Mize Lead Computer Operator	Raleigh School of Data Processing
Pamela Norman Computer Programmer/Analyst	A.A.S., Fayetteville Technical Community College A.A.S., King's College
Terry A. Plummer Systems Anslyst	A.A.S., Fayetteville Technical Community College
Patricia Timberlake Computer Programmer/Analyst	A.A.S., Fayetteville Technical Community College B.A., Atlantic Christian College
Kay Williams Word Processing Technician	A.A.S., Sampson Community College

FISCAL AFFAIRS OFFICE

Raymond E. Parker Controller	B.S., UNC-CH
David Hays Purchasing Agent	B.A., Methodist College
Linda R. Jones Computer Operator	A.A.S., Fayetteville Technical Community College
Carolyn Shaw Payroll Administrator	B.S., St. Andrews Presbyterian College
Betty Jo M. Smith Aministrative Assistant to the Controller	B.S., Campbell University Certified Public Accountant
Theress Rich Accounting Technician	A.A.S., Fayetteville Technical Community College

PLANT OPERATIONS

Fred Burns Coordinator for Maintenance and Custodial Services	
Sanford Cain Director of Facility Services	A.A.S., Fayetteville Technical Community College
Bobby Caulder Maintenance Supervisor	
Al Ford Plant Supervisor, Ramsey Street School	
Billy Houston Chief of Security	
Lyle Saville Supervisor, Custodial	

LEARNING RESOURCES CENTER

Joseph Alley Media Production Specialist	B.A., Central Michigan University
Thomas Blanton Senior Media Production Specialist	A.B., UNC-CH M.Div., Garrett Evangelical Theological Seminary M.A., Appalachian State University
Patricia L. Carter Learning Lab Instructor	B.S., Campbell University
Mary Crogban Learning Lab Instructor	B.A., Wellesley College M.E., Duke University
Flora G. Dunham Learning Lab Instructor	B.S., Indiana University M.E., East Carolina University
Janis Fisher Librarian	A.B., Meredith College M.L.S., East Carolina University
Carolyn E. Freeman Learning Lab Instructor	B.A., Flora McDonald College
Frank Galluccio Senior Media Production Specialist	A.A., Brookdale Community College B.S., M.Ed., Utah State University
Willisteen Hall Learning Lab Instructor	B.A., Methodist College
Annette D. Hornsby Learning Lab Instructor	B.A., Methodist College
Willard Justice Senior AV Technician	Fayetteville Technical Community College
Nell P. Mayville Learning Lab Instructor	Registered Nurse, Highsmith Hospital School of Nursing
Barbara Miller Librarian	B.A., UNC-CH M.L.S., UNC-G
Patricia H. Nunalee Learning Lab Director	B.S., East Carolina University
Dianne Richmond Senior Library Assistant	N.C. Central University
Susan S. Rose Library Services Director	B.A., NC State University M.L.S., UNC-CH
JoAnne B. Ryan Senior Library Assistant	B.S., Southwestern Missouri State Univ.
William D. Singleton Library Assistant	Caldwell Technical Institute and Community College

Janice O. Pavlikianidis Secretarial-Executive	B.S., Pembroke State University
Mark C. Pisano Social Science	B.A., Clemson University M.A., Western Carolina University
Charles O. Plummer	B.B.A., Campbell University M.A., Webster University
Susan L. Pope General Education	B.A., Lenoir Rhyne College M.Ed., East Carolina University
Barbara G. Ratley Developmental Studies	B.S., M.Ed., Pembroke State University
Hannah C. Sellers EDU	B.S., Fayetteville State University M.A., Fayetteville State University
Richard C. Skillman Business	B.S., Athens State College M.A., Webster University
S. Speight Smith English	B.A., Methodist College B.A., St. Leo College M., East Carolina University
Stephen E. Smith Business	B.S., Marian College M., Western Kentucky University
Julia M. Snellgroves Mathematics	B.S., Winthrop College M.A., Campbell University
Charles A. Stevens Developmental Studies	M.S., University of Maryland M.A., NC Central University M.S., Fayetteville State University
Robert J. Stiehl III Business	B.A., NC State University J.D., Campbell University
Luther G. Suber Industrial Management Business Administration	A.A.S., Fayetteville Technical Community College B.A., Methodist College
Linwood C. Thornton II Business	B.B.A., Campbell University
Roberta E. Weaver Criminal Justice	A.A., Hagerstown Junior College B.A., University of Maryland J.D., NC Central University
David A. Williams Social Science	B.A., University of North Carolina M.A., Northeastern University
Ronald L. Williams Business	B.A., Methodist College