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**FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE**

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1994-1996

CATALOG

VOLUME XIII

**P.O. BOX 35236, FAYETTEVILLE, NORTH CAROLINA 28303-0236**  
**PHONE (910) 678-8400**

## WELCOME

Fayetteville Technical Community College is a warm and friendly place...to visit...to explore career possibilities...to extend and enjoy avocational interests...and to pursue academic degrees for enhanced employment opportunities or advancement. In fact, FTCC is so versatile that over 40,000 people took one or more courses with us last year.

FTCC offers 60 credit programs in the Curriculum Programs division and hundreds of non-credit courses through the Continuing Education division. We are sure there is a course or program at FTCC for you.

We hope you'll take some time to look through the programs outlined in this catalog. Then let us know if we can help you make important decisions concerning your future education and training. If you have questions that are not answered in the catalog, please contact the people or offices listed below and let them know how they can help you.

FTCC is a community college, meaning that we exist to serve the people in this community. So whether you come here just to take a course or earn an associate degree, FTCC can meet your educational needs.

Please call us with your questions.

Admissions . . . . .	678-8473
Adult and Continuing Education . . . . .	678-8386
Academic Program Areas	
Business . . . . .	678-8466
General Education and Public Service . . . . .	678-8467
Health . . . . .	678-8264
Technical and Vocational . . . . .	678-8338
Co-op Education . . . . .	678-8453
Counseling . . . . .	678-8419
Financial Aid . . . . .	678-8242
Health Services . . . . .	678-8450
Information	
Student Services . . . . .	678-8419
Continuing Education . . . . .	678-8386
Job Placement . . . . .	678-8418
Learning Resources Center . . . . .	678-8305
Library . . . . .	678-8247
Registrar . . . . .	678-8252
Switchboard . . . . .	678-8400
Veterans' Services . . . . .	678-8395

FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

BOARD OF TRUSTEES

Harry F. Shaw, Chairman

Thornton W. Rose, Vice Chairman

Marye Jeffries, Secretary

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Maxine G. McCoy	June 30, 1995	Board of County Commissioners
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ATTORNEY

L. Stacy Weaver, Jr.

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## **NONDISCRIMINATION STATEMENT**

The Board of Trustees and the administration of Fayetteville Technical Community College are fully committed to the principles and practice of equal employment and educational opportunities. 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, handicap or political affiliation. 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 Title VI and VII of the Civil Rights Act of 1964 and 1991, 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, the Americans with Disabilities Act of 1990, and Executive Order 11375.

For information concerning these provisions, contact:

Vice President for Personnel  
Fayetteville Technical Community College  
P.O. Box 35236  
Fayetteville, NC 28303-0236



## **PURPOSE OF CATALOG**

The purpose of this catalog is to provide 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. Each student is given an approval letter and educational plan upon acceptance to a program. Students are expected to follow the course requirements specified in the educational plan.

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 as specified by the student's educational plan. 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 an academic award 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 respective certificate, degree or diploma 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.



# 1994-95 ACADEMIC CALENDAR

<b>FALL 94-95</b>	<b>11-WEEK TERM</b>	<b>8-1 TERM</b>	<b>8-2 TERM</b>
Registration	8/29-31; 9/1	8/23,24,29,30	10/18,19,24,25
Schedule Correction	9/6	8/29-31	10/24-25
Orientation	8/19,30		
Classes Begin	9/7	8/29	10/24
Last Day to Add	9/13	8/31	10/26
Last Day for Refunds	9/29	9/14	11/8
Student/Faculty Holidays	9/5; 11/24-25	9/5	11/24-25
Staff Holidays	9/5; 11/24-25	9/5	11/24-25
Last Day of Term	11/23	10/22	12/17
<b>WINTER 94-95</b>	<b>11-WEEK TERM</b>	<b>8-3 TERM</b>	
Registration	11/16-17	1/3,4,9,10	
Schedule Correction	11/30	1/9-11	
Orientation	11/16		
Classes Begin	12/1	1/9	
Last Day to Add	12/7	1/11	
Last Day for Refunds	1/6	1/25	
Student/Faculty Holidays	12/19-30; 1/16	1/16	
Staff Holidays	12/21-27,30; 1/16	1/16	
Required Leave Days	12/28-29		
Last Day of Term	3/3	3/4	
<b>SPRING 94-95</b>	<b>11-WEEK TERM</b>	<b>8-4 TERM</b>	<b>8-5 TERM</b>
Registration	2/22-23	2/28; 3/1,6,7	4/25,26; 5/1,2
Schedule Correction	3/8	3/6-8	5/1-3
Orientation	2/22		
Classes Begin	3/9	3/6	5/1
Last Day to Add	3/15	3/8	5/3
Last Day for Refunds	3/31	3/21	5/16
Student/Faculty Holidays	4/17	4/17	
Staff Holidays	4/17	4/17	
Last Day of Term	5/26	4/29	6/24
Graduation	6/1		
<b>SUMMER 95-96</b>	<b>11-WEEK TERM</b>	<b>6-1 TERM</b>	<b>6-2 TERM</b>
Registration	5/18,30	5/18,30	5/18; 7/10
Schedule Correction	5/30	5/30	7/10
Classes Begin	5/30	5/30	7/10
Last Day to Add	6/5	5/30	7/10
Last Day for Refunds	6/21	6/9	7/20
Student/Faculty Holidays	7/4	7/4	
Staff Holidays	7/4	7/4	
Last Day of Term	8/16	7/7	8/16
Graduation	8/18		

# 1995-96 ACADEMIC CALENDAR

<b>FALL 95-96</b>	<b>11-WEEK TERM</b>	<b>8-1 TERM</b>	<b>8-2 TERM</b>
Registration	8/28,29,30,31	8/22,23,28,29	10/17,18,23,24
Schedule Correction	9/5	8/28-30	10/23-25
Orientation	8/8,29		
Classes Begin	9/6	8/28	10/23
Last Day to Add	9/12	8/30	10/25
Last Day for Refunds	9/28	9/13	11/7
Student/Faculty Holidays	9/4; 11/23-24	9/4	11/24-25
Staff Holidays	9/4; 11/23-24	9/4	11/23-24
Last Day of Term	11/22	10/21	12/16
<b>WINTER 95-96</b>	<b>11-WEEK TERM</b>	<b>8-3 TERM</b>	
Registration	11/15-16	1/2,3,8,9	
Schedule Correction	11/29	1/8-10	
Orientation	11/15		
Classes Begin	11/30	1/8	
Last Day to Add	12/6	1/10	
Last Day for Refunds	1/18	1/24	
Student/Faculty Holidays	12/19-29; 1/1,15	1/15	
Staff Holidays	12/21-27; 1/1,15	1/15	
Required Leave Days	12/28-29		
Last Day of Term	3/1	3/2	
<b>SPRING 95-96</b>	<b>11-WEEK TERM</b>	<b>8-4 TERM</b>	<b>8-5 TERM</b>
Registration	2/21-22	2/27,28;3/4,5	4/23,24,29,30
Schedule Correction	3/6	3/4-6	4/29-30;5/1
Orientation	2/21		
Classes Begin	3/8	3/4	4/29
Last Day to Add	3/13	3/6	5/1
Last Day for Refunds	3/29	3/19	5/14
Student/Faculty Holidays	4/8	4/8	
Staff Holidays	4/8	4/8	
Last Day of Term	5/24	4/27	6/22
Graduation	5/30		
<b>SUMMER 96-97</b>	<b>11-WEEK TERM</b>	<b>6-1 TERM</b>	<b>6-2 TERM</b>
Registration	5/16,28	5/16,28	5/16; 7/8
Schedule Correction	5/28	5/28	7/8
Classes Begin	5/28	5/28	7/8
Last Day to Add	6/3	5/28	7/8
Last Day for Refunds	6/19	6/7	7/18
Student/Faculty Holidays	7/4	7/4	
Staff Holidays	7/4	7/4	
Last Day of Term	8/14	7/5	8/14
Graduation	8/16		

## **GENERAL INFORMATION**

Fayetteville Technical Community College, as a comprehensive community college, 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. As part of the admissions counseling process, Fayetteville Technical Community College utilizes an initial ASSET Success Seminar, a personal interview, and an evaluation of the applicant's prior school record to determine potential for success. 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 studies 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, color, national origin, religion, age, sex, handicap, or political affiliation.

## **HISTORY OF FTCC**

From a building of 38,000 square feet, a faculty and staff of nine people, and an enrollment of 50 students, Fayetteville Technical Community College has experienced phenomenal growth from 1961 to present. Now in its third decade, FTCC provides programs to meet the vocational, technical and adult education needs of Fayetteville, Cumberland and surrounding counties. FTCC currently is housed on a 111.6-acre campus with a physical plant of over 500,000 square feet and has a full-time faculty of 198 people, an enrollment of over 10,000 curriculum students, and a total operating budget of over 34 million dollars.

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

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

From its beginning in 1961 to the present, FTCC has seen the construction of a number of buildings such as Lafayette Hall, Cumberland Hall, the Paul H. Thompson Library, the Administration Building, the Student Center and Center for Business and Industry, and the Advanced Technology Center. FTCC's growth has not been limited to the numerous buildings which have been constructed. It has grown in enrollment and in educational programs as well.

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 Board is leading the North Carolina Community College System into the third decade of educational challenge and beyond.

In January 1988, Fayetteville Technical Institute became Fayetteville Technical Community College when the North Carolina Department of Community Colleges and the North Carolina State Legislature allowed all the technical colleges and institutes in the State to refer to themselves as community colleges. The change was in name only as the purpose and mission of Fayetteville Technical Community College remain intact.

## **FTCC PURPOSE STATEMENT**

The purpose of Fayetteville Technical Community College is to provide low-cost vocational-technical, general education, college transfer, and continuing education programs which meet the needs and desires of its students and community. To improve the educational base of society, FTCC encourages life-long learning and strives to prepare students for further educational experiences.

FTCC identifies the educational needs of applicants and assists students in satisfying these needs at a minimal expense. Each adult who applies will be admitted to a program appropriate to his/her abilities and interests. The College is in partnership with the public school system through the Tech Prep program. Further, agreements with four-year colleges and universities for transfer of technical courses, and FTCC's College Transfer program, support the educational continuum from high school through the baccalaureate degree.

Curricular programs reflect the changing technical, commercial, industrial, and health needs of Fayetteville, Cumberland County, and surrounding areas. Various curricula offer 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.

FTCC provides instruction in the basic life 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 technological advances in the community.

Adopted: April 27, 1992  
FTCC Board of Trustees

# 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, Inc.

1. Civil Engineering Technology
2. Electronics Engineering Technology

## AIR CONDITIONING CONTRACTORS OF AMERICA

The Air Conditioning, Heating, and Refrigeration Technology program at Fayetteville Technical Community College is a member of the Air Conditioning Contractors of America.

## AMERICAN BAR ASSOCIATION

Fayetteville Technical Community College's Paralegal Technology program is approved 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

FTCC's Dental Hygiene and Dental Assisting programs are accredited by the 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.

## AMERICAN SOCIETY FOR ENGINEERING EDUCATION (SOUTHEASTERN SECTION)

FTCC's Civil and Electronics Engineering Technology programs are assisted through institutional membership in the American Society for Engineering Education, Southeastern Section.

## 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 Care Technology 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 (NLN)

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 approved to offer a two-year associate degree program with a major in nursing and a one-year practical nursing education program. Both programs qualify the graduates to write the National Council Licensure Examination for the respective levels of preparation. Candidates who successfully complete these examinations are licensed to practice nursing.

## 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 DEPARTMENT OF PUBLIC INSTRUCTION

Fayetteville Technical Community College's High School Diploma Program meets the standards required by the North Carolina Department of Public Instruction for the purpose of awarding high school diplomas.

## 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 following courses:

1. Fundamentals of Real Estate
2. Real Estate Law
3. Real Estate Finance
4. Real Estate Brokerage Operations
5. Introduction to Real Estate Appraisal
6. Valuation Principles and Procedures
7. Application of Residential Property Valuation
8. Introduction to Income Property Appraisal
9. Advanced Income Capitalization Procedures
10. Application of Income Property Valuation

## 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 associate degrees, diplomas, and certificates.

(Note: 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 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.



## ADMISSIONS POLICIES AND PROCEDURES

Fayetteville Technical Community College adheres to an “Open Door” admissions policy for general admission to the College; however, various curricular programs have their own specific requirements for admission beyond the regular requirements to enter FTCC.

### ADMISSIONS REQUIREMENTS

Various curricular programs at FTCC have their own specific requirements for admission beyond the regular requirements to enter FTCC.

#### Associate Degree, Diploma, and Certificate Admission Requirements:

1. Applicants must submit an application form, including a residency statement.
2. Applicants must be high school graduates. Official high school transcripts, any state equivalency (GED) certificate, GED test results that meet NC equivalency standards, or other documentation as accepted by the Director of Admissions are acceptable. Official transcripts must be sent to the Director of Admissions, FTCC, P.O. Box 35236, Fayetteville, NC 28303-0236.
3. Applicants who have previously attended any other college or post-secondary institution must request that official transcripts of all work attempted be sent to the Admissions Office. Students requesting approval for certification of VA Educational Benefits must provide copies of DD/Form(s) 214 for evaluation of military experience.
4. Each applicant is scheduled for an ASSET Success Seminar (placement battery). Previous school records and ASSET results will be used in conjunction with the student’s personal aspirations to help plan a workable educational program.
5. ASSET requirements for admission to other than health areas may be waived by the Director of Admissions upon receipt of official transcripts if the applicant:
  - a. has completed 24 quarter hours of transferable college-level course work.
  - b. has taken the SAT and scored 750 or more, with verbal and math scores at or above 350 each or ACT composite score of 18 or higher.
  - c. has earned an Associate Degree or higher from a regionally accredited college and has completed the required prerequisite courses.
6. Certain programs have prerequisite course requirements. In addition to published program requirements, the College reserves the right to identify and require specific prerequisites before allowing students into certain courses. The identification of prerequisite requirements will be through normal test results and/or transcript evaluation.

## Program Prerequisites

	High school courses*				Dept. Interview**	Medical Exam***
	Alg. I	Alg. II	Biology	Chemistry		
Accounting	X	X				
Associate Degree Nursing	X		X	X	X	X
Architectural Technology	X					
Auto Service Technology					X	
Business Computer Programming	X	X				
Civil Engineering Technology	X	X				
College Transfer	X	X				
Dental Assisting			X		X	X
Dental Hygiene	X		X	X	X	X
Electronics Engineering Technology	X	X				
Emergency Medical Science	X		X	X	X	X
Funeral Services Education			X		X	X
General Education	X	X				
Machining Technology	X					
Nursing Assistant			X		X	X
Paralegal Technology					X	
Pharmacy Technology	X		X		X	X
Physical Therapist Assistant	X	X	X	X	X	X
Practical Nursing	X		X	X	X	X
Radiologic Technology	X	X	X	X	X	X
Respiratory Care Technology	X	X	X	X	X	X
Surgical Technology	X		X	X	X	X
Surveying Technology	X	X				

\*Grade of "C" or better

\*\*Qualified applicants will be scheduled for a departmental interview.

\*\*\*Approved students must provide a completed medical examination form.

In addition to catalog statements found elsewhere concerning prerequisite requirements, the institution reserves the right to identify and require prerequisite course work before allowing students to attempt successful completion of certain courses. Such identification of prerequisite requirements will be identified through normed test results and/or transcript evaluation.

### 7. Health Division Admissions Requirements

Completion of the FTCC admissions process (application for admission, official high school and college transcripts, and the ACT/ASSET Testing Seminar prior to February 15). Note: Applications received after February 15 will be considered on a space-available basis only.

Completion of high school (or college) prerequisites. **NOTE:** Courses taken after high school to satisfy admission requirements may be attempted **only twice**. **Related science courses**, such as Anatomy and Physiology I and II, Microbiology, and Physics must be taken within the **last five years** from the time of admission to the health program with a grade of "C" or better. Exceptions will be approved by the counselor or the appropriate health department chairperson. Courses taken to satisfy **related science course** requirements may be attempted **only twice**.

Satisfactory completion of ACT/ASSET. Applicants who do not meet stated minimum test requirements will be referred to Developmental Studies courses. After having completed recommended remedial and deficiency courses with grades of "C" or better, students will be retested. Minimum scaled scores of **45 (Writing Skills), 44 (Reading Skills), and 40 (Numerical Skills), are required for ADN, Physical Therapist Assistant, and Radiologic Technology applicants.**

Applicants will be ranked according to the following criteria and scheduled for a Departmental Interview accordingly.

1. Students will be assigned points based on the highest scaled score achieved on each section of the ACT/ASSET Seminar.
2. High school rank for applicants who graduated from a Cumberland County high school. Graduates within the top 10% will be assigned 20 points; the top 15% will receive 15 points, and the top 25% will receive 10 points.
3. Applicants will receive extra consideration for prior college-level courses if at least fifteen (15) quarter hours of work required in the program have been completed with a grade of "C" or better on each course and a minimum grade point average of 2.50. The grade point average will be based on a minimum of 15 hours of applicable credit earned at a single college. Points will be assigned based upon the overall grade point average attained.
  - 3.75-4.00 = 60 points
  - 3.50-3.74 = 50 points
  - 3.25-3.49 = 40 points
  - 3.00-3.24 = 30 points
  - 2.75-2.99 = 20 points
  - 2.50-2.74 = 10 points
  - 2.00-2.49 = 0 pointsADN, PTA and Radiologic Technology require a minimum 2.50 GPA on all related/transfer credits.
4. Applicants selected for a departmental interview will be assigned points for the interview rating (maximum 15 points).
5. Applicants selected for admissions based upon the criteria listed in items 1 through 4 will be notified by letter on or about April 15. Additional applicants may be selected for consideration on a standby basis. All other applicants will be notified of their status. Applicants processed after published deadlines may reapply for the following year and be reconsidered with all other applicants for the next class.
6. All applicants offered admission to a health program must complete a medical form provided by the Admissions Office. Approved health area students must submit physical exam results on forms provided by the Admissions Office.

8. ADN Advanced Placement Program

Licensed practical nurses may be granted advanced placement into the Associate Degree Nursing Program under the conditions set forth below. Candidates will be admitted based on space availability. The criteria for advanced placement include the following:

1. Be a currently licensed LPN.
2. Meet the requirements for admission into the FTCC's ADN Program.
3. Complete all first year related courses for ADN with an overall GPA of 2.50 or better. A grade of "C" or better is required in related courses.
4. Pass the National League for Nursing Mobility Profile I, which consists of two tests with passing scores of 70. (Costs of \$37.50 per test must be paid by the student.) Two opportunities will be permitted to pass the tests with a score of 70. Failure to pass the Mobility Profile I automatically excludes the applicant from advanced placement.
5. Attend an interview with the chairperson of the nursing department.

The candidate's score on the NLN Mobility Profile Test and the overall GPA will be used for selection.

Prior to beginning the second year courses, the candidates must successfully complete a five-week "Nursing Transition" course. This course will facilitate the LPN's transition to the role of the registered nurse and will focus on professional issues, role of the registered nurse, application of the nursing process including assessment skills, and evaluation of nursing skills in the nursing laboratory.

The following nursing skills must be passed with 100 percent mastery:

1. Vital signs (temperature, pulse, respiration, and blood pressure).
2. Urinary catheterization.
3. Charting (standard and problem oriented medical records).
4. Medications (oral and parenteral).
5. Intravenous management.
6. Sterile dressing change.
7. Sterile gloving.

## **COMMUNICABLE DISEASE POLICY**

Under the FTCC Communicable Disease policy, students who enter a health program or other program where there is potential exposure to blood or other body fluids will be required to have begun or completed all immunizations as specified in the pre-entrance medical record prior to admission. Those students who reject immunizations could jeopardize their ability to fulfill clinical requirements. The prospective student will also be required to sign a statement releasing FTCC from any liability related to the failure to have the immunizations.

9. Special Credit Student Admission - Persons who wish to take courses but not pursue a degree, certificate, or diploma should complete the Application for Admission and Residency Statement. Special credit students who have attempted 12 hours or more will be required to take the ASSET placement inventory and declare a major or identify themselves as non-matriculating, non-degree seeking students. Special credit students must comply with the regular Admissions policy when they decide to pursue a degree, certificate, or diploma.
10. International Student Admission - International students must complete the Admission Application and the International Student Application. Official transcripts, official results of the Test of English as a Foreign Language, a completed pre-entrance medical record, and a completed financial certificate must be submitted to the Admissions Office.

All prospective non-immigrant students will be required to place on deposit funds equal to the first year expenses prior to approval and issuance of the form I-20.

### **ADMISSION OF TRANSFER STUDENTS**

Students who have attempted course work at other colleges and universities must submit official transcripts of all post-secondary work. Transcripts will be reviewed during the admissions interview and transfer credit awarded according to the following criteria:

1. Prior course work must be equivalent to FTCC courses required in the degree or diploma program being sought.
2. Course work must have been completed at a regional association accredited college (i.e., Southern Association of Colleges and Schools or regional counterpart) or an institution holding professional area accreditation status (ABET, ABA, ADA, AMA, etc.).
3. Course work must have been completed with a grade of "C" or better.
4. Major subject area transfer credit must be approved by the departmental chairperson.
5. Transfer students must complete a minimum of 25 percent of resident credit at FTCC to be eligible to receive an associate degree, unless a SOCAD participant.
6. A record of transfer credit awarded is available on the FTCC student educational plan provided at the time of approval. Official FTCC transcripts will not be provided until the student has completed the first term of enrollment at the College.

## CREDIT FOR NON-TRADITIONAL LEARNING

FTCC will evaluate non-traditional educational records for the possible transfer of credits. Full documentation must be provided, and transfer of credit for non-traditional work is limited to no more than 75 percent of the AAS degree or diploma requirements. Non-traditional learning may include advanced placement examinations, military service training, industrial and professional training, or proficiency tests (see “Grading System” for more details). FTCC does not consider experiential or life experiences for transfer credit evaluation.

Students who change curriculums transfer credit for applicable courses taken and passed in the previous curriculum; all credits considered must be applicable to the instructional field and approved by the department chair and appropriate academic dean.

### A. Advanced Placement Examinations

Applicants to the College may request transfer credit for subjects covered under advanced placement examinations. CLEP and DANTES General Exams and Subject Area Exams are evaluated for transfer credit. Test scores must meet ACE (American Council on Education) recommendations. Advanced credit awarded at prior colleges must be supported by official test score reports to be considered for transfer credit.

### B. Experiential Learning

FTCC does not consider experiential or life experiences for transfer credit evaluation.

### C. Proficiency Tests

FTCC students who plan to challenge\* a curriculum level course must contact the department chairperson of the appropriate department to request a proficiency examination. Proficiency tests are given under the following conditions.

1. Students who have passed a preliminary screening test given by the department chairperson may take a proficiency exam.
2. Students must be registered for the course in order to take a proficiency exam.
3. Proficiency exams must be taken within the first four class days of the quarter.
4. Students who pass a proficiency exam at the “C” grade level or above will be assigned a “P” grade and will not be required to attend further class sessions.
5. Veteran students and other third party recipients may not use courses passed by proficiency for the purposes of educational entitlement. Students who pass a proficiency test are encouraged to add additional courses in order to maintain full-time status.

\*CLEP examinations will be the required proficiency test where available. Students will be referred to area CLEP examination sites for testing when appropriate.

D. Tech Prep Advanced Placement

Cumberland County High School Graduates who participated in the Tech Prep Program will be awarded proficiency credit based upon the recommendations of the Cumberland County Tech Prep Curriculum Development Committee. Credit for FTCC course work will require completion of the designated high school course(s) with a minimum grade of "C".

E. SOCAD

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, Air Conditioning, Heating, and Refrigeration Technology, Associate in Arts, Associate in Science, Business Administration, Criminal Justice-Protective Services Technology, Business Computer Programming, Foodservice Management, General Education, General Occupational Technology, Industrial Management, Marketing and Retailing, Paralegal Technology, and Public Administration.

### **RE-ADMISSION OF FORMER STUDENTS**

Any student who withdraws from the College and wishes to return must contact the Admissions 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 Office based upon a review of previous grades, consultation with instructors and department chairpersons involved, additional achievement and/or interest testing, and interviews to determine the reasons for unsatisfactory progress. In cases where the probable causes of unsatisfactory progress while previously enrolled have not been removed, re-entry to curricular studies may be denied or re-entry approved under specific conditions which can include change of curriculum, remedial course work, and probationary status.
3. A student who was dismissed from the College by disciplinary action may re-enter only upon approval by the program area dean.
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.

## COLLEGE EXPENSES

Tuition and fees are assessed on a quarterly basis and are due at registration. Payments may be made by cash, personal check, VISA or Mastercard. Second party checks, counter checks, checks without printed name and address, and checks in excess of actual costs are not accepted. A student is not considered as registered until fees are paid.

Estimated costs\*\* for an academic year (9 months) are shown below. Estimates are based on 94-95 tuition costs and a course load of 14 credit hours. A student is considered full-time if he/she is taking 12 or more credit hours.

All students will be charged a student support services fee of \$4 each quarter:

In-State Tuition: \$185.50 per quarter or \$556.50 (3 quarters)  
\$742.00 (4 quarters)

Under 14 hours: \$13.25 per credit hour

Out-of-State Tuition: \$107.50 per credit hour, through 13 hours  
\*\$1505.00 for 14 or more credit hours

Books (Estimated): \$300.00 per quarter

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

**\*\*Estimates exclude board and room, child care, and transportation costs, if any.**

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 14 or fewer quarter hours is \$13.25 per quarter hour for in-state students and \$107.50 per quarter hour for out-of-state students.
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 students are charged a student support services fee of \$4.00 per quarter. This fee covers the cost of student accident insurance, health services, student activities, and student government activities.
5. All prospective graduates will be charged a graduation fee of \$25.00.

## **FINANCIAL AID**

Fayetteville Technical Community College operates with the assumption that no student should be denied a college education due to lack of financial resources. As far as possible, students are aided in meeting college costs through careful planning and various forms of financial aid and other third-party support.

The Financial Aid Office at FTCC administers the various Title IV financial aid programs under policies established by the College and guidelines provided by the U.S. Department of Education. The College Financial Aid and Scholarship Committee recommends policy changes and awards a variety of scholarships.

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. The Financial Aid Office utilizes the Free Application for Federal Student Aid (FAFSA) to analyze applicant data and determine student eligibility for financial aid. All applicants and FTCC students are urged to apply for financial aid. The FAFSA application package is available in the FTCC Financial Aid Office and should be completed as early as possible. Applicants are urged to read the directions carefully and fill out the form completely and accurately. The FAFSA form covers all forms of financial aid offered at the College with the exception of scholarships.

Various resources are available through the Financial Aid Office located in Room 130 of the Student Center.

## **RESIDENCY CLASSIFICATION FOR TUITION PURPOSES**

Every applicant is required to provide information regarding 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 Student Development Office. Initial classification of residency for tuition purposes is made in the Admissions Office. Appeals and requests for re-classification should be addressed to the Director of Admissions.

## 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 require 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.

## **STUDENT INSURANCE**

All students, either full- or part-time, who are charged a student support services 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 regularly scheduled 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.

## **TUITION WAIVERS**

1. Senior citizens aged 65 or over are entitled to free tuition.
2. High school students enrolled in a community college curriculum class under Huskins Bill Programs or concurrent enrollment provisions are exempt from tuition.
3. When an employer, other than the armed services, pays tuition for an employee to attend a community college and when the employee works at a North Carolina business location, the employer is charged the in-state tuition rate.
4. Out-of-state service members and their dependents stationed at a North Carolina base are eligible to be charged the in-state tuition rate. This waiver is for the academic year. Continuing students must re-apply each fall term.

## **REFUND POLICIES**

### **Tuition Refunds**

A 75 percent refund may be made upon request of the student if the student officially withdraws from the class(es) prior to or on the official 20 percent point of the class(es) or the 20 percent point of the quarter if the student officially withdraws from the College.

To comply with applicable federal regulations regarding refunds to individuals or groups, federal regulations will supersede the state refund regulations stated in this rule.

### **Bookstore Refunds**

**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.
- B. Books which have not been used, damaged, or marked in will be accepted for 100 percent refund or credit toward the purchase of additional items. Proof of purchase (cash register receipt) must be shown.

- C. All refunds will be made by check mailed to the individual student. (No cash refunds will be made.)

## **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 College 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.

## **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, color, national origin, religion, sex, age, handicap or political affiliation.

## **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 DEVELOPMENT**

The Office of Student Development at Fayetteville Technical Community College is located in the Student Center. 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                          | 7. health services         |
| 2. alumni or follow-up<br>coordination | 8. new student orientation |
| 3. career development                  | 9. recruitment             |
| 4. counseling                          | 10. registration           |
| 5. financial aid                       | 11. student activities     |
| 6. graduate job placement              | 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.

## **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 aptitude 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.

## 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.

## COUNSELING SERVICES

Counseling Services, located in the Student Center, offers a variety of services free to all students, Monday through Friday, from 8:00 a.m. to 9:00 p.m. Students are seen on a walk-in basis, or appointments may be made in person or by calling 678-8419.

Staff: The counseling staff is composed of competent professionals with extensive training in counseling and guidance, who are experienced in assisting students in developing skills and attitudes needed to deal effectively with their surroundings. Responsibilities of counseling are shared equally between counselor and student, and the counselor respects the ability of the individual to make realistic choices among options presented.

Admissions Counseling: Counselors interpret test data, review transcripts, make course recommendations, and assist students in viewing alternatives as they prepare to enter Fayetteville Technical Community College. This process may involve career counseling. In such cases, counselors assist students in making a thorough self-appraisal of interests, abilities, and personality traits so that they may utilize this information in making a wise career choice. Additional career/vocational counseling services are available through the Career Center, Room 113, Student Center.

Educational Counseling: Students who are uncertain regarding their major course of study or who are experiencing academic difficulty are aided in making more meaningful academic choices.

Personal Counseling: Many students have personal concerns which may interfere with their academic success. The counseling staff provides an atmosphere in which students may discuss problems with the assurance that all counseling information is confidential and would be released only with the student's written consent.

Group Counseling: Counseling Services provides a variety of small group experiences ranging from personal growth groups, to study skills groups, to career decision-making workshops. Students who wish to improve communication or interpersonal skills may participate in growth groups where they can experiment with new types of behavior in a safe and accepting environment. For those students experiencing academic difficulty, study skills groups provide

instruction and supervised activity designed to improve study skills and habits. Students can gain insight regarding their interests, abilities, and decision-making styles, as well as the world of work, while participating in career decision-making workshops.

**Referrals:** Those students with long-term counseling needs or serious problems, such as personality disorders which require special treatment, are referred to appropriate agencies.

## **FACULTY ADVISEMENT**

The Faculty Advisory System at Fayetteville Technical Community College is an integral part of the instructional and student development programs of the College. The system is designed to provide the student with current and complete information, assistance with procedural tasks, and educational program planning. Advising is done in a caring and compassionate manner by willing and able faculty. For this system to work best, you must establish a mutual relationship with your advisor that will help you increase your chances for academic success.

## **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.

## **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.

## **STUDENTS WITH DISABILITIES**

The College recognizes its responsibility under Section 504 of the Rehabilitation Act of 1973 to provide equal access to education for students with disabilities. Support services are available to the hearing impaired, visually impaired, orthopedically handicapped, learning disabled, and other health impaired.



- a. Students who feel that they need accommodations due to a disability or handicap must complete a "Special Populations Questionnaire" indicating the nature of their disability.
- b. Students who have identified themselves as having special needs may make a request for special accommodations to the Counselor for Special Populations or the Director of Counseling. This must be done at least 30 days prior to the first day of the quarter.
- c. Students must arrange to provide supporting documentation upon request. Federal regulations obligate the student to provide information on identifying appropriate and effective auxiliary aids.
- d. Each request will be evaluated by the Counselor for Special Populations and/or the Director of Counseling, who will recommend any modifications to the educational plan that are essential to satisfactory completion of course requirements by the student.
- e. The Counselor for Special Populations and/or the Director of Counseling will provide the student with an "Authorization for Special Services" form. This document is to be used to inform college faculty and staff of authorized accommodations.

For further information and assistance, contact the Counselor for Students with Disabilities (678-8214).

## **STUDENT HOUSING**

Housing arrangements are the student's responsibility. As a member of the North Carolina 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.

## **LEARNING RESOURCES CENTER**

The Learning Resources Center 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 50,000 volumes of books and subscribes to several electronic indexes as well as 300 current magazines and newspapers. Back issues of periodicals are available in bound volumes, unbound issues, and on microfilm. Audiovisual software, such as film, filmstrips, records, cassette tapes, slides, and microfilms are available in the Library, as are the space and equipment necessary to use these materials. The Library also has available for students use electric typewriters and copying machines. The Library has the capacity to provide computerized literature searches of the Dialog data bases. The staff is always ready to instruct students in the use of the automated catalog 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 computer software, cassettes, filmstrips, and texts. 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 offers several state approved courses for teacher renewal credit. 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 through an instructor.

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.

## **ACADEMIC POLICIES**

### 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 in Arts, Associate in Science, Associate in Applied Science Degree, Associate Degree in General Education, the Diploma, and the Certificate 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 and one credit to ten hours of cooperative work experience or practicum.

- D. Students with academic deficiencies who require remedial work as background preparation 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.

### 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.

### 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 accumulated credit of 45 or more total credit hours.

**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 purposes, for their own pleasure, for job skills, etc., and who do not intend to pursue a degree or diploma may take up to 44 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 for VA or financial aid.

## Schedule Adjustments

1. Students may add a class within the first five school days (one day for summer terms) of any quarter if the class has not met.
2. A student may drop a class as late as the 30 percent date of the class without penalty. The transcript will indicate a "WD." Students who drop after the 30 percent point of the class will be assigned a grade of "WF" unless they withdrew due to "extenuating circumstances" as determined by the appropriate program area dean.
3. 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 constitutes student withdrawal and is effective as of that date.)
2. Administrative Withdrawal
  - a. He/she ceases attending class. Students who are absent for more than 20% of scheduled class sessions may be dropped from the class rolls.
  - 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.

A student who wishes to withdraw must complete a "Registration Change" form, have it initialed by the faculty member, and present it to the Registrar before an official withdrawal can be recorded. Failure to comply with this procedure will result in a grade of "WF."

Students who are dropped for excessive absences prior to the 30 percent point of the class will be assigned a grade of "WD."

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

## GRADING PROCEDURES

FTCC grades are based on a 4.0 grading system. 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.

<u>Numerical Grade</u>	<u>Grade</u>	<u>Grade Point Equivalent</u>
93 - 100	A - Excellent	4 quality points for ea. qtr. hr.
85 - 92	B - Good	3 quality points for ea. qtr. hr.
77 - 84	C - Average	2 quality points for ea. qtr. hr.
70 - 76	D - Below Avg.	1 quality point for each qtr. hr.
0 - 69	F - Failure	0 quality point
	I - Incomplete	After six weeks becomes an F
	AU - Audit (No Credit)	0 quality point (not computed in GPA)
	P - Proficiency	
	W/D - Withdrew	No effect on grade point average
	W/P - Withdrew Passing	No effect on grade point average
	W/F - Withdrew Failing	0 quality point

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.

All students must have at least a 2.0 grade point average (major GPA) 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, Funeral Service Education and Paralegal Technology require course grades of C or better in order to progress to the next course/term. Each 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 GPA on all courses completed including prerequisite courses.

## HONORS AND AWARDS

Any student who has earned a grade point average of 4.0 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 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 a perfect grade point average.

- a. Students must be approved for a curriculum, excluding Developmental Studies.
- b. Students must make a final grade of "A" on a minimum of 12 credit hours of curricular work.
- c. Students must earn a "4.0" GPA on a minimum of 12 credit hours. The formula used to calculate this "4.0" GPA excludes the following grades: P, AU, WD, WP.
- d. Students are NOT eligible for consideration until all course work is completed for the quarter.

### Dean's List

The Dean's List is published quarterly to honor those students with an outstanding grade point average.

- a. Students must be approved for a curriculum, excluding Developmental Studies.
- b. Students must make a final grade of "A or B" on a minimum of 12 credit hours of curricular work.
- c. Students must earn at least a "3.5" GPA on a minimum of 12 credit hours. The formula used to calculate this minimum "3.5" GPA excludes the following grades: P, AU, WD, WP.
- d. Students are NOT eligible for consideration until all course work is completed for the quarter.

### Ambassadors

Each academic year, Fayetteville Technical Community College chooses eight students to serve as ambassadors. The ambassadors act as official hosts and hostesses for various campus events. All ambassador candidates must:

- have completed 12 hours at FTCC.
- have a minimum 2.5 GPA.
- be recommended by a member of the College community.

## 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. Marshals must be third-quarter freshmen in a two-year curriculum.

## Trox Poland Memorial Award

The Trox Poland Memorial Award is presented to an outstanding student at the spring graduation exercises. The criteria set forth for this award are as follows:

1. Student must have a minimum overall grade point average of 3.0.
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 should exhibit and promote good student morale.

## Outstanding Student Award

Each year an outstanding student is honored at the summer graduation with a special award.

The criteria for this award are:

1. Student must have a minimum 3.0 overall grade point average.
2. Student must be in continuous enrollment during the year of nomination.
3. Student must be nominated by a faculty member from his/her curricular area.
4. Student will be selected during the summer quarter of his/her year of graduation.
5. Student will be judged on "attributes" and "contributions" while attending FTCC.

## 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 spring quarter are subject to the curricular requirements in effect for the following fall quarter. A student who withdraws from the institution and re-enters at a later quarter, including students who have completed at least one or more quarters, will be subject to curricular requirements in effect for the following fall quarter. In cases where students re-enter at the beginning of fall quarter, they are subject to the requirements of the curriculum at the fall quarter re-entry.
2. Have sufficient quality points to average 2.0 (major GPA).
3. Have passing grades in all required courses.
4. Must have taken care of ALL financial indebtedness to Fayetteville Technical Community College, including a graduation fee.
5. Applications for degrees or diplomas must be completed by the student and returned when the student registers for the last quarter of enrollment. 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 automatically voids his candidacy for that particular graduation.
6. Substitution of courses for graduation purposes is limited to 10 percent of the total credit hours required to graduate and must be approved by the department chairperson and the program area dean. All exceptions to the 10 percent limit must be approved by the Associate Vice President for Student Development.
7. Electives taken by students under VA educational benefits may exceed the total required hours of a curriculum only by the hours of the last elective taken to fulfill those requirements.

## STANDARDS OF PROGRESS

The college requires that students maintain a grade point average of 2.0 or better in order to be eligible for graduation. Students who fail to maintain a major GPA of 2.0 will be placed on probation for the next term of enrollment. Failure to complete the first term of probation with a GPA of 2.0 will result in a second term of probation. Failure to maintain a GPA on work attempted in the second term of probation will result in academic suspension.



Students placed on academic probation must comply with the terms of that probation. Terms of probation will include, but not be limited to, completion of all course work attempted with a minimum GPA of 2.0, satisfactory completion of recommended remedial and/or deficiency studies, and adherence to recommended enrichment activities.

Students placed on academic suspension may reapply for enrollment after a period of one term. Re-entry to the same curriculum would require approval of the department chair and would be under the current catalog.

Anyone on academic probation receiving VA educational allowance 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 probationary 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.

Failure in a major course may result in academic suspension regardless of GPA.

## **GENERAL COMPETENCIES FOR FTCC GRADUATES**

The following competencies were developed within the framework of Fayetteville Technical Community College's purpose statement, which reflects the institution's desire to meet the needs of its students and the surrounding community. Students who graduate from FTCC's degree and diploma programs should be able to:

- Communicate effectively in speaking, writing, reading, and listening.
- Perform technical skills in their chosen occupation.
- Use information to analyze problems and make logical decisions.
- Demonstrate positive interpersonal skills in various aspects of life.
- Demonstrate quantitative competencies.
- Demonstrate basic skills in using a personal computer.

# STUDENT OBLIGATIONS

## Attendance Policy

Regular class attendance is an essential part of the education process; therefore, absences must be kept to a minimum. While stressing regular attendance, FTCC simultaneously desires to allow students to develop a real sense of personal responsibility toward their studies. This policy has been established for the benefit of students who are forced, because of reasons beyond their control, to miss classes.

1. Instructors will make every effort to advise students who have missed more than 10 percent of a course that their standing in class is in jeopardy. **Students who add a course after the first day of the class are responsible for all materials covered from the beginning of the course.**
2. Instructors are encouraged to refer students with excessive absences to the Counseling Office.
3. Each student is expected to attend class regularly—at least 80 percent of all scheduled contact hours.
4. If absences exceed 20 percent, the faculty member may drop the student from the course, or if the student is performing acceptably, he or she may be allowed to continue in the course under conditions set by the instructor.
5. Tardy students interrupt the beginning of a class meeting. If a student enters the class after the faculty member has started the class, the student shall be recorded as being tardy. Three tardies shall be counted as one absence.
6. No absence, for any reason, shall excuse a student from an announced test or other assigned activity. Make-up of any tests or work missed shall be at the discretion of the faculty member.
7. Each student dropped may submit a request through the Director of Counseling for review by the Student Appeals Committee.
8. The following programs and departments have special attendance policies which will be distributed to the students during the first week of classes: Associate Degree Nursing, BLET, Dental Assisting, Dental Hygiene, Emergency Medical Science, Emergency Medical Technician (Continuing Education), Fire Academy (Continuing Education), Nursing Assistant, Pharmacy Technology, Phlebotomy Training (Continuing Education), Physical Therapist Assistant, Practical Nursing, Radiologic Technology, Respiratory Care Technology, and Surgical Technology.
9. The following programs require that a student complete the state course work with a grade of “C” or better in order to progress to the next course/term:  
Associate Degree Nursing - C or better in all major and science courses. Satisfactory grade in clinical.  
Emergency Medical Science - C or better in all major and science courses. Satisfactory grade in clinical.  
Funeral Service Education - C or better in all FSE courses and ACC 110, BIO 105X, BIO 105Y, BUS 115, BUS 116, PSY 254 and SOC 251.

Nursing Assistant - C or better in all major courses.  
Paralegal Technology - C or better in all LEX courses.  
Pharmacy Technology - C or better in all major and science courses.  
Physical Therapist Assistant - C or better in all major and science courses.  
Practical Nursing Education - C or better in all major and science courses.  
Radiologic Technology - C or better in all major and science courses.  
Respiratory Care Technology - C or better in all major and science courses.  
Surgical Technology - C or better in all major and science courses.

## 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 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 program area deans are responsible for administrative discipline of students.

Students are required to have in their possession at all times an FTCC ID card and to display such card upon request.

### Student Code of Conduct

The College reserves the right to maintain a safe and orderly educational environment for students and staff. Therefore, when, in the judgment of College officials, a student's conduct disrupts or threatens to disrupt the college community, appropriate disciplinary action will be taken to restore and protect the orderliness of the FTCC community.

Students are expected to conduct themselves in accordance with generally accepted standards of scholarship and conduct. The purpose of this code is not to restrict student rights but to protect the rights of individuals in their academic pursuits.

The following regulations set forth rules of conduct which prohibit certain types of student behavior. Violation of one or more of the following regulations may result in one of the sanctions.

- A. Academic Dishonesty - taking or acquiring possession of any academic material (test information, research papers, notes, etc.) from a member of the college staff or student body without permission; receiving or giving help during tests; submitting papers or reports (that are supposed to be original work) that are not entirely the student's own, except in cases of group assignments; not giving credit for others' work (plagiarism).

- B. Theft of, misuse of, or damage to College property, or theft of or damage to property of a member of the college community or a campus visitor on College premises or at college functions; unauthorized entry upon the property of the College or into a College facility or a portion thereof which has been restricted in use and thereby placed off limits; unauthorized presence in a College facility after closing hours.
- C. Possession of or use of alcoholic beverages or being in a state of intoxication on the College campus or a college-sponsored or supervised functions off campus or in college-owned vehicles. Possession, use or distribution of any illegal drugs, except as expressly permitted by law. Any influence which may be attributed to the use of drugs or of alcoholic beverages shall not in any way limit the responsibility of the individual for the consequences of his/her actions.
- D. Lewd or indecent conduct, including public physical or verbal action or distribution of obscene or libelous written material on the FTCC campus.
- E. Mental or physical abuse of any person on College premises or at college-sponsored or college-supervised functions, including verbal or physical actions which threaten or endanger the health or safety of any such persons.
- F. Any unwelcome verbal or physical act or behavior which is of a sexually suggestive or harassing nature and which in any way interferes with the student's or an employee's performance or creates an intimidating, hostile, or offensive environment.
- G. Intentional obstruction or disruption of teaching, research, administration or disciplinary proceedings, or other College activities, including public service functions, and other duly authorized activities on College premises.
- H. Occupation or seizure in any manner of College property, a College facility or any portion thereof for a use inconsistent with prescribed, customary, or authorized use.
- I. Participating in or conducting an assembly, demonstration, or gathering in a manner which threatens or causes injury to person or property; which interferes with free access to ingress or egress of College facilities; which is obstructive or disruptive to the education process or institutional functions of the College; remaining at the scene of such an assembly after being asked to leave by a representative of the College staff.
- J. Possession or use of a firearm, or other deadly weapon, incendiary device or explosive, except in connection with a college-approved activity. Policy is published in the current Student Handbook.
- K. Setting off a fire alarm, using, or tampering with any fire safety equipment, except with reasonable belief in the need for such alarm or equipment.
- L. Gambling.

- M. Smoking and/or using other forms of tobacco products in classrooms, shops, and labs or other unauthorized areas.
- N. Violation of College regulations regarding the operation and parking of motor vehicles.
- O. Forgery, alteration, or misuse of College documents, records, or instruments of identification with intent to deceive.
- P. Failure to comply with instructions of College officials acting in performance of their duties.
- Q. Violation of the terms of disciplinary probation or any College regulation during the period of probation.
- R. Fiscal irresponsibility such as failure to pay college-levied fines, failure to repay college-funded loans, or the passing of worthless checks to College officials.
- S. Violation of a local, state, or federal criminal law on College premises adversely affecting the college community's pursuit of its proper educational purposes.
- T. This Student Code of Conduct is not inclusive. Other conduct which is disruptive may be subject to appropriate sanctions.

#### Disciplinary Action

##### A. Immediate Suspension

If an act of misconduct threatens the health or safety of any member of the academic community or seriously disrupts the function and good order of the College, an instructor or administrative officer may direct the student(s) involved to cease and desist such conduct and advise them that failing to cease and desist, the instructor may suspend the student(s) from that class until further notice. An administrative officer may suspend the student(s) from either the class or the College until a resolution of the matter can be made. Disruptive behavior may include, but not be limited to, obscene and/or disruptive language, threatening actions, and blocking or restricting access to College classes, offices, and programs.

The instructor or administrative officer invoking such suspension shall notify the program area dean in writing of the individual(s) involved and the nature of the infraction as soon as possible but no more than two days following the incident. The dean shall resolve the matter in a timely fashion utilizing the steps outlined below.

##### B. Responsibility for Implementation

The program area dean is responsible for implementing student discipline procedures.

## C. Disciplinary Procedures

In order to provide an orderly procedure for handling student disciplinary cases in accordance with due process and justice, the following procedures will be followed:

1. **Charges:** Any administrative official, faculty/staff member, or student may file charges with the appropriate dean against any student or student organization for violations of College regulations. The individual(s) making the charge must complete a charge form (available from the office of the dean) stating:
  - a. name of the student(s) involved,
  - b. the alleged violation of the specific Code of Conduct,
  - c. the time, place, and date of the incident,
  - d. names of person(s) directly involved or witnesses to the infractions,
  - e. any action taken that relates to the matter, and
  - f. desired solution(s).

The completed charge form should be forwarded directly to the dean.

2. **Investigation and Decision:** Within five (5) working days after the charge is filed, the dean shall complete a preliminary investigation of the charge and shall schedule a meeting with the student. After discussing the alleged infraction with the student, the dean may act as follows:
  - a. drop the charges,
  - b. impose a sanction consistent with those shown below, and/or
  - c. refer the student to a College office or community agency for services.
3. **Notification:** The decision of the dean shall be presented to the student in writing or mailed within five (5) working days. In instances where the student cannot be reached to schedule an appointment with the dean or where the student refuses to cooperate, the dean shall send a certified letter to the student's last known address providing the student with a list of charges, the dean's decision, and instructions governing the appeal process.

### Sanctions

- A. **Reprimand:** A written communication which gives official notice to the student that any subsequent offense against the Student Code of Conduct will carry heavier penalties because of this prior infraction.
- B. **General Probation:** An individual may be placed on General Probation when involved in a minor disciplinary offense. General Probation has two (2) important implications: the individual is given a change to show capability and willingness to observe the Student Code of Conduct without further penalty; secondly, if the individual errs again, further action will be taken. This probation will be in effect for no more than two (2) quarters.

- C. **Restrictive Probation:** Restrictive Probation results in loss of good standing and becomes a matter of record. Restrictive conditions may limit activity in the College community. Generally, the individual will not be eligible for initiation into any local or national organization and may not receive any College award or other honorary recognition. The individual may not occupy a position of leadership with any College or student organization or activity. This probation will be in effect for not less than two (2) quarters. Any violation of Restrictive Probation may result in immediate **SUSPENSION**.
- D. **Restitution:** Paying for damaging, misusing, destroying or losing property belonging to the College, College personnel, or students.
- E. **Interim Suspension:** Exclusion from class and/or other privileges or activities as set forth in the notice, until a final decision has been made concerning the alleged violation.
- F. **Loss of Academic Credit or Grade:** Imposed as a result of academic dishonesty.
- G. **Withholding grade reports, diploma, or right to register or participate in graduation ceremonies:** Imposed when financial obligations are not met.
- H. **Suspension:** Exclusion from class(es), and/or all other privileges or activities of the College for a specified period of time. This sanction is reserved for those offenses warranting discipline more severe than probation or for repeated misconduct. Students who receive this sanction must get specific written permission from the dean before returning to campus.
- I. **Expulsion:** Dismissing a student from campus for an indefinite period losing student status. The student may be readmitted to the College only with the approval of the Vice President for Academic Affairs.
- J. **Group Probation:** This is given to a college club or other organized group for a specified period of time. If group violations are repeated during the term of the sentence, the charter may be revoked or activities restricted.
- K. **Group Restriction:** Removing College recognition during the quarter in which the offense occurred or for a longer period (usually not more than one other quarter). While under restriction, the group may not seek or add members, hold or sponsor events in the College community, or engage in other activities as specified.
- L. **Group Charter Revocation:** Removal of College recognition for a group, club, society, or other organizations for a minimum of two years. Recharter after that time must be approved by the President.

## APPEALS AND DUE PROCESS

Students subject to administrative decisions affecting their right to attend classes are entitled to due process. Due process includes, but is not limited to, the following considerations:

1. The student must be informed of any charges made against him/her that may result in administrative action.
2. The student must be advised in writing of the administrative action taken.
3. The student will be advised of corrective action required.
4. The student is entitled to an appeal as herein provided. The appeals process described in the following paragraphs must be followed.
5. The student is entitled to appear and present testimony at any committee meeting scheduled to hear an appeal from said student.

### Admissions Decisions

Initial decisions to approve a student or potential student to enter a program or a student re-entering a program are made by the counselor conducting the admissions interview. Appeals of admissions decisions are referred to the Director of Admissions. Decisions of the Director of Admissions may be appealed in writing to the FTCC Student Appeals Committee through the Director of Counseling no later than ten (10) college days after the date of the Director of Admissions' letter.

### Attendance Problems

Students with excessive absences are dropped by the instructor according to guidelines published in the Student Handbook. They should be referred to the curriculum program counselor.

Appeals of attendance decisions should be made first to the department chairperson and then to the program area dean. Further appeals of administrative withdrawal from class for attendance will be made in writing no later than five (5) College days to the FTCC Student Appeals Committee through the Director of Counseling. Further appeals must be accomplished pursuant to due process published in the Student Handbook.

Students placed on suspension for attendance problems may be allowed to continue attending class until the appeal has been resolved.



## Grades

Grading is the prerogative of the faculty member. Appeals concerning grades must be directed to that faculty member. Failing to reach a satisfactory solution, the student may appeal in accordance with the outline below. The appeal of grade must be initiated prior to the end of the next regular term.

1. The student shall present the appeal to the chairperson of the department within which the protested grade was awarded. The chairperson shall, by conferring with the student and the faculty member, seek resolution by mutual agreement.
2. Failing to reach a resolution, the department chairperson will transmit the appeal to the appropriate program area dean who may convene the Academic Review Committee.
3. The Academic Review Committee will consist of the convening dean and four faculty members appointed by the dean. If the committee affirms the faculty member's decision, the dean will notify in writing the faculty member, the student, and the department chairperson. If the committee supports the student's appeal, it shall prescribe the method by which the student will be re-evaluated. The resulting grade must be submitted within college guidelines and may not be further appealed.

## Academic Probation and Suspension

Students who fail to meet requirements of academic progress according to guidelines published in the Student Handbook will be placed on academic probation or academic suspension. These students should be referred to their academic advisor or counselor. The College will assist the student in identifying the probable causes of academic difficulty and will attempt to recommend strategies for change.

Any consideration of academic standing or reinstatement must be approved by the appropriate department chairperson and would require assurances that the reasons for academic difficulties have been removed.

Appeals of decisions of the department chairperson may be made to the appropriate program area dean. All appeals must be in writing and received no later than five days from the time of notification of the department chairperson's decision. Students placed on academic suspension may be allowed to continue attending class until the appeal has been resolved. The decision of the dean in matters of academic and academic suspension is final and not subject to further appeal.

## Financial Obligations

Initial telephone contacts and certified letters of advisement from the Business Office at FTCC regarding delinquent loans and returned checks are mailed to the student. Unpaid indebtedness to the college will result in suspension from the class(es). Student will not be allowed to register for the next term until the debt is cleared with the Business Office.

For returned checks, students are given 15 days from the date of the certified letter to clear the debt before legal action is taken by FTCC. If after 15 days the debt is not cleared, a warrant is issued by the Cumberland County Magistrates' Office. After this time, the student must make payment of the returned check plus court costs to the Clerk of Superior Court.

For student loans, the promissory note states that payment in full becomes due immediately upon default of any installment or termination of at least half-time study. If payment is not made, the student's account is submitted to the Attorney General's Office for collection. Upon notification of disposition by the Attorney General, the student's unpaid account is submitted to an outside collection agency.

Monthly, any unpaid student accounts are submitted to the North Carolina Department of Revenue under the Set-Off Debt Collection Act. This entitles FTCC to claim a part or all of the student's income tax refund to apply against the debt.

Financial indebtedness to FTCC can only be appealed through the Business Office until the matter is submitted to local and state legal authorities.

## Further Appeal Procedures

The decisions of the FTCC Student Appeals Committee are referred to the Associate Vice President for Curriculum Programs as recommendations. The Associate Vice President for Curriculum Programs will confer with the Associate Vice President for Student Development, reach a decision, and notify the student involved of the resulting decision as soon as possible, but no later than three work days from the receipt of the recommendation of the Student Appeals Committee by the Associate Vice President.

Further appeals must be in writing and addressed to the Vice President for Academic Affairs. The chain of appeal goes then from the Vice President for Academic Affairs to the President to the Board of Trustees. Decisions of the Board of Trustees are final.

## Dismissal

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

## STUDENT RECORDS

Records of progress are kept by this institution on all current and former students. Progress records are furnished to 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 written request. Official transcripts, will be mailed as requested.
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 certificates 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 requires 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 objection must state what information the parent or student does not want to be classified as directory information. If no objection 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.







CONTINUING EDUCATION

**Fayetteville Technical  
Community College**

# CONTINUING EDUCATION

## General

The Continuing Education Division is responsible for non-curriculum, non-credit educational programs for students 18 years of age or older. Due to ongoing changes in technology, career and job requirements, as well as revised life styles, needs are being created for continuing education in most occupational and avocational areas. The Continuing Education Division is mandated to respond to these needs by providing services to individuals, organizations, businesses, and industries within the Fayetteville-Cumberland County area. Requests for continuing education programs range from courses in basic reading and writing to advanced courses in technical fields. These courses are made available whenever there is a sufficient number of students interested in the same subject area and a qualified instructor is available. Adults may also attend continuing education courses to fill leisure time and to improve vocational, avocational, and practical skills.

## Literacy Education

Literacy Education encompasses the areas of Adult Basic Education (ABE), Adult High School Diploma (HSD), English As A Second Language (ESL), General Education Development (GED), and Compensatory Education.

### Adult Basic Education (ABE)

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.

### General Education Development (GED)

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)

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 (CED)

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 Program

The Adult High School Diploma Program, a component of Literacy Education, is a course of studies in the core subjects of English, social studies, mathematics, and sciences. This component is designed to give adults of Cumberland County an opportunity to earn a high school diploma. A student should be 18 years of age or older to enter the program, or be officially released from the public school system.

Each of the above listed subjects is a concentrated study of approximately sixty (60) hours per subject. The high school diploma is issued by Fayetteville Technical Community College in cooperation with the Cumberland County Board of Education.

### 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.

### Industry Services and Occupational Extension Education

Occupational Extension Education is primarily concerned with educational programs required to upgrade skills in businesses and industries throughout the county. Additionally, training for service industries is provided for public and private businesses and agencies. Other areas of concern include new and expanding industry, hospitality, and occupational skills training for the handicapped. Specialty training for manufacturing industries is available through the Cooperative Skills Training Department.

### Center for Business and Industry

The Center for Business and Industry is designed to serve the employee or prospective employee of our business and industry community. This state-of-the-art facility is located on Fayetteville Technical Community College's main campus (2801 Fort Bragg Road) and is scheduled exclusively for local business and industry use. Through the Center for Business and Industry, the Continuing Education Division will be promoting yet another dimension of customized courses, flexibility, and quality instruction.



## Community Services/Extension Education

The Community Services and Extension Education programs are an integral part of continuing education. These areas offer a wide variety of courses in art, automotive, aviation, building trades, business, computer education, foreign language, home economics, general interest programs, music, public school personnel staff development, sign language, travel agent, theater arts, and shop courses. These courses are intended to provide training to upgrade a person's skills or qualifications, assist in preparing an individual for a new career, and provide opportunities for personal growth and intellectual stimulation.

Fayetteville Technical Community College, in cooperative with the Cumberland County schools, utilizes the facilities at a number of local campuses to make these courses more accessible to the residents of the greater Fayetteville area.

Classes are also conducted at various locations throughout Fayetteville, Fort Bragg, Pope Air Force Base, Spring Lake, Hope Mills, Stedman, and other areas. Classes are also coordinated with local community centers, senior citizens' centers, and the Fayetteville Museum of Art. Likewise, businesses, churches, schools, and public and military facilities are utilized.

Students are regularly surveyed for comments and suggestions with courses frequently designed to meet specific requests. This area is expected to grow and change with the interests and needs of the community.

## Emergency Services Training

Emergency Services Training consists of education in the areas of Emergency Medical Technician, Cardiopulmonary Resuscitation, Rescue Squad, and other areas of the medical profession. Additionally, Law Enforcement Training and Fire Service Training are provided. Courses are offered on campus, at local fire departments, churches, schools, businesses, industries, or other locations where there is community interest. A number of courses are open to the public, while some are limited to in-service training. Although the state prescribed registration fee is required, exceptions are recognized for fire service, police, and life-saving personnel.



**CURRICULUM PROGRAMS**

**Fayetteville Technical  
Community College**

## CURRICULUM PROGRAMS

### **ASSOCIATE DEGREE PROGRAMS**

A/C, Heating & Refrigeration Technology  
Accounting  
Administrative Office Technology  
Architectural Technology  
Associate Degree Nursing  
Associate in Arts  
Associate in Science  
Automotive Service Technician  
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 Technology  
Machining Technology  
Marketing and Retailing  
Paralegal Technology  
Physical Therapist Assistant  
Postal Service Technology  
Public Administration  
Radiologic Technology

Recreation Associate  
Respiratory Care Technology  
Surveying Technology

### **DIPLOMA PROGRAMS**

Automotive Body Repair  
Cabinetmaking  
Cosmetology  
Dental Assisting  
Digital Electronic Repair  
Drafting-Mechanical  
Electrical Installation  
Foodservice Specialist  
Industrial Mechanics  
Masonry  
Pharmacy Technology  
Plumbing and Pipefitting  
Practical Nursing  
Residential Carpentry  
Surgical Technology  
Tool, Die and Moldmaking  
Welding

### **CERTIFICATE PROGRAMS**

Basic Law Enforcement Training  
Insurance (Advanced Technical Specialty)  
Insurance (Technical Specialty)  
Nursing Assistant  
Real Estate (Technical Specialty)  
Real Estate Appraisal  
Technical Curriculum Core

### **OTHER PROGRAMS**

Developmental Studies  
Vocational Curriculum Core

## **NOTE:**

All displays in schedules for Curriculum Programs show contact hours and total quarter credit hours for classes in the following order:

### **Example:**

		<b>Lecture Hours</b>	<b>Lab Hours</b>	<b>Shop/ Clinic Hours</b>	<b>Quarter Credit Hours</b>
ENG-101	Grammar	3	0	0	3

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 system accountant, cost accountant, budget accountant and property accountant.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

ACC-120	Accounting Principles I	4	2	0	5
BUS-110	Bus Math With Calculators	2	0	3	3
CAS-101	Intro to Microcomputers	0	0	3	1
ENG-101	Grammar for Composition	3	0	0	3
MAT-163	College Algebra	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
	<b>OR</b>				
OSC-102	Keyboarding Skills II	0	0	3	1
		<hr/>	<hr/>	<hr/>	<hr/>
		14	2	9	18

**SECOND QUARTER**

ACC-121	Accounting Principles II	4	2	0	5
ACC-123	Accounting on Computers	0	0	3	1
BUS-123	Business Finance I	2	2	0	3
CAS-126	Intro to Spreadsheets	0	0	3	1
CSC-103	Intro to Programming	3	0	0	3
ENG-102	Composition I	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		12	4	6	16

**THIRD QUARTER**

ACC-221	Intermediate Acct I	4	2	0	5
BUS-124	Business Finance II	2	2	0	3
CAS-128	Spreadsheets	2	0	3	3
ENG-103	Composition II	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	4	3	17

**SUMMER QUARTER**

ACC-122	Management Accounting	4	2	0	5
CAS-132	Advanced Spreadsheets	1	0	3	2
		<hr/>	<hr/>	<hr/>	<hr/>
		5	2	3	7

**FOURTH QUARTER**

ACC-222	Intermediate Acct II	4	2	0	5
ACC-229	Federal Income Tax	5	0	0	5
BUS-112	Business Statistics	5	0	0	5
BUS-115	Business Law I	4	0	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		18	2	0	19

**FIFTH QUARTER**

ACC-223	Intermediate Acct III	4	2	0	5
ACC-225	Cost Accounting	4	2	0	5
BUS-116	Business Law II	4	0	0	4
BUS-234	Management	2	0	3	3
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		17	4	3	20

ACCOUNTING (continued)

SIXTH QUARTER

ACC-224	Advanced Accounting	4	2	0	5
<b>OR</b>					
ACC-227	Managerial Accounting	4	2	0	5
ACC-235	Auditing	5	0	0	5
ECO-151	Basic Economics	5	0	0	5
ENG-160	Oral Communications	3	0	0	3
		17	2	0	18

**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 they acquire the approval of the Co-op Director and Department Chairperson.

**Important Notice:** Students intending to transfer to a four year college/university should see a Business Division counselor or Accounting Curriculum advisor before registering for any courses.

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TOTAL REQUIRED CREDITS.... 115

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ADMINISTRATIVE OFFICE TECHNOLOGY

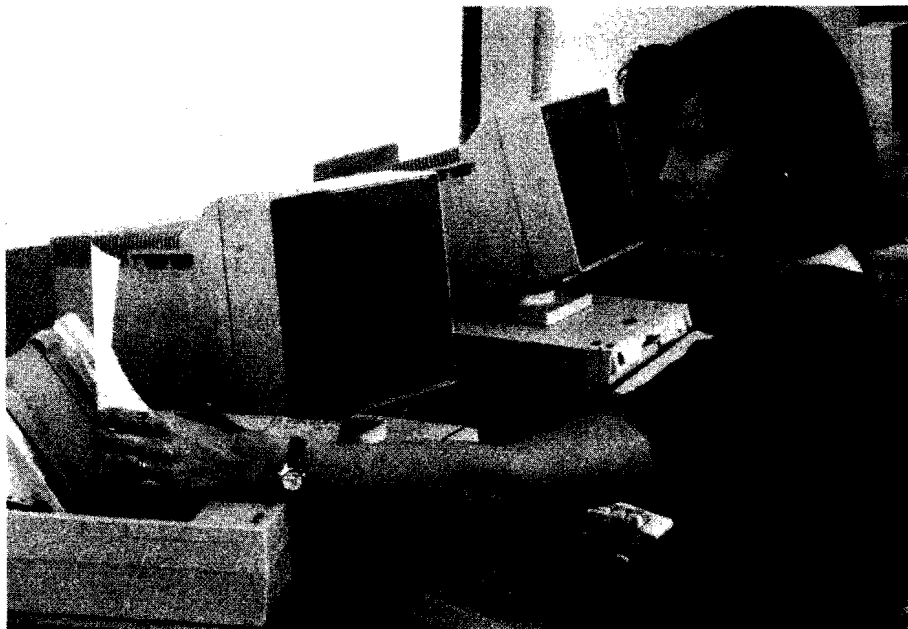
(T-030)

This curriculum prepares individuals to perform secretarial and administrative support duties in a variety of offices including those offices with computerized, automated functions.

Students in this curriculum study keyboarding and word/information processing to develop skills in the preparation of business correspondence, reports, statistical copy, manuscripts and business forms. Administrative support courses emphasize typical office tasks such as scheduling appointments, composing correspondence and performing reprographic duties. Training is also provided in analyzing and coordinating office duties and systems. Skills and knowledge are taught in the areas of electronic document storage and retrieval and computer software utilization.

Graduates of the program may be employed in offices in private business establishments involved in retailing, marketing, advertising, and manufacturing as well as offices in local, state, and federal government.

Upon completion of the program, the student will receive an **associate degree**.



**ADMINISTRATIVE OFFICE TECHNOLOGY (continued)**

**FIRST QUARTER**

ENG-101	Grammar for Composition	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
OSC-105	Keyboard Skillbuilding	1	0	3	2
OSC-110	Info Processing Concepts	2	0	3	3
OSC-118	Word Processing on Micro	0	0	3	1
		—	—	—	—
		11	0	9	14

**SECOND QUARTER**

BUS-141	Business English	3	0	0	3
CAS-103	Advanced DOS/Windows	0	0	3	1
OSC-103	Keyboarding III	2	0	3	3
OSC-132	Terminology & Vocab I	5	0	0	5
OSC-134	Secretarial Procedures	3	2	0	4
OSC-136	Machine Transcription I	1	0	6	3
		—	—	—	—
		14	2	12	19

**THIRD QUARTER**

ENG-102	Composition I	3	0	0	3
BUS-110	Bus Math With Calculators	2	0	3	3
OSC-104	Keyboarding IV	2	0	3	3
OSC-232	Terminology & Vocab II	5	0	0	5
	Social/Behav Science Elec	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		18	0	6	20

**SUMMER QUARTER**

CAS-130	Micro Data Management	0	0	3	1
OSC-112	Records Management	5	0	0	5
OSC-236	Machine Transcription II	2	0	3	3
		—	—	—	—
		7	0	6	9

**FOURTH QUARTER**

CAS-126	Intro to Spreadsheets	0	0	3	1
OSC-201	Info Processing Applic I	4	0	3	5
OSC-210	Bus Comm for				
	Word Process	5	0	0	5
	Major Elective	5	0	0	5
	Social Science Elective	3	0	0	3
		—	—	—	—
		17	0	6	19

**FIFTH QUARTER**

CAS-136	Desktop Publishing	1	0	3	2
ENG-160	Oral Communications	3	0	0	3
OSC-106	Adv Keyboarding Skills	1	0	3	2
OSC-203	Info Processing Applic II	4	0	3	5
	Major Elective	4	0	0	4
	Social Science Elective	3	0	0	3
		—	—	—	—
		16	0	9	19

**SIXTH QUARTER**

CAS-134	Integrated Software Appli	2	0	3	3
CAS-203	Advanced Desktop Publishing	1	0	3	2
COE-220	Secretarial Internship	0	0	10	1
	<b>OR</b>				
OSC-101	Keyboarding I	0	0	3	1
OSC-205	Info Processing Appli III	4	0	3	5
OSC-234	Office Practice Seminar	3	0	0	3
		—	—	—	—
		10	0	12	14

**TOTAL REQUIRED CREDITS.... 114**

\*\* Proficiency will be given for OSC 120 if high school grade is "B" or better.

\*\*\* OSC 218 or CAS 101 may not be used for free elective.\*\*\*

**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 they acquire approval from the Co-op Director and the Department Chairperson.

# 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, commercial and industrial 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.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

* AHR-101A	Refrig. Fundamentals I	3	0	3	4
AND					
* AHR-101B	Refrig. Fundamentals I	1	0	6	3
OR					
AHR-101X	Refrig. Fundamentals I	4	0	0	4
AND					
AHR-101Y	AHR-101 Lab	0	0	9	3
* AHR-110X	Circuits and Controls I	3	0	0	3
* AHR-110Y	AHR-110 Lab	0	0	6	2
DFT-101	Technical Drafting I	0	6	0	3
ENG-101	Grammar for Composition	3	0	0	3
		—	—	—	—
		10	6	15	18

## THIRD QUARTER

AHR-112X	Circuits & Controls III	2	0	0	2
AHR-112Y	AHR-112 Lab	0	0	6	2
* AHR-145A	All-Weather Systems I	3	0	3	4
AND					
* AHR-145B	All-Weather Systems I	1	0	6	3
OR					
AHR-145X	All-Weather Systems I	4	0	0	4
AND					
AHR-145Y	AHR-145 Lab	0	0	9	3
PHY-131X	Physics II	3	0	0	3
PHY-131Y	PHY-131 Lab	0	2	0	1
PSY-110	Occupational Psychology	3	0	0	3
		—	—	—	—
		12	2	15	18

## SECOND QUARTER

** AHR-102A	Refrig. Fundamentals II	3	0	3	4
AND					
** AHR-102B	Refrig. Fundamentals II	1	0	6	3
OR					
AHR-102X	Refrig. Fundamentals II	4	0	0	4
AND					
AHR-102Y	AHR-102 Lab	0	0	9	3
AHR-111X	Circuits and Controls II	3	0	0	3
AHR-111Y	AHR-111 Lab	0	0	6	2
CAS-101	Intro to Microcomputers	0	0	3	1
MAT-112	Algebra I	5	0	0	5
		—	—	—	—
		12	0	18	18

## SUMMER QUARTER

* AHR-146X	All-Weather Systems II	4	0	0	4
* AHR-146Y	AHR-146 Lab	0	0	6	2
AHR-147X	Air Systems Fabrication	1	0	0	1
AHR-147Y	AHR-147 Lab	0	0	6	2
PHY-132X	Physics III	3	0	0	3
PHY-132Y	PHY-132 Lab	0	2	0	1
		—	—	—	—
		8	2	12	13



**AIR CONDITIONING, HEATING, & REFRIGERATION TECHNOLOGY (continued)**

**FOURTH QUARTER**

AHR-201	Principles of Air Cond	4	0	6	6
** AHR-220	Refrig. System Design	3	0	6	5
ENG-102	Composition I	3	0	0	3
WLD-106	Techniques of Welding	1	0	6	3
		—	—	—	—
		11	0	18	17

ENG-160	Oral Communications	3	0	0	3
	Elective	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		14	0	15	19

**TOTAL REQUIRED CREDITS.... 121**

**FIFTH QUARTER**

AHR-221	Air Cond System Design	4	0	6	6
AHR-230	Hydronic Systems	3	0	9	6
ENG-103	Composition II	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		13	0	15	18

**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 they acquire approval from the Co-op Director and Department Chairperson.

**\*T036C Evening Heating and Air Conditioning Service Certificate** requires 25 credit hours and includes AHR-101A, AHR-101B, AHR-110X, AHR-110Y, AHR-145A, AHR-145B, AHR-146X and AHR 146Y.

**\*\*T036R Evening Refrigeration Service Certificate** requires 24 credit hours and includes AHR-101A, AHR-101B, AHR-110X, AHR-110Y, AHR-102A, AHR-102B, and AHR-220.

Courses are not necessarily listed in proper quarter sequence, therefore, the student should see his/her advisor before registering.

**SIXTH QUARTER**

AHR-247	Advanced Heat Pumps	2	0	9	5
AHR-249	Service Problems	3	0	6	5

**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 specifications.

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

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

ARC-100	Sketching, Drawing & Comp	1	0	3	2
ARC-101	Arch Tech & Dsgn I	2	4	0	4
ARC-111	Materials & Methods I	2	2	3	4
ARC-135	Arch CADD Systems I	0	0	3	1
ENG-101	Grammar for Composition	3	0	0	3
MAT-112	Algebra I	5	0	0	5
		—	—	—	—
		13	6	9	19

**SECOND QUARTER**

ARC-102	Arch Tech & Dsgn II	2	0	6	4
ARC-110	Intro To Architecture	1	2	3	3
ARC-112	Materials & Methods II	3	0	3	4
ARC-136	Arch CADD Systems II	0	0	3	1
ENG-102	Composition I	3	0	0	3
MAT-113	Algebra II	5	0	0	5
		—	—	—	—
		14	2	15	20

**ARCHITECTURAL TECHNOLOGY (continued)**

**THIRD QUARTER**

ARC-103	Arch Tech & Dsgn III	2	2	6	5
ARC-120	Codes/Specs/Contracts	1	0	3	2
ARC-137	Arch CADD Systems III	1	0	3	2
PHY-130X	Technical Physics I	3	0	0	3
PHY-130Y	PHY-130 Lab	0	2	0	1
SRV-101	Surveying I	2	0	6	4
		—	—	—	—
		9	4	18	17

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**SUMMER QUARTER**

ARC-130	Architectural Estimating	3	4	0	5
ARC-138	Arch CADD Systems IV	3	4	0	5
		—	—	—	—
		6	8	0	10

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**FOURTH QUARTER**

ARC-201	Arch Tech & Dsgn IV	2	2	6	5
ARC-211	Arch Presentations I	1	4	0	3
ART-151	Art Appreciation	5	0	0	5
ENG-103	Composition II	3	0	0	3
PSY-110	Occupational Psychology	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		17	6	6	22

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**FIFTH QUARTER**

ARC-202	Arch Tech & Dsgn V	2	2	6	5
ARC-212	Arch Presentations II	2	4	0	4
ARC-221	Arch Environment Sys I	1	2	3	3
CIV-210	Const. Methods & Mgt	3	2	0	4
ENG-160	Oral Communications	3	0	0	3
		—	—	—	—
		11	10	9	19

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**SIXTH QUARTER**

ARC-203	Arch Tech & Dsgn VI	1	2	9	5
ARC-222	Arch Environment Sys II	1	2	3	3
ARC-230	Project Seminar	2	6	0	5
ARC-235	Portfolio	1	4	0	3
		—	—	—	—
		5	14	12	16

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**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 electives provided they acquire approval from the Co-op Director and the Department Chairperson.

# ASSOCIATE DEGREE NURSING, REGISTERED NURSING (T-059)

The Associate Degree Nursing curriculum is designed to prepare the graduate to assess, analyze, plan, implement and evaluate nursing care. The graduate is eligible to apply 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.

The Registered Nurse may be employed in a wide variety of health care settings such as hospitals, long term care facilities, clinics, physician's offices, industry and community health agencies.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
NUR-101	Nursing Child/Adult I	6	4	3	9
PSY-101	Intro to Psychology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	4	6	18

## THIRD QUARTER

BIO-162X	Microbiology I	5	0	0	5
BIO-162Y	BIO-162 Lab	0	0	3	1
NUR-103	Nursing Child/Adult III	6	0	9	9
SOC-101	Intro to Sociology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	0	12	18

## SECOND QUARTER

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
NUR-102	Nursing Child/Adult II	6	4	3	9
PSY-252	Human Growth & Develop	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		16	4	6	20

## SUMMER QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1
NUR-104	Nursing Child/Adult IV	4	0	6	6
		<hr/>	<hr/>	<hr/>	<hr/>
		4	0	9	7



**ASSOCIATE DEGREE NURSING, REGISTERED NURSING (continued)**

**FOURTH QUARTER**

ENG-151	English Composition	5	0	0	5
NUR-205	Nursing Child/Adult V	6	0	12	10
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	12	15

**SIXTH QUARTER**

NUR-207	Nursing Child/Adult VII	6	0	12	10
NUR-208	Professional Development	2	0	0	2
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	12	15

**FIFTH QUARTER**

ENG-152	English Composition & Lit	5	0	0	5
NUR-206	Nursing Child/Adult VI	6	0	12	10
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	12	15

NUR-110	Nursing Transition For LPN's - Approved for Placement	3	0	0	3
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**TOTAL REQUIRED CREDITS.... 108**

Students with a felony conviction will have limited licensure and employment opportunities.

**ASSOCIATE IN ARTS**

**(C011)**

The College Transfer program is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree. Students in this program are responsible for examining the requirements of the four-year college or university to which they plan to transfer for completion of their degree. Counselors and advisors are available to assist students in planning their program.

The coursework in the program includes literature, humanities, mathematics, physical education and the sciences. The Associate in Arts program concentrates heavily on the humanities and social sciences and is recommended for those who plan to continue in a Bachelor of Arts degree program. The Associate in Science program leans more toward mathematics and the physical and life sciences and is intended for those pursuing the Bachelor of Science degree.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

CSC-104	Intro to Data Processing	3	0	0	3
ENG-151	English Composition	5	0	0	5
MAT-163	College Algebra	5	0	0	5
	Humanities/Fine Arts Elec	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		18	0	0	18

ASSOCIATE IN ARTS (continued)

SECOND QUARTER

BIO-151X	General Biology I	5	0	0	5
AND					
BIO-151Y	BIO-151 Lab	0	2	0	1
OR					
CHM-151X	General Chemistry I	5	0	0	5
AND					
CHM-151Y	CHM-151 Lab	0	0	3	1
OR					
PHY-151X	General Physics I	5	0	0	5
AND					
PHY-151Y	PHY-151 Lab	0	2	0	1
OR					
PHS-151	Physical Science I	5	2	0	6
ENG-152	English Composition & Lit	5	0	0	5
	Elective	3	0	0	3
		15	2	0	16

FIFTH QUARTER

Elective	5	0	0	5
Humanities/Fine Arts Elec	5	0	0	5
Social Science Elec	5	0	0	5
	15	0	0	15

SIXTH QUARTER

Electives	15	0	0	15
Physical Education	2	0	0	2
	17	0	0	17

THIRD QUARTER

Science Sequence Con't	6	0	0	6
Humanities/Fine Arts Elec	5	0	0	5
Social Science Elec	5	0	0	5
	16	0	0	16

TOTAL REQUIRED CREDITS... 96

**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 they acquire approval from the Co-op Director and the Department Chairperson.

FOURTH QUARTER

Electives	10	0	0	10
Physical Education	2	0	0	2
Social Science Elec	5	0	0	5
	17	0	0	17



# ASSOCIATE IN SCIENCE

(C050)

The College Transfer program is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree. Students in this program are responsible for examining the requirements of the four-year college or university to which they plan to transfer for completion of their degree. Counselors and advisors are available to assist students in planning their program.

The coursework in the program includes literature, humanities, mathematics, physical education and the sciences. The Associate in Science program leans more toward mathematics and the physical and life sciences and is intended for those pursuing the Bachelor of Science degree. The Associate in Arts program concentrates heavily on the humanities and social sciences and is recommended for those who plan to continue in a Bachelor of Arts degree program.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

ART-151	Art Appreciation	5	0	0	5
CSC-104	Intro to Data Processing	3	0	0	3
ENG-151	English Composition	5	0	0	5
MAT-163	College Algebra	5	0	0	5
		—	—	—	—
		18	0	0	18

## SECOND QUARTER

ENG-152	English Composition & Lit	5	0	0	5
	Humanities/Fine Arts Elec	5	0	0	5
	Math Sequence	5	0	0	5
		—	—	—	—
		15	0	0	15

## THIRD QUARTER

	Math Sequence	5	0	0	5
ECO-152	Macroeconomics	5	0	0	5
BIO-151X	General Biology I	5	0	0	5
	AND				
BIO-151Y	BIO-151 Lab	0	2	0	1
	OR				
CHM-151X	General Chemistry I	5	0	0	5
	AND				
CHM-151Y	CHM-151 Lab	0	0	3	1
	OR				
PHY-151X	General Physics I	5	0	0	5
	AND				
PHY-151Y	PHY-151 Lab	0	2	0	1
	OR				
PHS-151	Physical Science I	5	2	0	6
	Physical Education	2	0	0	2
		—	—	—	—
		17	2	0	18

## FOURTH QUARTER

	Math Sequence	5	0	0	5
	Science Sequence Con't	6	0	0	6
	Social/Behav Science Elec	5	0	0	5
		—	—	—	—
		16	0	0	16

**ASSOCIATE IN SCIENCE (continued)**

**FIFTH QUARTER**

Electives	12	0	0	12
Physical Education	1	0	0	1
Science Sequence Con't	6	0	0	6
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	19	0	0	19

**SIXTH QUARTER**

Electives	8	0	0	8
Physical Education	1	0	0	1
Science Sequence Con't	6	0	0	6
	<hr/>	<hr/>	<hr/>	<hr/>
	15	0	0	15

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**TOTAL REQUIRED CREDITS... 96**

**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 they acquire approval from the Co-op Director and the Department Chairperson.

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**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 business.

Upon completion, the student will receive a **diploma**.

**FIRST QUARTER**

AUT-1111	Auto Body Repair I	6	0	12	10
<b>OR</b>					
AUT-1111A	Auto Body Repair I	3	0	6	5
<b>AND</b>					
AUT-1111B	Auto Body Repair I	3	0	6	5
BPR-1101	Schematics & Diagrams	1	0	3	2
WLD-1180	Basic Welding	1	0	6	3
		<hr/>	<hr/>	<hr/>	<hr/>
		8	0	21	15

**SECOND QUARTER**

AUT-1110	Automotive Repair	2	0	6	4
AUT-1112	Auto Body Repair II	6	0	12	10
<b>OR</b>					
AUT-1112A	Auto Body Repair II	3	0	6	5
<b>AND</b>					
AUT-1112B	Auto Body Repair II	3	0	6	5
WLD-1105	Auto Body Welding	2	0	6	4
		<hr/>	<hr/>	<hr/>	<hr/>
		10	0	24	18

**AUTOMOTIVE BODY REPAIR (continued)**

**THIRD QUARTER**

AUT-1113	Auto Body Repair III	8	0	12	12
<b>OR</b>					
AUT-1113A	Auto Body Repair III	4	0	6	6
<b>AND</b>					
AUT-1113B	Auto Body Repair III	4	0	6	6
CAS-101	Intro to Microcomputers	0	0	3	1
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1101	General Math	3	2	0	4
		—	—	—	—
		14	2	15	20

**FOURTH QUARTER**

AUT-1114	Auto Body Repair IV	7	0	15	12
<b>OR</b>					
AUT-1114A	Auto Body Repair IV	2	0	6	4
<b>AND</b>					
AUT-1114B	Auto Body Repair IV	2	0	6	4
<b>AND</b>					
AUT-1114C	Auto Body Repair IV	3	0	3	4
BUS-1103	Small Business Operations	3	0	0	3
PSY-1101	Psych of Formal/ Informal Org.	3	0	0	3
		—	—	—	—
		13	0	15	18

**TOTAL REQUIRED CREDITS.... 71**

**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 of the program will be supervised and evaluated.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

AUT-101	Internal Comb Engines I	2	4	0	4
AUT-103	Electrical Systems I	2	4	0	4
AUT-106	Auto Power Train Sys I	2	4	0	4
ENG-101	Grammar for Composition	3	0	0	3
MAT-112	Algebra I	5	0	0	5
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		17	12	0	23

**THIRD QUARTER**

AUT-102	Internal Comb Engines II	2	2	0	3
AUT-104	Electrical Systems II	2	2	0	3
AUT-107	Auto Power Train Sys II	2	2	0	3
AUT-108	Basic Auto Fuel Systems	2	4	0	4
CAS-101	Intro to Microcomputers	0	0	3	1
ENG-102	Composition I	3	0	0	3
PHY-131X	Physics II	3	0	0	3
PHY-131Y	PHY-131 Lab	0	2	0	1
		—	—	—	—
		14	12	3	21

**SECOND QUARTER**

COE-131	Automotive Co-Op Work Exp	0	0	30	3
		—	—	—	—
		0	0	30	3



**AUTOMOTIVE SERVICE TECHNICIAN (continued)**

**FOURTH QUARTER**

COE-132	Automotive Co-Op Work				
	Exp	0	0	30	3
		—	—	—	—
		0	0	30	3

**FIFTH QUARTER**

COE-231	Automotive Co-Op Work				
	Exp	0	0	30	3
		—	—	—	—
		0	0	30	3

**SIXTH QUARTER**

AUT-201	Auto Chassis & Suspen Sys	2	4	0	4
AUT-202	Auto Heating & Air Cond	2	2	0	3
AUT-207	Engine & Pwr Tr Sys Diag	2	2	0	3
AUT-208	Electrical/Fuel Sys Diag	2	2	0	3
BUS-235	Small Business Management	2	0	3	3
ELN-100	Intro to Electronics	3	2	0	4
ENG-103	Composition II	3	0	0	3
		—	—	—	—
		16	12	3	23

**SEVENTH QUARTER**

COE-232	Automotive Co-Op Work				
	Exp	0	0	30	3
		—	—	—	—
		0	0	30	3

**EIGHTH QUARTER**

AUT-213	Automotive Electronics	3	2	0	4
AUT-214	Auto Chas & Susp Sys Diag	2	2	0	3
AUT-215	Inst & Chassis Elec Sys	2	4	0	4
AUT-216	Electronic Controlled Sys	3	2	0	4
ENG-160	Oral Communications	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		16	10	0	21

**NINTH QUARTER**

AUT-217	Electronic Contr Sys Diag	3	2	0	4
AUT-218	Automotive Fuel Injection	3	2	0	4
AUT-219	Auto Emissions Systems	2	2	0	3
PSY-110	Occupational Psychology	3	0	0	3
WLD-106	Techniques of Welding	1	0	6	3
	Elective	3	0	0	3
		—	—	—	—
		15	6	6	20

**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.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

AUT-121	Basic Engines	3	0	12	7
* AUT-122	Automotive Brake Systems	2	0	6	4
ENG-101	Grammar for Composition	3	0	0	3
MAT-112	Algebra I	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		13	0	18	19

## FOURTH QUARTER

AUT-129	Power Trains Service	1	0	3	2
** AUT-130	Electronic Fuel Injection	2	4	0	4
** AUT-131	Tune-up & Electr Controls	3	0	3	4
PSY-110	Occupational Psychology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		9	4	6	13

## SECOND QUARTER

AUT-123	Engine Electrical Systems	6	0	9	9
** AUT-124	Automotive Fuel Systems	2	4	0	4
CAS-101	Intro to Microcomputers	0	0	3	1
PHY-131X	Physics II	3	0	0	3
PHY-131Y	PHY-131 Lab	0	2	0	1
		<hr/>	<hr/>	<hr/>	<hr/>
		11	6	12	18

## FIFTH QUARTER

* AUT-221	Susp & Computer Alignment	3	0	6	5
AUT-222X	Automotive Machine Shop	2	0	6	4
AUT-222Y	AUT-222 Lab	0	0	3	1
ENG-102	Composition I	3	0	0	3
WLD-106	Techniques of Welding	1	0	6	3
		<hr/>	<hr/>	<hr/>	<hr/>
		9	0	21	16

## THIRD QUARTER

AUT-125	Automotive Power Trains	3	0	6	5
** AUT-126	Fundamentals of Auto Comp	2	0	3	3
** AUT-127	Emission & Elect Controls	2	0	3	3
* AUT-128	Auto Heating & Air Cond	3	0	3	4
ELN-100	Intro to Electronics	3	2	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		13	2	15	19

## SIXTH QUARTER

AUT-223	Automatic Trans Rebuild	3	0	6	5
AUT-224	Electrical Power Accessor	4	0	6	6
ENG-103	Composition II	3	0	0	3
	Elective	4	0	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		14	0	12	18

**AUTOMOTIVE TECHNOLOGY (continued)**

**SEVENTH QUARTER**

AUT-225X	Automotive Servicing	2	0	6	4
AUT-225Y	AUT-225 Lab	0	0	3	1
AUT-226	Driveability & Elec Diag	2	0	6	4
ENG-160	Oral Communications	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		10	0	15	15

**Co-op Option:** Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of AUT 222Y, AUT 225Y, and electives provided they obtain the approval of the Co-op Director and Department Chairperson.

**\*T176C Evening Basic Automotive Repair Certificate** requires 16 credit hours and includes AUT-122, AUT-126, AUT-128, and AUT-221.

**\*\*T176P Evening Engine Performance Certificate** requires 18 credit hours and includes AUT-124, AUT-126, AUT-127, AUT-130, and AUT-131.

Courses are not necessarily listed in proper sequence, therefore, the student should see his/her advisor.

**TOTAL REQUIRED CREDITS.... 118**

**BANKING AND FINANCE**

**(T-112)**

The purposes of the Banking and Finance curriculum are to prepare the individual to enter the banking and finance industries, to provide an educational program for the banking employees wanting to receive the American Institute of Banking certificate, and 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.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

BAF-103	Principles of Banking	4	0	0	4
BUS-101	Introduction to Business	3	0	0	3
ENG-101	Grammar for Composition	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
		15	0	3	16

**SECOND QUARTER**

BAF-105	Money and Banking	4	0	0	4
BUS-110	Bus Math With Calculators	2	0	3	3
BUS-115	Business Law I	4	0	0	4
ECO-152	Macroeconomics	5	0	0	5
ENG-102	Composition I	3	0	0	3
		18	0	3	19

**BANKING AND FINANCE (continued)**

**THIRD QUARTER**

BAF-107	Marketing for Bankers	4	0	0	4
BUS-116	Business Law II	4	0	0	4
BUS-142	Business Communications	3	0	0	3
CAS-101	Intro to Microcomputers	0	0	3	1
ECO-153	Microeconomics	5	0	0	5
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		19	0	3	20

**FIFTH QUARTER**

ACC-115	Accounting for Managers	4	2	0	5
BAF-208	Bank Investments	4	0	0	4
CAS-126	Intro to Spreadsheets	0	0	3	1
	Major Elective	4	0	0	4
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		15	2	3	17

**SUMMER QUARTER**

BAF-109	Consumer Lending	4	0	0	4
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		7	0	0	7

**SIXTH QUARTER**

BAF-210	Trust Business	4	0	0	4
BAF-212	Analyzing Financial Stmtts	4	0	0	4
BUS-234	Management	2	0	3	3
	Major Elective	4	0	0	4
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		17	0	3	18

**FOURTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
BAF-202	Corporate Banking	4	0	0	4
BAF-206	Law & Banking: Application	4	0	0	4
ENG-160	Oral Communications	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		15	2	0	16

**TOTAL REQUIRED CREDITS.... 113**

**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 they acquire 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 and Training 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/or 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 qualify one for job opportunities with private enterprise in such areas as industrial, retail, and private security.

Upon completion of the program, the student will receive a **certificate**.

**BASIC LAW ENFORCEMENT TRAINING (continued)**

**FIRST QUARTER**

CJC-100 Basic Law Enforcement Trn	15	0	30	25
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	15	0	30	25

**TOTAL REQUIRED CREDITS.... 25**

**BUSINESS ADMINISTRATION**

**(T-018)**

The Business Administration curriculum is designed to prepare an individual for entry into management positions.

The curriculum develops competencies in the application of management principles. Emphasis is placed on skill development in the areas of management functions, computer applications and analysis, critical thinking and decision-making techniques, marketing, finance, legal aspects of business, oral and written communications, and the utilization of human resources.

Through the development of management competencies, the graduate will be able to function as a contributing member of a management team.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

BUS-101	Introduction to Business	3	0	0	3
CAS-101	Intro to Microcomputers	0	0	3	1
COE-101	Personal Develop & Comm	3	0	0	3
ENG-101	Grammar for Composition	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
		<hr/>	<hr/>	<hr/>	<hr/>
		14	0	6	16

**THIRD QUARTER**

BUS-142	Business Communications	2	0	3	3
CAS-130	Micro Data Management	0	0	3	1
ECO-153	Microeconomics	5	0	0	5
ENG-103	Composition II	3	0	0	3
MKT-139	Marketing	5	0	0	5
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		18	0	6	20

**SECOND QUARTER**

BUS-121	Business Math	5	0	0	5
BUS-202	Supervision	3	0	0	3
CAS-103	Advanced DOS/Windows	0	0	3	1
ECO-152	Macroeconomics	5	0	0	5
ENG-102	Composition I	3	0	0	3
OSC-118	Word Processing on Micro	0	0	3	1
		<hr/>	<hr/>	<hr/>	<hr/>
		16	0	6	18

**SUMMER QUARTER**

CAS-126	Intro to Spreadsheets	0	0	3	1
MKT-224	Salesmanship	2	0	3	3
	Major Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		5	0	6	7

**BUSINESS ADMINISTRATION (continued)**

**FOURTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
BUS-115	Business Law I	4	0	0	4
BUS-233	Human Resource Management	3	0	0	3
CAS-128	Spreadsheets	2	0	3	3
ENG-160	Oral Communications	3	0	0	3
	Related Electives	1	0	3	2
		<hr/>	<hr/>	<hr/>	<hr/>
		17	2	6	20

**SIXTH QUARTER**

BUS-117	Business Law III	3	0	0	3
BUS-124	Business Finance II	2	2	0	3
BUS-236	Integrative Management	3	2	0	4
	Elective	3	0	0	3
	Major Elective	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		16	4	0	18

**TOTAL REQUIRED CREDITS.... 119**

**FIFTH QUARTER**

ACC-115	Accounting for Managers	4	2	0	5
BUS-116	Business Law II	4	0	0	4
BUS-123	Business Finance I	2	2	0	3
BUS-234	Management	2	0	3	3
CAS-138	Bus Graphics Presentation	1	0	3	2
INS-247	Principles of Insurance	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		16	4	6	20

**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 they acquire 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.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

ACC-110	Financial Accounting	4	2	0	5
CAS-101	Intro to Microcomputers	0	0	3	1
CSC-103	Intro to Programming	3	0	0	3
CSC-104	Intro to Data Processing	3	0	0	3
MAT-163	College Algebra	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
		<hr/>	<hr/>	<hr/>	<hr/>
		15	2	6	18

**SECOND QUARTER**

ACC-115	Accounting for Managers	4	2	0	5
CAS-103	Advanced DOS/Windows	0	0	3	1
CSC-109	COBOL I	4	0	3	5
ENG-101	Grammar for Composition	3	0	0	3
MAT-172	Finite Mathematics	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		16	2	6	19

**BUSINESS COMPUTER PROGRAMMING (continued)**

**THIRD QUARTER**

BUS-112	Business Statistics	5	0	0	5
CSC-110	COBOL II	4	0	3	5
CSC-114	Operating Systems	3	0	3	4
ENG-102	Composition I	3	0	0	3
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		18	0	6	20

**FIFTH QUARTER**

CAS-218	Network Technology	2	0	6	4
CSC-221	Systems Implementation	3	0	3	4
ENG-160	Oral Communications	3	0	0	3
	Major Elective	3	0	3	4
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	0	12	18

**SUMMER QUARTER**

CAS-212	Data Base Management	3	0	3	4
	Major Elective	3	0	3	4
		<hr/>	<hr/>	<hr/>	<hr/>
		6	0	6	8

**SIXTH QUARTER**

CAS-240	Computer Programming Proj	2	0	9	5
CSC-224	System Administration	1	0	6	3
	Major Elective	3	0	3	4
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		9	0	18	15

**FOURTH QUARTER**

CAS-217	Data Communications	3	0	0	3
CSC-204	COBOL III	4	0	3	5
CSC-220	Systems Design/Analysis	4	0	0	4
ENG-103	Composition II	3	0	0	3
	Major Elective	3	0	3	4
		<hr/>	<hr/>	<hr/>	<hr/>
		17	0	6	19

**TOTAL REQUIRED CREDITS.... 117**

**Co-op Option:** Qualified students may elect to take up to six (6) credit hours of Cooperative Education in place of three (3) hours of major electives and three (3) hours of electives provided they acquire the approval of the Co-op Director or the Department Chairperson.

**CABINETMAKING**

**(V-172)**

The Cabinetmaking curriculum is designed to train students to construct and install cabinets and built-in furniture for homes, offices, and commercial businesses. The student will learn to use the tools and techniques of modern cabinet construction and installation.

Some of the topics to be covered include: cabinet design, sketching and computer-assisted drafting, joints and joinery, materials and hardware, finishes and finishing methods, applied mathematics and modern manufacturing processes.

Upon completion of this program, graduates should qualify for employment in cabinetmaking or furniture making companies as an apprentice cabinetmaker or other related entry level job.

Upon completion of the program, the student will receive a **diploma**.

CABINETMAKING (Continued)

**FIRST QUARTER**

CAB-1110	Shop Operations	3	0	3	4
CAB-1111	Cabinetmaking I	4	0	12	8
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1101	General Math	3	2	0	4
		13	2	15	19

**THIRD QUARTER**

CAB-1115	Cabinetmaking III	5	0	15	10
DFT-1141	Cabinetry Design	2	2	0	3
PHY-1103X	Work, Energy & Power	3	0	0	3
PHY-1103Y	PHY-1103 Lab	0	2	0	1
		10	4	15	17

**SECOND QUARTER**

CAB-1112	Cabinetmaking II	5	0	15	10
CAS-101	Intro to Microcomputers	0	0	3	1
DFT-1140	Cab Sketching & Drafting	2	2	0	3
PSY-1101	Psych of Formal/Informal Org	3	0	0	3
		10	2	18	17

**SUMMER QUARTER**

BUS-1103	Small Business Operations	3	0	0	3
CAB-1116	Cabinetmaking IV	6	2	15	12
		9	2	15	15

**TOTAL REQUIRED CREDITS...68**

**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 treatment 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, and 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.

Upon completion of the program, the student will receive an **associate degree**.



**CIVIL ENGINEERING TECHNOLOGY (Continued)**

**FIRST QUARTER**

CIV-105	Civil CAD I	2	0	6	4
CIV-107	Civil Engr Computations	3	0	3	4
ENG-101	Grammar for Composition	3	0	0	3
MAT-114	Algebra & Trigonometry I	5	0	0	5
SRV-101	Surveying I	2	0	6	4
		—	—	—	—
		15	0	15	20

**FOURTH QUARTER**

CIV-202	Properties of Soil	4	0	3	5
CIV-210	Const. Methods & Mgt	3	2	0	4
CIV-219	Strength of Materials	4	0	3	5
PHY-103X	Electricity	3	0	0	3
PHY-103Y	PHY-103 Lab	0	2	0	1
		—	—	—	—
		14	4	6	18

**SECOND QUARTER**

CIV-106	Civil CAD II	1	0	6	3
ENG-102	Composition I	3	0	0	3
MAT-115	Algebra & Trigonometry II	5	0	0	5
PHY-101X	Properties of Matter	3	0	0	3
PHY-101Y	PHY-101 Lab	0	2	0	1
PSY-110	Occupational Psychology	3	0	0	3
		—	—	—	—
		15	2	6	18

**FIFTH QUARTER**

CIV-220	Hydraulics & Drainage	4	0	3	5
CIV-221	Reinforced Concrete	5	0	0	5
CIV-226	Cement & Asphalt Concrete	3	0	3	4
CIV-227	Subdivision Design	1	0	6	3
CIV-228	City & Regional Planning	3	0	0	3
		—	—	—	—
		16	0	12	20

**THIRD QUARTER**

CIV-112	Construction Estimates	2	0	6	4
ENG-103	Composition II	3	0	0	3
MAT-116	Basic Calculus I	5	0	0	5
PHY-102X	Work, Energy & Power	3	0	0	3
PHY-102Y	PHY-102 Lab	0	2	0	1
SRV-102	Surveying II	2	0	6	4
		—	—	—	—
		15	2	12	20

**SIXTH QUARTER**

CIV-229	Municipal Engineering	3	0	3	4
CIV-230	Design of Roads & Pavement	3	0	3	4
ENG-160	Oral Communications	3	0	0	3
	Elective	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		15	0	6	17

**TOTAL REQUIRED CREDITS.... 122**

**SUMMER QUARTER**

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

**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 they acquire approval from the Co-op Director and Department Chairperson.

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

Commercial artists and advertising designers create and design layouts and art work for print and audiovisual 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 audiovisual 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.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

ART-103	Basic Drawing	2	4	0	4
ART-151	Art Appreciation	5	0	0	5
DES-104	Basic Design	3	0	3	4
ENG-101	Grammar for Composition	3	0	0	3
* GRA-108	Lettering/Typography	2	4	0	4
		—	—	—	—
		15	8	3	20

**SUMMER QUARTER**

ART-107	Watercolor I	2	2	0	3
PHO-117	Photography II	2	4	0	4
		—	—	—	—
		4	6	0	7

**SECOND QUARTER**

ART-105	Life Study	2	4	0	4
DES-115	Advertising Design	2	4	0	4
ENG-102	Composition I	3	0	0	3
* GRA-112	Intro to Computer Graphics	2	4	0	4
* GRA-117	Production Basics	3	0	3	4
		—	—	—	—
		12	12	3	19

**FOURTH QUARTER**

DES-205	Illustration I	3	0	3	4
ENG-160	Oral Communications	3	0	0	3
* GRA-212	Adv. Computer Graphics	3	2	0	4
* GRA-217	Production/Printing	3	0	3	4
MKT-141	Advertising Principles	5	0	0	5
		—	—	—	—
		17	2	6	20

**THIRD QUARTER**

DES-135	Design Studio I	3	0	3	4
ENG-103	Composition II	3	0	0	3
* GRA-118	Advanced Typography	2	4	0	4
MAT-111	Basic Mathematics	5	0	0	5
PHO-107	Photography I	3	0	3	4
<b>OR</b>					
PHO-115	Intro To Photography I	1	2	0	2
<b>AND</b>					
PHO-116	Intro To Photography II	1	2	0	2
		—	—	—	—
		16/15	4/8	6/3	20

**FIFTH QUARTER**

DES-210	Layout	3	0	3	4
DES-215	Illustration II	2	4	0	4
DES-235	Design Studio II	2	4	0	4
PHO-227	Studio Photography	3	4	0	5
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		13	12	3	20

SIXTH QUARTER

DES-240	Portfolio	3	0	3	4
DES-245	Client/Media Relations	2	4	0	4
GRA-232	Advertising Solutions	3	2	0	4
MKT-238	Commercial Display	2	4	0	4
	Elective	3	0	0	3
		—	—	—	—
		13	10	3	19

**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 they acquire approval from the Co-op Director and Department Chairperson.

\*T070C **Evening Computer Graphics Certificate** requires 24 credit hours. Courses are not necessarily listed in proper quarter sequence, therefore, the student should see his/her advisor before registering.

TOTAL REQUIRED CREDITS.... 125

**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 specialty shops, as well as setting up one's own business.

Upon completion of the program, the student will receive a **diploma**.



**COSMETOLOGY (continued)**

**FIRST QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
COS-1101	Intro to Cosmetology	2	0	0	2
COS-1102	Mannequin Practice	1	0	33	12
PSY-110	Occupational Psychology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		6	0	36	18

**THIRD QUARTER**

COS-1105	Cosmetology Theory II	3	0	0	3
COS-1106	Cosmetology Skills II	1	0	33	12
ENG-102	Composition I	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		7	0	33	18

**SECOND QUARTER**

COS-1103	Cosmetology Theory I	4	0	0	4
COS-1104	Cosmetology Skills I	2	0	30	12
ENG-101	Grammar for Composition	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		9	0	30	19

**SUMMER QUARTER**

BUS-232	Small Business Start-up	3	0	0	3
COS-1107	Adv Cosmetology Theory	4	0	0	4
COS-1108	Advanced Practice	1	0	24	9
		<hr/>	<hr/>	<hr/>	<hr/>
		8	0	24	16

**TOTAL REQUIRED CREDITS.... 71**  
**TOTAL CONTACT HOURS.....1683**

**CRIMINAL JUSTICE - PROTECTIVE SERVICES TECHNOLOGY**

**(T-129)**

The Criminal Justice Technology curriculum is designed so that it may be a multi-faceted 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 subjects, 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 service 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 such as industrial, retail and private security.

Upon completion of the program, the student will receive an **associate degree**.

**CRIMINAL JUSTICE - PROTECTIVE SERVICES TECHNOLOGY (continued)**

**FIRST QUARTER**

CJC-101	Intro to Criminal Justice	5	0	0	5
CJC-102	Constitutional Law	5	0	0	5
ENG-101	Grammar for Composition	3	0	0	3
SOC-101	Intro to Sociology	3	0	0	3
		—	—	—	—
		16	0	0	16

**SECOND QUARTER**

CJC-103	Criminology	5	0	0	5
CJC-108	Criminal Law	5	0	0	5
ENG-102	Composition I	3	0	0	3
PSY-101	Intro to Psychology	3	0	0	3
	Political Science Elective	3	0	0	3
		—	—	—	—
		19	0	0	19

**THIRD QUARTER**

CJC-105	Intro to Corrections	3	0	0	3
CJC-114	Organizational Theory	5	0	0	5
ENG-103	Composition II	3	0	0	3
SAF-101	First Aid and Safety	3	2	0	4
	Psychology Elective	3	0	0	3
		—	—	—	—
		17	2	0	18

**SUMMER QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
CJC-206	Criminal Justice Issues	3	0	0	3
CJC-231	Intro to Security	3	0	0	3
ENG-160	Oral Communications	3	0	0	3
		—	—	—	—
		9	0	3	10

**FOURTH QUARTER**

CJC-210	Criminal Investigation I	4	2	0	5
	<b>OR</b>				
CJC-107	Comm Based Corrections	5	0	0	5
CJC-219	Intro to Criminalistics	4	2	0	5
	<b>OR</b>				
CJC-112	Confinement Facilities	5	0	0	5
	Political Science Elective	3	0	0	3
	Math Elective	5	0	0	5
		—	—	—	—
		16/18	4/0	0	18

**FIFTH QUARTER**

CJC-211	Community Relations	3	2	0	4
CJC-214	Criminal Investigation II	4	2	0	5
	<b>OR</b>				
CJC-106	Correctional Counseling	4	2	0	5
PHS-151	Physical Science I	5	2	0	6
	Elective	3	0	0	3
		—	—	—	—
		15	6	0	18

**SIXTH QUARTER**

CJC-104	Law Enforcement Operations	3	0	0	3
	<b>OR</b>				
CJC-212	Prisoners Rights	3	0	0	3
CJC-209	Juvenile Delinquency	5	0	0	5
CJC-221	Substance Abuse	5	0	0	5
	Major Elective	3	0	0	3
	Sociology Elective	3	0	0	3
		—	—	—	—
		19	0	0	19

**TOTAL REQUIRED CREDITS.... 118**

**CRIMINAL JUSTICE - PROTECTIVE SERVICES TECHNOLOGY (continued)**

**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 they acquire approval from the Co-op Director and Department Chairperson.

**NOTE:** Transfer credits may be substituted with the approval of the Department Chairperson. Students intending to transfer to a 4-year institution should take ENG-151 and ENG-152 in lieu of ENG-101, 102 and 103. (STUDENT SHOULD SEE ADVISOR FIRST)

Students with a felony conviction will have limited Criminal Justice employment opportunities.

**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 education, preparing dental materials, preparing the patient for treatment, taking dental X-rays, maintaining dental supplies and equipment, assisting the Dentist, providing selected services for the patient, making appointments, maintaining patient records and other office management procedures. Graduates may be employed by dental office, dental clinics, public health clinics, federal service clinics, dental schools, state health departments, dental manufacturers and insurance companies.

Graduates are eligible to take the examination given by the Dental Assisting National Board, Incorporated to become a Certified Dental Assistant.

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

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

BIO-1005	Anatomy & Physiology	2	0	0	2
DEN-1004	Dental Anatomy	4	0	0	4
DEN-1008	Dental Infection Control	2	0	0	2
DEN-1011X	Clinical Procedures I	1	0	0	1
DEN-1011Y	DEN-1011 Lab	0	2	0	1
DEN-1014X	Dental Roentgenology	3	0	0	3
DEN-1014Y	DEN-1014 Lab	0	6	0	3
ENG-1101	Comm. in Grammar	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		15	8	0	19

DEN-1026	Dental Office Emergencies	2	0	0	2
PSY-1101	Psych of Formal/ Informal Org	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		16	6	6	21

**SECOND QUARTER**

BIO-1013	Microbiology	2	0	0	2
DEN-1020X	Dental Materials I	2	0	0	2
DEN-1020Y	DEN-1002 Lab	0	0	3	1
DEN-1021X	Clinical Procedures II	3	0	0	3
DEN-1021Y	DEN-1021 Lab	0	6	0	3
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

**THIRD QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
DEN-1030X	Dental Materials II	2	0	0	2
DEN-1030Y	DEN-1030 Lab	0	0	3	1
DEN-1032	Dental Office Management	3	0	0	3
DEN-1033	Professional Development	1	0	0	1
DEN-1034X	Clinical Procedures III	4	0	0	4
DEN-1034Y	DEN-1034 Lab	0	4	3	3
ENG-1102	Vocational Communications	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		13	4	9	18

**DENTAL ASSISTING (continued)**

**SUMMER QUARTER**

DEN-1040	Dental Office Practice I	1	0	39	14
		—	—	—	—
		1	0	39	14

**TOTAL REQUIRED CREDITS.... 72**

Students with a felony conviction will have limited certification and employment opportunities.

**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.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

BIO-110X	Bio Chem for Health Sci	3	0	0	3
BIO-110Y	BIO-110 Lab	0	0	3	1
BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 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 Anat & Physiology	3	0	0	3
ENG-101	Grammar for Composition	3	0	0	3
		—	—	—	—
		18	0	9	21

**THIRD QUARTER**

BIO-162X	Microbiology I	5	0	0	5
BIO-162Y	BIO-162 Lab	0	0	3	1
DEN-122	Head & Neck Anatomy	2	0	0	2
DEN-131X	Dental Hygiene III	3	0	0	3
DEN-131Y	DEN-131 Lab	0	0	9	3
DEN-214	Periodontology	3	0	0	3
PSY-101	Intro to Psychology	3	0	0	3
		—	—	—	—
		16	0	12	20

**SECOND QUARTER**

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
DEN-113	Histology	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-102	Composition I	3	0	0	3
		—	—	—	—
		17	0	12	21

**SUMMER QUARTER**

DEN-116	Dental Emergency Care	1	0	0	1
DEN-141X	Dental Hygiene IV	1	0	0	1
DEN-141Y	DEN-141 Lab	0	0	6	2
ENG-160	Oral Communications	3	0	0	3
NUT-101	Nutrition	3	0	0	3
		—	—	—	—
		8	0	6	10

**DENTAL HYGIENE (continued)**

**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

**SIXTH QUARTER**

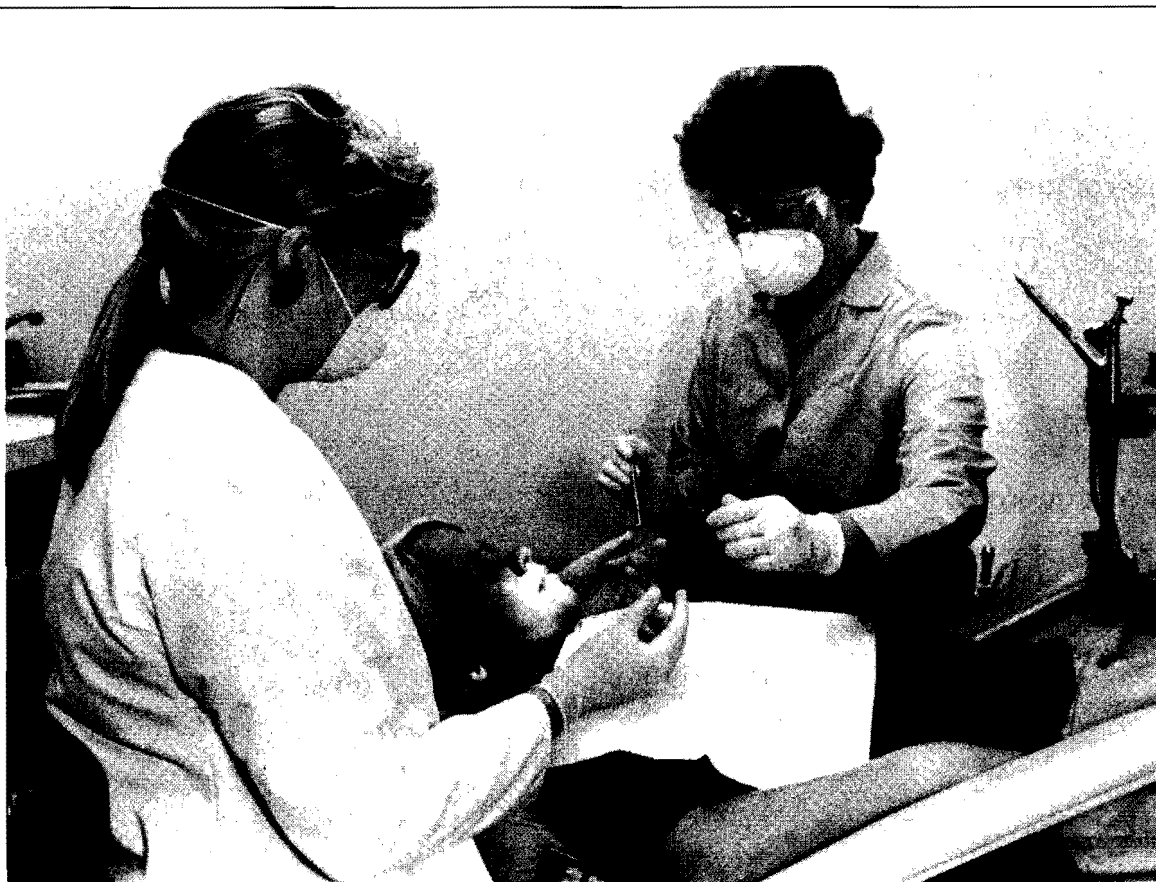
CAS-101	Intro to Microcomputers	0	0	3	1
DEN-224	Office Management	1	0	0	1
DEN-225X	Chairside Assisting	1	0	0	1
DEN-225Y	DEN-225 Lab	0	2	0	1
DEN-231X	Dental Hygiene VII	1	0	0	1
DEN-231Y	DEN-231 Lab	0	0	15	5
DEN-232	Ethics & Jurisprudence	2	0	0	2
DEN-233	Dental Specialties	2	0	0	2
	Humanities/Fine Arts Elec	3	0	0	3
		—	—	—	—
		10	2	18	17

**FIFTH QUARTER**

DEN-212X	Community Dental Health	3	0	0	3
DEN-212Y	DEN-212 Lab	0	0	3	1
DEN-221X	Dental Hygiene VI	1	0	0	1
DEN-221Y	DEN-221 Lab	0	0	15	5
PHM-223	Pharm & Anesthesiology	3	0	0	3
SOC-101	Intro to Sociology	3	0	0	3
		—	—	—	—
		10	0	18	16

**TOTAL REQUIRED CREDITS.... 123**

Students with a felony conviction will have limited licensure and employment opportunities.





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 the individual student. Special interest courses are also offered as elective exploratory courses. A placement test measuring achievement in reading, writing and math skills 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 “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.

**LEVEL I**

**FIRST QUARTER**

RED-94	Prescriptive Reading	3	2	0	4
RED-80	Applied Reading Skills	3	2	0	4
MAT-91	Basic Math I	3	2	0	4
	Level I Science/Elective	3	2	0	4
		12	8	0	16

**THIRD QUARTER**

RED-96	Vocabulary and Reading II	3	2	0	4
ENG-98	Composition	3	2	0	4
MAT-93	Basic Math II	3	2	0	4
	Level I Science/Elective	3	2	0	4
		12	8	0	16

**SECOND QUARTER**

RED-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/Elective	3	2	0	4
		12	8	0	16

**DEVELOPMENTAL STUDIES (continued)**

**LEVEL II**

**FIRST QUARTER**

RED-94	Prescriptive Reading	3	2	0	4
RED-80	Applied Reading Skills	3	2	0	4
MAT-95	Algebra I	3	2	0	4
	Level II Science/Elective	3	2	0	4
		12	8	0	16

**THIRD QUARTER**

RED-96	Vocabulary and Reading II	3	2	0	4
ENG-98	Composition	3	2	0	4
MAT-97	Algebra III, Trigonometry	3	2	0	4
	Level II Science/Elective	3	2	0	4
		12	8	0	16

**SECOND QUARTER**

RED-95	Vocabulary and Reading I	3	2	0	4
ENG-97	Grammar and Composition	3	2	0	4
MAT-96	Algebra II	3	2	0	4
	Level II Science/Elective	3	2	0	4
		12	8	0	16

**DIGITAL ELECTRONIC REPAIR**

**(V113)**

\*Imured Program: Enrollment restricted to current military and qualified DOD employees.

The Digital Electronic Repair curriculum provides the necessary electronics training for the repair of electronic circuits in computers. This program teaches the technical knowledge and mechanical skills necessary to locate a defective circuit board in a computer, and to locate and replace defective components on the circuit board.

The Digital Electronic Repair graduate should be qualified to locate and repair defective electronic circuits in computers.

Upon completion of the program, the student will be receive a **diploma**.

**FIRST QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
ELC-140	Intro to Electricity	4	6	0	7
ENG-101	Grammar for Composition	3	0	0	3
MAT-112	Algebra I	5	0	0	5
		12	6	3	16

**SECOND QUARTER**

CSC-104	Intro to Data Processing	3	0	0	3
ELN-141	Solid State Devices	4	6	0	7
ENG-102	Composition I	3	0	0	3
MAT-113	Algebra II	5	0	0	5
		15	6	0	18

**DIGITAL ELECTRONIC REPAIR (continued)**

**THIRD QUARTER**

ELN-142	Solid State Circuits	2	4	0	4
ELN-143	Digital Electronics	4	6	0	7
PHY-130X	Technical Physics I	3	0	0	3
PHY-130Y	PHY-130 Lab	0	2	0	1
		<hr/>	<hr/>	<hr/>	<hr/>
		9	12	0	15

**FOURTH QUARTER**

BUS-235	Small Business Management	2	0	3	3
ELN-144	Micro C Troubleshooting	3	6	0	6
ELN-145	Computer Sys Diagnosis	3	6	0	6
PSY-110	Occupational Psychology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		11	12	3	18

**TOTAL REQUIRED CREDITS.... 67**

**DRAFTING - MECHANICAL**

**(V-017)**

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 and 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.

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

DFT-1170	Basic Drafting	2	2	3	4
DFT-1171	Basic Industrial Drafting	2	0	3	3
DFT-121	Computer Aided Dft I	1	0	3	2
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1102	Algebra	3	2	0	4
MEC-1110	Machine Processes I	1	0	3	2
		<hr/>	<hr/>	<hr/>	<hr/>
		12	4	12	18

**SECOND QUARTER**

DFT-1172	Technical Sketching	1	0	3	2
DFT-1173	Industrial Drafting I	1	2	3	3
DFT-122	Computer Aided Dft II	1	0	3	2
ENG-1102	Vocational Communications	3	0	0	3
MAT-1104	Trigonometry	3	2	0	4
MEC-1111	Intro to Mfg Processes	3	0	0	3
PHY-1101X	Properties of Matter	3	0	0	3
PHY-1101Y	PHY-1101 Lab	0	2	0	1
		<hr/>	<hr/>	<hr/>	<hr/>
		15	6	9	21

**DRAFTING - MECHANICAL (continued)**

**THIRD QUARTER**

DFT-1125	Descriptive Geometry I	2	2	0	3
DFT-1174	Manufacturing & Drafting	1	0	3	2
DFT-1190X	Industrial Drafting II	1	2	0	2
DFT-1190Y	DFT-1190 Lab	0	0	3	1
DFT-1191	Tool Drafting I/Computer	1	0	6	3
MEC-1108	Industrial Materials	1	0	3	2
PHY-1103X	Work, Energy & Power	3	0	0	3
PHY-1103Y	PHY-1103 Lab	0	2	0	1
		—	—	—	—
		9	6	15	17

**FOURTH QUARTER**

DFT-1126	Descriptive Geometry II	2	2	0	3
DFT-1192	Design Draft & Tolerances	3	2	0	4
DFT-1193X	Industrial Drafting III	1	0	3	2
DFT-1193Y	DFT-1193 Lab	0	0	3	1
DFT-1194	Tool Drafting II/Computer	2	2	3	4
DFT-1195	Steel Fabrication Draft	3	0	3	4
		—	—	—	—
		11	6	12	18

**TOTAL REQUIRED CREDITS.... 74**

**Co-op Option:** Qualified students may elect to take up to two (2) credit hours of Cooperative Education in place of DFT 1190Y and/or DFT 1193Y upon approval of the Co-op Director and the Department Chairperson.

**EARLY CHILDHOOD ASSOCIATE**

**(T-073)**

The Early Childhood Associate curriculum is designed to prepare individuals to work with children in learning environments from infancy through middle childhood. The program of study includes the subjects of child growth and development, physical and nutritional needs of children, care and guidance of children and communication with children and their parents. Students learn to foster the cognitive/language, physical/motor, and social/emotional development of children. The program of study combines theories and principles with opportunities for supervised practice.

Graduates are prepared to plan and implement developmentally appropriate programs in early childhood settings. Employment opportunities are available in child development and child care programs, preschools, public and private schools, recreational centers, kindergartens, some Head Start programs, and programs for children with special needs.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

* EDU-125	Childcare Credential I	3	0	0	3
* EDU-126	Child Health, Safety, Nut.	3	2	0	4
EDU-127	Creative Teaching	3	2	0	4
ENG-101	Grammar for Composition	3	0	0	3
PSY-101	Intro to Psychology	3	0	0	3
		—	—	—	—
		15	4	0	17

**SECOND QUARTER**

* EDU-128	Childcare Credential II	3	0	0	3
EDU-130	Creative Curr Activities	3	2	0	4
ENG-102	Composition I	3	0	0	3
PSY-202	Changes in Human Develop.	3	0	0	3
REC-112	Arts & Crafts	2	0	3	3
SAF-101	First Aid & Safety	3	2	0	4
		—	—	—	—
		17	4	3	20

**EARLY CHILDHOOD ASSOCIATE (continued)**

**THIRD QUARTER**

EDU-131	Positive Discipline	3	0	0	3
EDU-132	Language Arts Techniques	3	0	0	3
ENG-103	Composition II	3	0	0	3
FSO-145	Food Plan. in Childcare	2	0	3	3
REC-136	Low Organized Games	1	0	3	2
	Elective or Co-op	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		15	0	6	17

**SUMMER QUARTER**

ENG-160	Oral Communications	3	0	0	3
SOC-101	Intro to Sociology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		6	0	0	6

**FOURTH QUARTER**

EDU-225	Educating Except. Child	3	0	0	3
EDU-226	Pgm Planning in Preschool	3	0	0	3
EDU-227	Childrens Literature	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
	Related Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		17	0	0	17

**FIFTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
* EDU-229	Pgm Plng for Infants/Todd	3	2	0	4
SOC-102	Family Relationships	3	0	0	3
	*Major Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		13	4	0	15

**SIXTH QUARTER**

BUS-233	Human Resource Management	3	0	0	3
CAS-101	Intro to Microcomputers	0	0	3	1
EDU-231	Child Care Applications	1	0	6	3
	OR				
EDU-135	Legal Issues in Education	3	0	0	3
EDU-232	Parent Education	3	0	0	3
REC-121	Pgm. Plan & Supervision	5	0	0	5
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		15/17	0	3/9	18

**TOTAL REQUIRED CREDITS....110**

**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 they acquire the approval of the Co-op Director and Department Chairperson.

\*T073C **Evening Early Childhood Certificate** requires 18 credit hours. Courses are not necessarily listed in proper quarter sequence, therefore, the student should see his/her advisor before registering.

**ELECTRICAL INSTALLATION**

**(V-018)**

The Electrical Installation 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 and installation of electrical systems in residential, commercial or industrial settings.

Upon completion of the program, the student will receive a **diploma**.

**ELECTRICAL INSTALLATION (continued)**

**FIRST QUARTER**

BPR-1113	BPrint Read - Electrical	1	2	0	2
ELC-1112	ACDC Current	5	0	15	10
<b>OR</b>					
ELC-1112A	ACDC Current	2	0	6	4
<b>AND</b>					
ELC-1112B	ACDC Current	2	0	6	4
<b>AND</b>					
ELC-1112C	ACDC Current	1	0	3	2
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1101	General Math	3	2	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		12	4	15	19

**THIRD QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
ELC-1124X	Residential Wiring	5	0	6	7
<b>AND</b>					
ELC-1124Y	ELC-1124 Lab	0	0	3	1
<b>OR</b>					
ELC-1124A	Residential Wiring	3	0	3	4
<b>AND</b>					
ELC-1124B	Residential Wiring	2	0	6	4
ELN-1118	Industrial Electronics I	3	0	6	5
PSY-1101	Psych of Formal/ Informal Org.	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	18	17

**SECOND QUARTER**

ELC-1113	ACDC Machines & Controls	5	0	15	10
<b>OR</b>					
ELC-1113A	ACDC Machines & Controls	1	0	3	2
<b>AND</b>					
ELC-1113B	ACDC Machines & Controls	2	0	6	4
<b>AND</b>					
ELC-1113C	ACDC Machines & Controls	2	0	6	4
ELC-1123	National Electrical Code	4	0	0	4
PHY-1102X	Electricity	3	0	0	3
PHY-1102Y	PHY-1102 Lab	0	2	0	1
		<hr/>	<hr/>	<hr/>	<hr/>
		12	2	15	18

**FOURTH QUARTER**

BUS-1103	Small Business Operations	3	0	0	3
ELC-1125X	Commercial & Indus Wiring	5	4	3	8
<b>AND</b>					
ELC-1125Y	ELC-1125 Lab	0	0	3	1
<b>OR</b>					
ELC-1125A	Commercial & Indus Wiring	3	2	3	5
<b>AND</b>					
ELC-1125B	Commercial & Indus Wiring	2	2	3	4
ELN-1119	Industrial Electronics II	3	0	6	5
		<hr/>	<hr/>	<hr/>	<hr/>
		11	4	12	17



**TOTAL REQUIRED CREDITS.... 71**

**Co-op Option:** Qualified students may elect to take up to one (1) credit hour of Cooperative Education in place of ELC 1124Y or ELC 1125Y provided they obtain the approval of the Co-op Director and Department Chairperson.

# ELECTRONICS ENGINEERING TECHNOLOGY

(T-045)

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

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

CHM-101X	Chemistry I	3	0	0	3
CHM-101Y	CHM-101 Lab	0	2	0	1
ELC-101X	Fundamentals of Elect I	4	0	0	4
ELC-101Y	ELC-101 Lab	0	6	0	3
<b>OR</b>					
* ELC-101A	Fundamentals of Elect I	2	2	0	3
<b>AND</b>					
* ELC-101B	Fundamentals of Elect I	2	4	0	4
ENG-101	Grammar for Composition	3	0	0	3
* MAT-114	Algebra & Trigonometry I	5	0	0	5
		—	—	—	—
		15	8	0	19

PHY-102X	Work, Energy & Power	3	0	0	3
PHY-102Y	PHY-102 Lab	0	2	0	1
		—	—	—	—
		17	6	3	21

## SUMMER QUARTER

ELN-106	Passive Networks I	2	2	0	3
ELN-206	Active Network Analy I	2	0	3	3
		—	—	—	—
		4	2	3	6

## SECOND QUARTER

DFT-101	Technical Drafting I	0	6	0	3
* ELC-103X	Fundamentals of Elect II	2	0	0	2
* ELC-103Y	ELC-103 Lab	0	0	3	1
* ELN-103X	Active Devices I	2	0	0	2
* ELN-103Y	ELN-103 Lab	0	2	0	1
ENG-102	Composition I	3	0	0	3
* MAT-115	Algebra & Trigonometry II	5	0	0	5
PHY-101X	Properties of Matter	3	0	0	3
PHY-101Y	PHY-101 Lab	0	2	0	1
		—	—	—	—
		15	10	3	21

## FOURTH QUARTER

ELN-207	Active Network Analy II	2	0	3	3
ELN-209	Passive Networks II	3	0	0	3
ELN-214	Computer Principles	2	4	0	4
ENG-160	Oral Communications	3	0	0	3
MAT-230	Basic Calculus II	3	0	0	3
PHY-104X	Light & Sound	3	0	0	3
PHY-104Y	PHY-104 Lab	0	2	0	1
		—	—	—	—
		16	6	3	20

## THIRD QUARTER

CSC-119	Circuit Analysis w/Pascal	3	2	0	4
ELN-104X	Active Devices II	4	0	0	4
ELN-104Y	ELN-104 Lab	0	0	3	1
ELN-105X	Basic Logic Circuits	2	0	0	2
ELN-105Y	ELN-105 Lab	0	2	0	1
MAT-116	Basic Calculus I	5	0	0	5

## FIFTH QUARTER

ELN-216	Microcomputers	6	0	6	8
ELN-220	Electronic Systems	4	4	0	6
	Elective	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		16	4	6	20

## SIXTH QUARTER

TOTAL REQUIRED CREDITS.... 126

ELN-235	Indus Mechanisms & Instr	5	6	0	8
ELN-240	Indus Appl & Microcomp	4	0	3	5
ENG-103	Composition II	3	0	0	3
PSY-110	Occupational Psychology	3	0	0	3
		15	6	3	19

**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 they acquire approval from the Co-op Director and Department Chairperson.

\*T045C **Evening Basic Electronics Certificate** requires 23 credit hours. Courses are not necessarily listed in proper quarter sequence, therefore, the student should see his/her advisor before registering.

## EMERGENCY MEDICAL SCIENCE

(T-139)

The Emergency Medical Science curriculum is designed to prepare graduates to provide emergency care under medical command authority to acutely ill or injured patients. Students will acquire basic and advanced life support knowledge and skills through a combination of classroom instruction, practical laboratory sessions, and clinical experience in hospitals and with emergency medical service providers.

As students progress through the curriculum, they become eligible to take certifying examinations for the emergency medical technician (EMT), EMT-defibrillator (EMT-D), EMT-intermediate (EMT-I), EMT-advanced intermediate (EMT-AI), and EMT-paramedic (EMT-P) given by the North Carolina Office of Emergency Medical Services and the EMT, EMT-I, and EMT-P examination of the National Registry of Emergency Medical Technicians.

Graduates may be employed by ambulance, rescue or aeromedical services, in specialty areas of hospitals, and by industry, educational institutions, and governmental agencies.

Individuals seeking a career in emergency medical science benefit from a background in biology, chemistry, and mathematics. Strong written and verbal communication skills are additional assets which benefit students.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
EMS-120	Intro to Emer Med Science	4	2	0	5
ENG-102	Composition I	3	0	0	3
MED-115	Medical Terminology & Voc	3	0	0	3
		15	2	3	17

## THIRD QUARTER

EMS-130	Emergency Skills II	7	6	0	10
EMS-131	Clinical I	0	0	6	2
EMS-132	Med Comm: Extrication/Res	2	2	0	3
PHM-133	Emergency Pharmacology I	5	0	0	5
		14	8	6	20

## SECOND QUARTER

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
EMS-121	Emergency Skills I	3	2	6	6
ENG-103	Composition II	3	0	0	3
PSY-101	Intro to Psychology	3	0	0	3
		14	2	9	18

## FOURTH QUARTER

EMS-140	Emergency Skills III	4	2	0	5
EMS-141	Clinical II	0	0	12	4
PHM-143	Emergency Pharmacology II	5	0	0	5
PSY-202	Changes in Human Develop.	3	0	0	3
		12	2	12	17



**EMERGENCY MEDICAL SCIENCE (continued)**

**FIFTH QUARTER**

EMS-220	Cardiology	5	2	0	6
EMS-221	Clinical III	0	0	12	4
ENG-160	Oral Communications	3	0	0	3
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		11	2	12	16

**EIGHTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
BUS-202	Supervision	3	0	0	3
CAS-101	Intro to Microcomputers	0	0	3	1
COE-216	EMS Practicum	0	0	10	1
EMS-237	Seminar	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		10	2	13	13

**SIXTH QUARTER**

BIO-162X	Microbiology I	5	0	0	5
BIO-162Y	BIO-162 Lab	0	0	3	1
EMS-230	Emergency Skills IV	3	0	0	3
EMS-231	Clinical IV	0	0	12	4
PSY-204	Behavior Disorders	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	15	16

**TOTAL REQUIRED CREDITS.... 129**

Students with a felony conviction will have limited licensure and employment opportunities.

**SEVENTH QUARTER**

EMS-233	Emergency Skills V	2	2	0	3
EMS-234	Clinical V	0	0	9	3
EMS-235	Methods of Instruction	2	2	0	3
SOC-101	Intro to Sociology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		7	4	9	12



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.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

FSO-101	Foodservice Math Princi.	2	0	0	2
FSO-102X	Food Preparation I	3	0	0	3
FSO-102Y	FSO-102 Lab	0	0	6	2
FSO-105	Sanitation & Equipment	2	0	3	3
FSO-107X	Baking I	2	0	0	2
FSO-107Y	FSO-107 Lab	0	0	6	2
MAT-111	Basic Mathematics	5	0	0	5
		14	0	15	19

## THIRD QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1
ENG-102	Composition I	3	0	0	3
FSO-122	Quantity Food Prod I	2	0	6	4
FSO-124	Garnishing	1	0	3	2
FSO-127	Baking III	2	0	6	4
FSO-128	Resource Mgmt in FSO	3	0	0	3
PSY-110	Occupational Psychology	3	0	0	3
		14	0	18	20

## SECOND QUARTER

ENG-101	Grammar for Composition	3	0	0	3
FSO-112X	Food Preparation II	3	0	0	3
FSO-112Y	FSO-112 Lab	0	0	6	2
FSO-113	Dining Room Service	2	2	0	3
FSO-115	Bar and Beverage Mgmt.	2	2	0	3
FSO-117X	Baking II	2	0	0	2
FSO-117Y	FSO-117 Lab	0	0	9	3
		12	4	15	19

## SUMMER QUARTER

COE-110	Food Serv Internship I	0	0	20	2
	<b>AND</b>				
FSO-130	Seminar I	2	0	0	2
	<b>OR</b>				
* FSO-139	International Foods	1	0	6	3
NUT-106	Essentials of Nutrition	4	0	0	4
	Major Elective	2	0	0	2
		8	0	20	9/10

**FOODSERVICE MANAGEMENT (continued)**

**FOURTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
ENG-103	Composition II	3	0	0	3
FSO-202	Quantity Food Prod II	2	0	6	4
FSO-204	Purchasing	3	0	0	3
FSO-205	Menu Planning	3	0	0	3
		—	—	—	—
		15	2	6	18

**SIXTH QUARTER**

COE-210	Food Serv Internship II	0	0	20	2
	<b>AND</b>				
FSO-211	Seminar II	2	0	0	2
	<b>OR</b>				
*FSO-140	Professional Catering	3	0	0	3
ENG-160	Oral Communications	3	0	0	3
FSO-227	Merchandising	1	0	3	2
	Major Elective	3	0	0	3
		—	—	—	—
		9	0	23	11/12

**FIFTH QUARTER**

BUS-123	Business Finance I	2	2	0	3
BUS-235	Small Business Management	2	0	3	3
FSO-212	Buffets and Banquets	2	0	6	4
FSO-223	Food Serv Cost Control	3	0	0	3
SOC-101	Intro to Sociology	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		15	2	9	19

**TOTAL REQUIRED CREDITS....115/117**

**Co-op Option:** Qualified students may elect to take up to two (2) credit hours of Cooperative Education in place of two (2) hours of electives provided they acquire the approval of the Co-op Director and Department Chairperson.

**\*Department Chair Approval Required**

**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.

Upon completion of the program, the student will receive a **diploma**.

**FOODSERVICE SPECIALIST (continued)**

**FIRST QUARTER**

FSO-101	Foodservice Math Princi.	2	0	0	2
FSO-102X	Food Preparation I	3	0	0	3
FSO-102Y	FSO-102 Lab	0	0	6	2
FSO-105	Sanitation & Equipment	2	0	3	3
FSO-107X	Baking I	2	0	0	2
FSO-107Y	FSO-107 Lab	0	0	6	2
MAT-111	Basic Mathematics	5	0	0	5
		—	—	—	—
		14	0	15	19

**THIRD QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
ENG-102	Composition I	3	0	0	3
FSO-122	Quantity Food Prod I	2	0	6	4
FSO-124	Garnishing	1	0	3	2
FSO-127	Baking III	2	0	6	4
FSO-128	Resource Mgmt in FSO	3	0	0	3
PSY-110	Occupational Psychology	3	0	0	3
		—	—	—	—
		14	0	18	20

**SECOND QUARTER**

ENG-101	Grammar for Composition	3	0	0	3
FSO-112X	Food Preparation II	3	0	0	3
FSO-112Y	FSO-112 Lab	0	0	6	2
FSO-113	Dining Room Service	2	2	0	3
FSO-115	Bar and Beverage Mgmt.	2	2	0	3
FSO-117X	Baking II	2	0	0	2
FSO-117Y	FSO-117 Lab	0	0	9	3
		—	—	—	—
		12	4	15	19

**SUMMER QUARTER**

COE-110	Food Serv Internship I	0	0	20	2
	<b>OR</b>				
*FSO-139	International Foods	1	0	6	3
FSO-130	Seminar I	2	0	0	2
NUT-106	Essentials of Nutrition	4	0	0	4
	Major Elective	3	0	0	3
		—	—	—	—
		9	0	20	11/12

**TOTAL REQUIRED CREDITS.... 69/70**

**\*Department Chair Approval Required**

**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.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

ENG-101	Grammar for Composition	3	0	0	3
*FSE-101	Intro to Funeral Service	3	0	0	3
FSE-206	Embalming Chemistry	3	2	0	4
MAT-111	Basic Mathematics	5	0	0	5
SOC-101	Intro to Sociology	3	0	0	3
		—	—	—	—
		17	2	0	18

**SECOND QUARTER**

*BUS-115	Business Law I	4	0	0	4
ENG-102	Composition I	3	0	0	3
*FSE-121	Funeral Service Practices	3	0	0	3
FSE-122	Anatomy for Funeral Serv	4	0	0	4
OSC-101	Keyboarding Skills I	0	0	3	1
*PSY-101	Intro to Psychology	3	0	0	3
		—	—	—	—
		17	0	3	18

**FUNERAL SERVICE EDUCATION (continued)**

**THIRD QUARTER**

BIO-105X	Fundamentals of Microbio	3	0	0	3
BIO-105Y	BIO-105 Lab	0	2	0	1
BUS-101	Introduction to Business	3	0	0	3
*BUS-116	Business Law II	4	0	0	4
*ENG-160	Oral Communications	3	0	0	3
*FSE-115	Funeral Law	3	0	0	3
FSE-209	Intro to Embalming Pract	3	0	0	3
		—	—	—	—
		19	2	0	20

**FIFTH QUARTER**

*ACC-110	Financial Accounting	4	2	0	5
CAS-226	Computers/Funeral Serv	0	0	3	1
COE-213	FSE Embalming Practicum II	0	0	10	1
	<b>OR</b>				
FSE-223	Embalming Practice II	0	0	3	1
FSE-211	Embalming Theory II	3	0	0	3
FSE-215	Restorative Arts II	2	4	0	4
*FSE-224	Funeral Home Operations	4	0	0	4
		—	—	—	—
		13	6	13	18

**SUMMER QUARTER**

*CAS-101	Intro to Microcomputers	0	0	3	1
INS-215	Life Insurance	5	0	0	5
SOC-253	Death & Dying	5	0	0	5
		—	—	—	—
		10	0	3	11

**SIXTH QUARTER**

*BUS-235	Small Business Management	2	0	3	3
*FSE-247	Funeral Counseling	3	0	0	3
FSE-249	Seminar	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		11	0	3	12

**FOURTH QUARTER**

COE-212	FSE Embalming Practicum I	0	0	10	1
	<b>OR</b>				
FSE-222	Embalming Practice I	0	0	3	1
FSE-210	Embalming Theory I	3	0	0	3
FSE-214	Restorative Arts I	2	4	0	4
*FSE-245	Pathology	3	0	0	3
*PSY-254	Grief Psychology	5	0	0	5
		—	—	—	—
		13	4	10	16

**TOTAL REQUIRED CREDITS.... 113**

**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 approval is obtained from the Department Chairperson and Co-op Director.

\*T057C **N.C. Funeral Service Certificate** program requires 50 credit hours. Courses are not necessarily listed in proper sequence, therefore, the student should see his/her advisor before registering.

**GENERAL EDUCATION**

**(G-020)**

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 Degree in General Education (A.D.G.E.). It is designed principally for students who desire two years of general education beyond the high school level.

Upon completion of the program, the student will receive an **associate degree**.

**General Education (continued)**

**FIRST QUARTER**

English Elective	5	0	0	5
Elective	5	0	0	5
Humanities/Fine Arts Elec	5	0	0	5
	<hr/>	<hr/>	<hr/>	<hr/>
	15	0	0	15

**FOURTH QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
	Elective	3	0	0	3
	Elective	3	0	0	3
	Elective	2	0	0	2
	Natural/Phy Sci Elective	5	2	0	6
		<hr/>	<hr/>	<hr/>	<hr/>
		12	2	6	15

**SECOND QUARTER**

English Elective	5	0	0	5
Elective	5	0	0	5
Humanities/Fine Arts Elec	5	0	0	5
	<hr/>	<hr/>	<hr/>	<hr/>
	15	0	0	15

**FIFTH QUARTER**

Elective	3	0	0	3
Elective	3	0	0	3
Elective	5	0	0	5
Elective	5	0	0	5
	<hr/>	<hr/>	<hr/>	<hr/>
	16	0	0	16

**THIRD QUARTER**

Elective	5	0	0	5
Mathematics Elective	5	0	0	5
Social/Behav Science Elec	5	0	0	5
	<hr/>	<hr/>	<hr/>	<hr/>
	15	0	0	15

**SIXTH QUARTER**

Elective	5	0	0	5
Elective	5	0	0	5
Elective	5	0	0	5
	<hr/>	<hr/>	<hr/>	<hr/>
	15	0	0	15

**SUMMER QUARTER**

Elective	5	0	0	5
	<hr/>	<hr/>	<hr/>	<hr/>
	5	0	0	5

**TOTAL REQUIRED CREDITS.... 96**

# GENERAL OCCUPATIONAL TECHNOLOGY

(T-114)

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 communications, 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.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

ENG-101	Grammar for Composition	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Related Math Elective	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		17	0	0	17

## FOURTH QUARTER

Major Elective	3	0	0	3
Related Elective	3	0	0	3
	<hr/>	<hr/>	<hr/>	<hr/>
	6	0	0	6

## SECOND QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1
ENG-102	Composition I	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Related Math Elective	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		17	0	3	18

## FIFTH QUARTER

ENG-160	Oral Communications	3	0	0	3
PSY-101	Intro to Psychology	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Related Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		18	0	0	18

## THIRD QUARTER

ENG-103	Composition II	3	0	0	3
SOC-101	Intro to Sociology	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Related Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		18	0	0	18

## SIXTH QUARTER

Major Elective	3	0	0	3
Major Elective	3	0	0	3
Major Elective	3	0	0	3
Major Elective	3	0	0	3
Related Elective	6	0	0	6
	<hr/>	<hr/>	<hr/>	<hr/>
	18	0	0	18

**GENERAL OCCUPATIONAL TECHNOLOGY (continued)**

**SEVENTH QUARTER**

**TOTAL REQUIRED CREDITS.... 112**

BUS-234	Management	2	0	3	3
	Elective	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Major Elective	3	0	0	3
	Related Computer Elective	0	0	3	1
	Related Computer Elective	0	0	3	1
		—	—	—	—
		14	0	9	17

**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 they acquire the approval of the Co-op Director and the Department Chairperson.

**GENERAL OFFICE**

**(T-033)**

The purposes of the General Office curriculum are to prepare the individual to enter clerical office occupations, 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 provide an opportunity for individuals wanting to fulfill professional or general interest needs.

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

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

ENG-101	Grammar for Composition	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
OSC-105	Keyboard Skillbuilding	1	0	3	2
	Social/Behav Science Elec	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		15	0	3	16

**THIRD QUARTER**

BUS-141	Business English	3	0	0	3
ENG-102	Composition I	3	0	0	3
OSC-104	Keyboarding IV	2	0	3	3
OSC-134	Secretarial Procedures	3	2	0	4
OSC-136	Machine Transcription I	1	0	6	3
		—	—	—	—
		12	2	9	16

**SECOND QUARTER**

BUS-110	Bus Math With Calculators	2	0	3	3
OSC-103	Keyboarding III	2	0	3	3
OSC-110	Info Processing Concepts	2	0	3	3
OSC-132	Terminology & Vocab I	5	0	0	5
	Elective	3	0	0	3
		—	—	—	—
		14	0	9	17

**SUMMER QUARTER**

CAS-130	Micro Data Management	0	0	3	1
OSC-112	Records Management	5	0	0	5
OSC-236	Machine Transcription II	2	0	3	3
		—	—	—	—
		7	0	6	9



**GENERAL OFFICE (continued)**

**FOURTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
OSC-201	Info Processing Applic I	4	0	3	5
OSC-210	Bus Comm for Word Process	5	0	0	5
OSC-232	Terminology & Vocab II	5	0	0	5
		—	—	—	—
		18	2	3	20

**SIXTH QUARTER**

CAS-134	Integrated Software Appli	1	0	3	2
CAS-203	Advanced Desktop Publish	1	0	3	2
COE-220	Secretarial Internship	0	0	10	1
	<b>OR</b>				
OSC-101	Keyboarding I	0	0	3	1
OSC-205	Info Processing Appl III	4	0	3	5
OSC-234	Office Practice Seminar	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		12	0	19/12	16

**FIFTH QUARTER**

CAS-126	Intro to Spreadsheets	0	0	3	1
CAS-133	Microcomputer DOS	1	0	3	2
CAS-136	Desktop Publishing	1	0	3	2
ENG-160	Oral Communications	3	0	0	3
OSC-106	Adv Keyboarding Skills	1	0	3	2
OSC-203	Info Processing Applic II	2	0	3	3
		—	—	—	—
		8	0	15	13

**TOTAL REQUIRED CREDITS.... 107**

**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 they acquire the approval from the Co-op Director and the Department Chairperson.

**GENERAL TECHNOLOGY CURRICULUM CORE**

**(T-201)**

General Technology Curriculum Core is designed as a career mobility program for technical students to acquire the general education and related courses in subject areas such as humanities; communications; social sciences; general computer studies; general graphics (drafting) and theoretical and applied sciences such as biology, chemistry, physics, and mathematics that are foundation courses to specific curriculums in the technical field. After completion of this certificate curriculum the student has job skills for occupations requiring communications skills and/or science and mathematics. The student may take this program as the first level in a specific technical curriculum as an intended objective component of the technical curriculum. Students may also take this program for transfer to a technical curriculum at another community college system institution either prior to or concurrently with enrollment at the institution at which they intend to pursue or are pursuing a technical curriculum degree.

Upon completion of the program, the student will receive a **certificate**.

**RELATED COURSES**

BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1

An additional 9 credit hours, according to occupational goals, are to be taken from related curriculum courses offered by the College.

**GENERAL EDUCATION**

ENG-102	Composition I	3	0	0	3
	<b>OR</b>				
ENG-151	English Composition	5	0	0	5

An additional 15 credit hours, according to occupational goals, are to be taken from English, social science, and humanities curriculum courses offered by the College.

**ELECTIVES** 6

**TOTAL REQUIRED CREDITS ... 45**

## GENERAL VOCATIONAL CURRICULUM CORE

(V-201)

General Vocational Curriculum Core is designed as a career mobility program for vocational students to acquire the general education and related courses in subject areas such as humanities; communications; social sciences; general computer studies; general graphics (drafting); and theoretical and applied sciences such as biology, chemistry, physics, mathematics, that are foundation courses to specific curriculums in the vocational field. After completion of this certificate curriculum the student has job skills for occupations requiring communications skills and/or science and mathematics. The student may take this curriculum prior to enrolling in a specific vocational curriculum as an intended objective component of the vocational curriculum. Students may also take this program for transfer to a vocational curriculum at another community college system institution either prior to or concurrently with enrollment at the institution at which they intend to pursue or are pursuing a vocational curriculum diploma.

### RELATED COURSES

BIO-160X	Human Anat & Physiology I	5	0	0	5
<b>AND</b>					
BIO-160Y	BIO-160 Lab	0	0	3	1
<b>OR</b>					
BIO-1005	Anatomy & Physiology	2	0	0	2
<b>AND</b>					
BIO-1013	Microbiology	2	0	0	2
<b>OR</b>					
BIO-1096X	Anatomy & Physiology II	3	0	0	3
<b>AND</b>					
BIO-1096Y	BIO-1096 Lab	0	2	0	1

### GENERAL EDUCATION

ENG-101	Grammar for Composition	3	0	0	3
<b>OR</b>					
ENG-1101	Comm Skills in Grammar	3	0	0	3
<b>OR</b>					
ENG-1102	Vocational Communication	3	0	0	3

An additional 3 credit hours, according to occupational goals, are to be taken from English, social science, and/or humanities curriculum courses offered by the College.

An additional 14 credit hours, according to occupational goals are to be taken from related curriculum courses offered by the College.

**TOTAL REQUIRED CREDITS ... 24**

## 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 sale 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.

Upon completion of the program, the student will receive an **associate degree**.

### FIRST QUARTER

ENG-101	Grammar for Composition	3	0	0	3
HOR-120	Plant Materials I	4	2	0	5
HOR-125	Plant Science	5	2	0	6
MAT-111	Basic Mathematics	5	0	0	5
		—	—	—	—
		17	4	0	19

### SECOND QUARTER

AGR-110	Soil Science & Fertilizer	4	2	0	5
BUS-115	Business Law I	4	0	0	4
ECO-151	Basic Economics	5	0	0	5
ENG-102	Composition I	3	0	0	3
HOR-137	Greenhouse Management	3	2	0	4
		—	—	—	—
		19	4	0	21

## HORTICULTURE BUSINESS TECHNOLOGY (continued)

### THIRD QUARTER

ACC-110	Financial Accounting	4	2	0	5
CAS-101	Intro to Microcomputers	0	0	3	1
ENG-103	Composition II	3	0	0	3
HOR-121	Plant Materials II	4	2	0	5
HOR-139	Bedding Plant Production	2	2	0	3
HOR-141	Intro to Landscape	2	2	0	3
		15	8	3	20

### FIFTH QUARTER

BUS-235	Small Business Management	2	0	3	3
HOR-201	Landscape Horticulture II	3	4	0	5
HOR-215	Irrigation Design	1	4	0	3
PME-201	Sm Equip Oper Rep & Maint	1	4	0	3
	Elective	3	0	0	3
		10	12	3	17

### SUMMER QUARTER

AGR-201	Agricultural Chemicals	3	2	0	4
MKT-225	Techniques in Selling	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		9	2	0	10

### SIXTH QUARTER

HOR-220	Computers in Horticulture	1	0	3	2
HOR-235	Landscape Management	2	4	0	4
HOR-237	Turf Management	3	2	0	4
MKT-139	Marketing	5	0	0	5
	Major Elective	3	0	0	3
		14	6	3	18

### FOURTH QUARTER

AGR-228	Plant Disease & Parasites	3	2	0	4
ENG-160	Oral Communications	3	0	0	3
HOR-200	Landscape Horticulture I	3	4	0	5
HOR-233	Plant Propagation	3	2	0	4
	Social/Behav Science Elec	3	0	0	3
		15	8	0	19

**TOTAL REQUIRED CREDITS.... 124**

**Co-op Option:** Qualified students may elect to take up to six (6) hours of Cooperative Education in place of three (3) hours of Horticulture major electives and/or three (3) hours of electives provided they acquire approval from the Co-op Director and Department Chairperson.

## INDUSTRIAL MANAGEMENT TECHNOLOGY

**(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.

Upon completion of the program, the student will receive an **associate degree**.

*Operations Mgmt Tech*

**INDUSTRIAL MANAGEMENT TECHNOLOGY (continued)**

**FIRST QUARTER**

BUS-101	Introduction to Business	3	0	0	3
CAS-101	Intro to Microcomputers	0	0	3	1
ENG-101	Grammar for Composition	3	0	0	3
ISC-120	Operations Management	3	0	0	3
MAT-112	Algebra I	5	0	0	5
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		17	0	3	18

**FOURTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
ENG-160	Oral Communications	3	0	0	3
ISC-202	Statistical Process Cntrl	3	0	0	3
ISC-203	Safety and Health	2	2	0	3
ISC-236	Management Science	2	2	0	3
		—	—	—	—
		13	8	0	17

**SECOND QUARTER**

ECO-151	Basic Economics	5	0	0	5
ENG-102	Composition I	3	0	0	3
ISC-140	Processes and Materials	3	0	0	3
MAT-113	Algebra II	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
	<b>OR</b>				
OSC-102	Keyboarding Skills II	0	0	3	1
		—	—	—	—
		16	0	3	17

**FIFTH QUARTER**

ACC-115	Accounting for Managers	4	2	0	5
BUS-245	Total Quality Management	2	2	0	3
ISC-210	Production Management	2	2	0	3
ISC-221	Operations	3	2	0	4
ISC-241	Training and Development	3	0	0	3
		—	—	—	—
		14	8	0	18

**THIRD QUARTER**

BUS-112	Business Statistics	5	0	0	5
BUS-233	Human Resource Management	3	0	0	3
CAS-126	Intro to Spreadsheets	0	0	3	1
ENG-103	Composition II	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		17	0	3	18

**SIXTH QUARTER**

ISC-205	Purchasing	3	0	0	3
ISC-225	Computer Aided Mfg	3	4	0	5
ISC-228	Computer Aided Design	2	0	3	3
ISC-234	Operations Seminar	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		13	6	3	17

**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) hours of electives provided they acquire the approval of the Co-op Director and Department Chairperson.

**SUMMER QUARTER**

ISC-104	Operations Analysis	2	2	0	3
ISC-226	Facilities Management	3	0	0	3
		—	—	—	—
		5	2	0	6

# 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.

Upon completion of the program, the student will receive a **diploma**.

## FIRST QUARTER

BPR-1113	BPrint Read - Electrical	1	2	0	2
ELC-1112	ACDC Current	5	0	15	10
<b>OR</b>					
ELC-1112A	ACDC Current	2	0	6	4
<b>AND</b>					
ELC-1112B	ACDC Current	2	0	6	4
<b>AND</b>					
ELC-1112C	ACDC Current	1	0	3	2
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1101	General Math	3	2	0	4
		—	—	—	—
		12	4	15	19

## SECOND QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1
ELC-1113	ACDC Machines & Controls	5	0	15	10
<b>OR</b>					
ELC-1113A	ACDC Machines & Controls	1	0	3	2
<b>AND</b>					
ELC-1113B	ACDC Machines & Controls	2	0	6	4
<b>AND</b>					
ELC-1113C	ACDC Machines & Controls	2	0	6	4
ELC-1123	National Electrical Code	4	0	0	4
PHY-1102X	Electricity	3	0	0	3
PHY-1102Y	PHY-1102 Lab	0	2	0	1
		—	—	—	—
		12	2	18	19

## THIRD QUARTER

AHR-1121	Basic Heating & Air Cond.	3	0	3	4
ELN-1101	Basic Electronics	2	0	3	3
HYD-1135	Hydraulics & Pneumatics	2	0	6	4
MEC-1136	Mech Ind. Sys	2	0	6	4
PSY-1101	Psych of Formal/ Informal Org.	3	0	0	3
		—	—	—	—
		12	0	18	18

## FOURTH QUARTER

ELC-1131	Preventive Maintenance	2	0	3	3
ELC-1132	Ind. Instrumentation	2	0	6	4
ELM-1140	Electromech. Devices	2	0	6	4
WLD-1180	Basic Welding	1	0	6	3
		—	—	—	—
		7	0	21	14

**TOTAL REQUIRED CREDITS.... 70**

# INSURANCE (ADVANCED TECHNICAL SPECIALTY)

(T-228)

This curriculum is designed to provide preparatory courses for meeting the education requirements to sit for examinations for insurance industry accepted national designations such as Chartered Life Underwriter (CLU), Chartered Financial Consultant (ChFC), Chartered Property and Casualty Underwriter (CPCU), Life Underwriter Training Council Fellow (LUTCF), Fellow Life Management Institute (FLMI), Certified Employee Benefit Specialist (CEBS), and Agency Management Training Course (AMTC).

Upon completion of this curriculum, an individual should have completed the courses necessary to sit for all parts of national examinations for which courses have been taken. Employment opportunities may be found in insurance agencies, insurance company regional and home offices, real estate firms, human resource division of organizations, banks, savings and loans, credit unions, and consulting firms. Employment opportunities may also be found in the areas of financial planning and risk management.

Upon completion of the program, the student will receive an **certificate**.

## FIRST QUARTER

Major Elective	4	0	0	4
Major Elective	4	0	0	4
Major Elective	4	0	0	4
	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
	12	0	0	12

## THIRD QUARTER

Major Elective	4	0	0	4
Major Elective	4	0	0	4
	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
	8	0	0	8

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TOTAL REQUIRED CREDITS...32

## SECOND QUARTER

Major Elective	4	0	0	4
Major Elective	4	0	0	4
Major Elective	4	0	0	4
	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
	12	0	0	12

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# INSURANCE (TECHNICAL SPECIALTY)

(T-228)

The purpose of this curriculum is to provide the courses to meet the education requirements for state licensing examinations for agents in selected areas such Life, Accident and Health; Accident and Health; Medicare Supplement/Long Term Care; Fire and Casualty; National Association of Security Dealers; and Adjusters.

An additional purpose of the curriculum is to provide the first of a series of preparatory courses for sitting for examinations that are nationally recognized designations. The nationally recognized designations may include those such as Chartered Life Underwriter (CLU), Chartered Financial Consultant (ChFC), Chartered Property and Casualty Underwriter (CPCU), Life Underwriter Training Council Fellow (LUTC), Fellow Life Management Institute (FLMI), Certified Employee Benefit Specialist (CEBS), and Agency Management Training Course (AMTC).

Employment opportunities may be found in insurance companies, insurance agencies, banks, savings and loans, credit unions, stock brokerage firms, auto dealerships, real estate firms, independent adjusting companies, and human resource division business establishments.

Upon completion of the program, the student will receive a **certificate**.

**INSURANCE (Technical Specialty) (continued)**

**FIRST QUARTER**

INS-215	Life Insurance	5	0	0	5
<b>OR</b>					
INS-216	Property & Casualty Life	5	0	0	5
	Major Elective	4	0	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		9	0	0	9

**SECOND QUARTER**

Major Elective	4	0	0	4
Major Elective	4	0	0	4
	<hr/>	<hr/>	<hr/>	<hr/>
	8	0	0	8

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**TOTAL REQUIRED CREDITS.... 17**

**MACHINING TECHNOLOGY**

**(T-121)**

The Machining Technology curriculum is a comprehensive program designed to develop skills in the theory and use of hand tools, power machinery, computerized equipment and sophisticated precision inspection instruments. Basic machining skills and introductory computer numerical control (CNC) courses are taught in the first half of the program. The second half of the program emphasizes the set-up and operation of CNC machines, advanced CNC parts programming, CAD/CAM operations and quality assurance inspection skills.

Related coursework includes blueprint reading, applied mathematics through trigonometry, microcomputer skills and quality assurance theory.

Employment opportunities for machining technicians exist in manufacturing industries, public institutions, government agencies and in a wide range of specialty machining job shops.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

DFT-101	Technical Drafting I	0	6	0	3
ISC-203	Safety and Health	2	2	0	3
MAT-112	Algebra I	5	0	0	5
MEC-111	Machining Technology I	3	0	12	7
		<hr/>	<hr/>	<hr/>	<hr/>
		10	8	12	18

**SECOND QUARTER**

*DFT-121	Computer Aided Dft I	1	0	3	2
ENG-101	Grammar for Composition	3	0	0	3
MAT-130	Geometry	5	0	0	5
MEC-112	Machining Technology II	2	0	9	5
MEC-116	Industrial Specifications	2	0	0	2
MEC-118	Physical Metallurgy	3	2	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		16	2	12	21

**MACHINING TECHNOLOGY (continued)**

**THIRD QUARTER**

*DFT-122	Computer Aided Dft II	1	0	3	2
ENG-102	Composition I	3	0	0	3
*MAT-131	Trigonometry I	5	0	0	5
MEC-113	Machining Technology III	2	0	9	5
*MEC-121	Intro to CNC Machining	2	0	3	3
		13	0	15	18

**SIXTH QUARTER**

MEC-222	CNC Milling Operations	3	0	9	6
MEC-231	Die Making I	2	0	6	4
WLD-106	Techniques of Welding	1	0	6	3
	Humanities/Fine Arts Elec	3	0	0	3
		9	0	21	16

**FOURTH QUARTER**

MEC-114	Machining Technology IV	1	0	9	4
*MEC-122	Operation of CNC Machines	2	0	3	3
*MEC-130	Jig & Fixture Design	2	0	3	3
PSY-110	Occupational Psychology	3	0	0	3
		8	0	15	13

**SEVENTH QUARTER**

ENG-160	Oral Communications	3	0	0	3
MEC-232	Die Making II	2	0	6	4
MEC-235	EDM Machining	2	2	3	4
	Elective	3	0	0	3
	Major Elective	2	2	3	4
		12	4	12	18

**FIFTH QUARTER**

ISC-202	Statistical Process Cntrl	3	0	0	3
MEC-215	Advanced Machine Setup	2	0	6	4
MEC-221	CNC Lathe Operations	3	0	9	6
PHY-130X	Technical Physics I	3	0	0	3
PHY-130Y	PHY-130 Lab	0	2	0	1
	Social/Behav Science Elec	3	0	0	3
		14	2	15	20

**TOTAL REQUIRED CREDITS.... 124**

**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 they acquire approval from the Co-op Director and Department Chairperson.

\*T121C **Evening Basic CAD/CNC Certificate** requires 18 credit hours. Courses are necessarily listed in proper quarter sequence, therefore, the student should see his/her advisor before registering.

**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 of personal competencies and qualities will be provided the opportunity to enter an array of marketing and distribution jobs.

Upon completion of the program, the student will receive an **associate degree**.



**MARKETING AND RETAILING (continued)**

**FIRST QUARTER**

BUS-101	Introduction to Business	3	0	0	3
ENG-101	Grammar for Composition	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
MKT-139	Marketing	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
	<b>OR</b>				
OSC-102	Keyboarding Skills II	0	0	3	1
		<u>16</u>	<u>0</u>	<u>3</u>	<u>17</u>

**FOURTH QUARTER**

ACC-110	Financial Accounting	4	2	0	5
ECO-151	Basic Economics	5	0	0	5
ENG-103	Composition II	3	0	0	3
MKT-222	Market Research	2	2	0	3
MKT-224	Salesmanship	2	0	3	3
		<u>16</u>	<u>4</u>	<u>3</u>	<u>19</u>

**SECOND QUARTER**

BUS-115	Business Law I	4	0	0	4
BUS-121	Business Math	5	0	0	5
CAS-101	Intro to Microcomputers	0	0	3	1
COE-101	Personal Develop & Comm	3	0	0	3
ENG-102	Composition I	3	0	0	3
MKT-111	Consumer Behavior	3	0	0	3
		<u>18</u>	<u>0</u>	<u>3</u>	<u>19</u>

**FIFTH QUARTER**

BUS-123	Business Finance I	2	2	0	3
BUS-142	Business Communications	3	0	0	3
BUS-233	Human Resource Management	3	0	0	3
MKT-226	Public Relations	3	0	0	3
	Elective	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		<u>17</u>	<u>2</u>	<u>0</u>	<u>18</u>

**THIRD QUARTER**

BUS-116	Business Law II	4	0	0	4
CAS-130	Micro Data Management	0	0	3	1
ENG-160	Oral Communications	3	0	0	3
MKT-121	Retailing	5	0	0	5
MKT-123	Promotion	3	0	0	3
OSC-118	Word Processing on Micro	0	0	3	1
		<u>15</u>	<u>0</u>	<u>6</u>	<u>17</u>

**SIXTH QUARTER**

INS-247	Principles of Insurance	3	0	0	3
MKT-220	Advanced Marketing	2	2	0	3
MKT-230	Marketing Leadership	3	0	0	3
	<b>OR</b>				
BUS-231	Women in Management	3	0	0	3
MKT-235	Services Marketing	3	0	0	3
	Elective	3	0	0	3
	Major Elective	3	0	0	3
		<u>17</u>	<u>2</u>	<u>0</u>	<u>18</u>

**SUMMER QUARTER**

BUS-234	Management	2	0	3	3
MKT-141	Advertising Principles	5	0	0	5
		<u>7</u>	<u>0</u>	<u>3</u>	<u>8</u>

**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 they acquire 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, commercial 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.

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

BPR-1110	BPrint Read Bldg Trades	1	2	0	2
MAS-1100	Intro to Bricklaying	2	0	6	4
MAS-1101	Masonry Concepts	2	0	6	4
MAS-1102	Fund of Bricklaying I	2	0	6	4
MAT-1101	General Math	3	2	0	4
		—	—	—	—
		10	4	18	18

**SECOND QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
MAS-1107	Fund of Bricklaying II	3	0	18	9
	<b>OR</b>				
MAS-1107A	Fund of Bricklaying II	1	0	6	3
	<b>AND</b>				
MAS-1107B	Fund of Bricklaying II	1	0	6	3
	<b>AND</b>				
MAS-1107C	Fund of Bricklaying II	1	0	6	3
MAS-1113	Masonry Regulations	3	0	0	3
PSY-1101	Psych of Formal/Informal Org	3	0	0	3
		—	—	—	—
		9	0	21	16

**THIRD QUARTER**

ENG-1101	Comm Skills in Grammar	3	0	0	3
MAS-1108X	Fund of Masonry I	6	0	12	10
	<b>AND</b>				
MAS-1108Y	MAS-1108 Lab	0	0	6	2
	<b>OR</b>				
MAS-1108A	Fund of Masonry I	2	0	6	4
	<b>AND</b>				
MAS-1108B	Fund of Masonry I	2	0	6	4
	<b>AND</b>				
MAS-1108C	Fund of Masonry I	2	0	6	4
PHY-1103X	Work, Energy & Power	3	0	0	3
PHY-1103Y	PHY-1103 Lab	0	2	0	1
		—	—	—	—
		12	2	18	19

**FOURTH QUARTER**

BUS-1103	Small Business Operations	3	0	0	3
MAS-1109X	Fund of Masonry II	3	0	12	7
	<b>AND</b>				
MAS-1109Y	MAS-1109 Lab	0	0	6	2
	<b>OR</b>				
MAS-1109A	Fund of Masonry II	1	0	6	3
	<b>AND</b>				
MAS-1109B	Fund of Masonry II	1	0	6	3
	<b>AND</b>				
MAS-1109C	Fund of Masonry II	1	0	6	3
MAS-1110	Masonry Estimating	3	0	0	3
		—	—	—	—
		9	0	18	15

**TOTAL REQUIRED CREDITS.... 68**

**Co-op Option:** Qualified students may elect to take up to two (2) credit hours of Cooperative Education in place of MAS-1108Y or MAS-1109Y provided they acquire approval from the Co-op Director and Department Chairperson.

## 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 for patients. The nursing assistant performs 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 homes, 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.

Upon completion of the program, the student will receive a **certificate**.

### FIRST QUARTER

NUR-3023	Nursing Assistant I	2	2	6	5
NUR-3025	Home Care	2	2	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		4	4	6	8

### SECOND QUARTER

NUR-3024	Nursing Assistant II	3	4	9	8
		<hr/>	<hr/>	<hr/>	<hr/>
		3	4	9	8

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**TOTAL REQUIRED CREDITS.... 16**

Students with a felony conviction will have limited certification and employment opportunities.

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## PARALEGAL TECHNOLOGY

(T-120)

The Paralegal Technology curriculum trains individuals in basic knowledge and applications of the law to work under the supervision of attorneys. The paralegal/legal assistant can support attorneys by performing routine legal tasks, and assisting with more complicated and difficult legal work. Training will include legal specialty courses such as legal research, real estate, litigation preparation, as well as general subjects such as English, oral communications, mathematics, and computer skills.

Graduates of the Paralegal Technology curriculum are trained to assist an attorney or group of attorneys in many areas of the law. A paralegal/legal assistant is not able to practice law, give legal advice or represent clients in a court of law. However, paralegals/legal assistants can represent clients in some administrative hearings. Paralegal graduates will be able to assist in work on probate matters, conduct investigations, search public records, serve and file legal documents, perform library research, and provide office management. Employment opportunities and job descriptions vary greatly depending on whether a paralegal/legal assistant is hired by a private law firm, a government agency, or a corporation such as a bank or insurance company.

Upon completion of the program, the student will receive an **associate degree**.

### FIRST QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1	OSC-101	Keyboarding Skills I	0	0	3	1
LEX-101	Intro to Paralegalism	3	0	0	3	<b>OR</b>					
LEX-135	Civil Litigation I	5	0	0	5	OSC-102	Keyboarding Skills II	0	0	3	1
MAT-111	Basic Mathematics	5	0	0	5	POL-152	American Government	5	0	0	5
								<hr/>	<hr/>	<hr/>	<hr/>
								18	0	6	20

**PARALEGAL TECHNOLOGY (continued)**

**SECOND QUARTER**

ENG-151	English Composition	5	0	0	5
LEX-105	Partnership & Corporate Law	3	0	0	3
LEX-115	Contract Law and the UCC	3	0	0	3
LEX-136	Civil Litigation II	5	0	0	5
OSC-118	Word Processing on Micro	0	0	3	1
		<hr/>	<hr/>	<hr/>	<hr/>
		16	0	3	17

**FIFTH QUARTER**

LEX-131	Legal Writing	2	4	0	4
LEX-140	Bankruptcy	2	2	0	3
LEX-215	Property II-Title Search	2	4	0	4
OSC-132	Terminology & Vocab I	5	0	0	5
PSY-101	Intro to Psychology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	10	0	19

**THIRD QUARTER**

ENG-152	English Composition & Lit	5	0	0	5
LEX-113	Family Law	3	2	0	4
LEX-117	Tort Law	3	0	0	3
LEX-119	Criminal Procedure	3	0	0	3
LEX-129	Law Office Writing	1	2	0	2
MAT-170	Logic	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		20	4	0	22

**SIXTH QUARTER**

COE-224	LEX Internship	0	20	0	2
	<b>OR</b>				
OSC-218	Advanced Word Processing	1	0	3	2
LEX-216	Property III-RE Closing	3	0	0	3
LEX-217	Collections	2	0	0	2
LEX-230	Seminar	1	0	0	1
	<b>OR</b>				
CAS-103	Advanced DOS/Windows Elective	0	0	3	1
		3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		9	0	20/6	11

**SUMMER QUARTER**

ENG-161	Comm Through Speech	5	0	0	5
LEX-204	Investigation	4	0	0	4
LEX-225	Law Office Management	2	0	0	2
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	0	11

**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 approval is obtained from the Co-op Director and the Department Chairperson.

Students with a felony conviction will have limited employment opportunities.

**FOURTH QUARTER**

LEX-130	Legal Research	4	2	0	5
LEX-214	Property I - Real Estate	4	0	0	4
LEX-224	Wills, Trusts & Estates	4	2	0	5
MED-115	Medical Terminology & Voc	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		15	4	0	17

The Pharmacy Technology curriculum prepares individuals to assist the pharmacist in duties that a non-professional can legally perform and to function within the boundaries prescribed by the pharmacist and the employing agency. Graduates may maintain patient's records; fill routine prescription orders; maintain inventories of drugs and supplies; set up, package, and label medication doses; prepare stock solutions and intravenous additives; assist with over-the-counter drugs and health aids; and perform clerical duties, including insurance forms and forms required by third-party payees.

Graduates may be employed in hospitals, in nursing homes, in private and chain drug stores, by drug manufacturers, in research laboratories 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.

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

ENG-151	English Composition	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
PHM-101	Intro 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 Calc	5	0	0	5
		<hr/>	<hr/>	<hr/>	<hr/>
		18	0	6	20

**THIRD QUARTER**

BIO-105X	Fundamentals of Microbio	3	0	0	3
BIO-105Y	BIO-105 Lab	0	2	0	1
PHM-103	Pharmacology II	5	0	0	5
PHM-105	Pharmaceutical Prep II	3	0	3	4
PHM-113	Hospital Clinical II	0	0	15	5
PSY-110	Occupational Psychology 3	0	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	2	18	21

**SECOND QUARTER**

BIO-200X	Human Biology	4	0	0	4
BIO-200Y	BIO-200 Lab	0	2	0	1
CAS-101	Intro to Microcomputers	0	0	3	1
PHM-102	Pharmacology I	5	0	0	5
PHM-104	Pharmaceutical Prep I	3	0	3	4
PHM-112	Hospital Clinical I	0	0	15	5
		<hr/>	<hr/>	<hr/>	<hr/>
		12	2	21	20

**FOURTH QUARTER**

ENG-160	Oral Communications	3	0	0	3
PHM-107	Community Pharmacy	3	0	6	5
PHM-111	Pharmacy Seminar	2	0	0	2
SOC-101	Intro to Sociology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	6	13

**TOTAL REQUIRED CREDITS.... 74**

Students with a felony conviction will have limited licensure and employment opportunities.

# 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.

Upon completion of the program, the student will receive an associate degree.

## FIRST QUARTER

BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
PHY-110X	Topical Physics	4	0	0	4
PHY-110Y	PHY-110 Lab	0	2	0	1
PTH-101	Intro to Physical Therapy	2	0	6	4
PTH-112	Topical Anatomy for PTA	2	0	3	3
		<hr/>	<hr/>	<hr/>	<hr/>
		13	2	12	18

## SECOND QUARTER

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
ENG-151	English Composition	5	0	0	5
PTH-102	Physical Therapy Proc I	2	0	9	5
SAF-101	First Aid & Safety	3	2	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		15	2	12	20

## THIRD QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1
ENG-152	English Composition & Lit	5	0	0	5
OSC-118	Word Processing on Micro	0	0	3	1
PTH-103	Physical Therapy Proc II	3	0	6	5
PTH-114	Kinesiology/Ther	3	0	6	5
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	18	17

## SUMMER QUARTER

PTH-201	Path/Phys for PT Assist	4	0	0	4
PTH-203	Physical Therapy Proc III	2	0	3	3
		<hr/>	<hr/>	<hr/>	<hr/>
		6	0	3	7

## FOURTH QUARTER

ENG-160	Oral Communications	3	0	0	3
PSY-151	General Psychology	5	0	0	5
PTH-204	Physical Therapy Proc IV	3	0	9	6
PTH-210	Psychology of Adjustment	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	0	9	17

## FIFTH QUARTER

MAT-162	College Mathematics	5	0	0	5
PTH-205	Physical Therapy Proc V	3	0	12	7
PTH-215	Community Health/Welfare	3	0	0	3
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	0	12	18

**PHYSICAL THERAPIST ASSISTANT (continued)**

**SIXTH QUARTER**

PTH-218	Clinical Education	1	0	39	14
PTH-220	Physical Therapy Seminar	3	0	0	3
		—	—	—	—
		4	0	39	17

**TOTAL REQUIRED CREDITS.... 114**

Students with a felony conviction will have limited licensure and employment opportunities.

**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 communication 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 gases 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.

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

BPR-1110	BPrint Read Bldg Trades	1	2	0	2
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1116	Math for Plumbers	3	2	0	4
PLU-1110	Plumbing Pipework	5	0	15	10
		—	—	—	—
		12	4	15	19

**THIRD QUARTER**

BUS-1103	Small Business Operations	3	0	0	3
PLU-1112	Install of Plumb Fixtures	3	0	9	6
PLU-1113	Plu. Maint.: Residential	2	0	6	4
WLD-1180	Basic Welding	1	0	6	3
		—	—	—	—
		9	0	21	16

**SECOND QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
PLU-1111	Domestic Water Systems	2	0	9	5
PLU-1115	Steam & Water Boilers	3	0	9	6
PSY-1101	Psych of Formal/Informal				
	Org	3	0	0	3
	Related Elective	4	0	0	4
		—	—	—	—
		12	0	21	19

**FOURTH QUARTER**

PLU-1114	Plu. Maint.: Commercial	2	0	6	4
PLU-1125	Industrial Piping	3	0	6	5
PLU-1127	Plumbing Estimates	2	0	3	3
WLD-1181	MIG & TIG	1	0	6	3
		—	—	—	—
		8	0	21	15

**TOTAL REQUIRED CREDITS.... 69**

# 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.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

BUS-101	Introduction to Business	3	0	0	3
ECO-152	Macroeconomics	5	0	0	5
ENG-101	Grammar for Composition	3	0	0	3
OSC-101	Keyboarding Skills I	0	0	3	1
POS-101	Postal History & Organiz	3	0	0	3
POS-103	Postal Serv Mail Proc I	3	0	0	3
		—	—	—	—
		17	0	3	18

## FOURTH QUARTER

ACC-110	Financial Accounting	4	2	0	5
BUS-116	Business Law II	4	0	0	4
ENG-160	Oral Communications	3	0	0	3
POS-202	Postal Service Finance	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		17	2	0	18

## SECOND QUARTER

BUS-142	Business Communications	3	0	0	3
BUS-202	Supervision	3	0	0	3
CAS-101	Intro to Microcomputers	0	0	3	1
ECO-153	Microeconomics	5	0	0	5
ENG-102	Composition I	3	0	0	3
POS-105	Postal Serv Mail Proc II	3	0	0	3
		—	—	—	—
		17	0	3	18

## FIFTH QUARTER

ACC-115	Accounting for Managers	4	2	0	5
BUS-117	Business Law III	3	0	0	3
POS-203	Postal Customer Service	3	0	0	3
POS-205	Postal Delivery & Collect	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		16	2	0	17

## THIRD QUARTER

BUS-115	Business Law I	4	0	0	4
ENG-103	Composition II	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
POS-107	Postal Serv Labor Relat	3	0	0	3
	Social/Behav Science Elec	3	0	0	3
		—	—	—	—
		18	0	0	18

## SIXTH QUARTER

BUS-234	Management	2	0	3	3
POS-207	Postal Serv Empl Relation	3	0	0	3
POS-208	Postal Problem Analysis	3	0	0	3
PSY-110	Occupational Psychology	3	0	0	3
SAF-101	First Aid & Safety	3	2	0	4
		—	—	—	—
		14	2	3	16

**TOTAL REQUIRED CREDITS... 105**

**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 they acquire approval from the Co-op Director and Department Chairperson.



# PRACTICAL NURSING

(V-038)

The Practical Nursing curriculum is designed to prepare the graduate to participate in assessing, planning, implementing and evaluating nursing care. The graduate is eligible to apply to take the National Council Licensure Examination (NCLEX-PN) which is required for practice as a Licensed Practical Nurse. Licensed Practical Nurses function under the supervision of the Registered Nurse or Physician.

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.

Upon completion of the program, the student will receive a **diploma**.

## FIRST QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1
BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
ENG-101	Grammar for Composition	3	0	0	3
NUR-1101	Nursing Skills I	5	4	9	10
		<hr/>	<hr/>	<hr/>	<hr/>
		13	4	15	20

## SECOND QUARTER

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
NUR-1102	Nursing Skills II	2	4	0	4
NUR-1103	Medical & Surg Nursing I	7	0	12	11
		<hr/>	<hr/>	<hr/>	<hr/>
		14	4	15	21

## THIRD QUARTER

NUR-1111	Maternal - Child Nursing	9	0	12	13
PSY-101	Intro to Psychology	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		12	0	12	16

## FOURTH QUARTER

NUR-1113	Medical & Surg Nursing II	7	2	12	12
NUR-1114	Vocational Development	2	0	0	2
		<hr/>	<hr/>	<hr/>	<hr/>
		9	2	12	14

**TOTAL REQUIRED CREDITS.... 71**

Students with a felony conviction will have limited licensure and employment opportunities.

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 prepare the individual for entry into middle-management positions in state and local government and non-profit organizations, provide an inservice educational program for individuals currently employed, and 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 profession.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

BUS-138	Intro to Public Admin	3	0	0	3
CAS-101	Intro to Microcomputer	0	0	3	1
ENG-101	Grammar for Composition	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
OSC-101	Keyboarding Skills I	0	0	3	1
	Elective	3	0	0	3
		—	—	—	—
		14	0	6	16

**SUMMER QUARTER**

BUS-240	Public Finance	3	0	0	3
ECO-152	Macroeconomics	5	0	0	5
		—	—	—	—
		8	0	0	8

**SECOND QUARTER**

ACC-110	Financial Accounting	4	2	0	5
BUS-237	Public Personnel Admin	3	0	0	3
CAS-126	Intro to Spreadsheets	0	0	3	1
ECO-153	Microeconomics	5	0	0	5
ENG-102	Composition I	3	0	0	3
POL-103	National Government	3	0	0	3
		—	—	—	—
		18	2	3	20

**FOURTH QUARTER**

BUS-115	Business Law I	4	0	0	4
BUS-234	Management	2	0	3	3
BUS-250	Public Budgeting	3	0	0	3
CAS-128	Spreadsheets	2	0	3	3
PSY-101	Intro to Psychology	3	0	0	3
		—	—	—	—
		14	0	6	16

**THIRD QUARTER**

ACC-139	Governmental Accounting	4	2	0	5
BUS-217	Ethics in Government	3	0	0	3
ENG-103	Composition II	3	0	0	3
POL-102	State & Local Government	3	0	0	3
SOC-101	Intro to Sociology	3	0	0	3
		—	—	—	—
		16	2	0	17

**FIFTH QUARTER**

BUS-116	Business Law II	4	0	0	4
BUS-233	Human Resource Management	3	0	0	3
BUS-238	Problems of Public Admin	3	0	0	3
PSY-110	Occupational Psychology	3	0	0	3
	Elective	2	0	0	2
		—	—	—	—
		15	0	0	15

**PUBLIC ADMINISTRATION (continued)**

**SIXTH QUARTER**

**TOTAL REQUIRED CREDITS.... 106**

BUS-117	Business Law III	3	0	0	3
BUS-202	Supervision	3	0	0	3
BUS-215	Public Admin Seminar	1	0	0	1
BUS-241	Public Policy Analysis	3	0	0	3
ENG-160	Oral Communications	3	0	0	3
	Major Elective	0	03/10		1
		13	03/10		14

**Co-op Option:** Qualified students may elect to take up to five (5) credit hours of Cooperative Education in place of five (5) hours of electives provided they acquire approval from the Co-op Director and Department Chairperson.

**RADIOLOGIC TECHNOLOGY (RADIOGRAPHY)**

**(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: By Applying knowledge of the principles of radiation protection for the patient, self and others; By Applying knowledge of anatomy, positioning, and radiographic techniques to accurately demonstrate anatomical structures on a radiograph; By Determining exposure factors to achieve optimum radiographic technique with a minimum of radiation exposure to the patient; By Examining radiographs for the purpose of evaluating technique, positioning, and other pertinent technical qualities; By Exercising discretion and judgment in the performance of medical imaging procedures; By Providing patient care essential to radiologic procedures; and By 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, and chemistry and/or physics prior to entering the program.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

**SECOND QUARTER**

BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
ENG-151	English Composition	5	0	0	5
RAD-101	Radiologic Technology I	5	4	3	8
RAD-111	Clinical Education I	0	0	12	4
		15	4	18	23

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
PHY-120	Radiographic Physics I	3	0	0	3
RAD-102	Radiologic Technology II	6	6	0	9
RAD-112	Clinical Education II	0	0	12	4
		14	6	15	22

**RADIOLOGIC TECHNOLOGY (RADIOGRAPHY) (continued)**

**THIRD QUARTER**

ENG-152	English Composition & Lit	5	0	0	5
PHY-121	Radiographic Physics II	3	0	0	3
RAD-103	Radiologic Technology III	5	6	0	8
RAD-113	Clinical Education III	0	0	15	5
		<hr/>	<hr/>	<hr/>	<hr/>
		13	6	15	21

**SIXTH QUARTER**

PSY-151	General Psychology	5	0	0	5
RAD-207	Pathology for RAD	4	0	0	4
RAD-216	Clinical Education VI	1	0	30	11
		<hr/>	<hr/>	<hr/>	<hr/>
		10	0	30	20

**FOURTH QUARTER**

RAD-104	Radiologic Technology IV	7	0	0	7
RAD-114	Clinical Education IV	1	0	24	9
SAF-101	First Aid & Safety	3	2	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		11	2	24	20

**SEVENTH QUARTER**

ENG-160	Oral Communications	3	0	0	3
RAD-206	Radiologic Technology VI	5	0	0	5
RAD-217	Clinical Education VII	1	0	30	11
		<hr/>	<hr/>	<hr/>	<hr/>
		9	0	30	19

**TOTAL REQUIRED CREDITS.... 145**

Students with a felony conviction will have limited licensure and employment opportunities.

**FIFTH QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
RAD-205	Radiologic Technology V	7	0	0	7
RAD-215	Clinical Education V	0	0	27	9
	Elective	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		10	0	30	20

**REAL ESTATE (TECHNICAL SPECIALTY)**

**(T-166)**

The purposes of the Real Estate (Technical Specialty) curriculum is to provide the prelicensing education requirements needed for real estate salespersons and brokers.

The courses required by the North Carolina Real Estate Commission for prelicensing which are covered in this curriculum are Fundamentals of Real Estate, Real Estate Law, Real Estate Finance, and Brokerage Operations. In addition to these courses, Real Estate Math is also included.

After successful completion of Fundamentals of Real Estate, an individual may make application with the Real Estate Commission to take the prelicensing real estate salesperson examination. After successful completion of all the courses required by the Real Estate Commission, an individual may make application with the Commission to take the real estate prelicensing broker examination. Employment opportunities are available in real estate firms as salesperson or broker as well as a real estate broker in one's own business.

Upon completion of the program, the student will receive a **certificate**.

**REAL ESTATE (continued)**

**FIRST QUARTER**

RLS-101	Real Estate Math	3	0	0	3
RLS-103	Real Estate Fundamentals	4	2	0	5
		<u>7</u>	<u>2</u>	<u>0</u>	<u>8</u>

**THIRD QUARTER**

RLS-231	Real Estate Brokerage	3	2	0	4
CAS-101	Intro to Microcomputers	0	0	3	1
		<u>3</u>	<u>2</u>	<u>3</u>	<u>5</u>

**TOTAL REQUIRED CREDITS.... 20**

**SECOND QUARTER**

RLS-201	Real Estate Law	3	0	0	3
RLS-209	Real Estate Finance	3	2	0	4
		<u>6</u>	<u>2</u>	<u>0</u>	<u>7</u>

**REAL ESTATE APPRAISAL**

**T-224**

The purpose of the Real Estate Appraisal curriculum is to provide the pre-licensing and the pre-certification appraisal education requirements approved by the N.C. Real Estate Commission.

The courses required by the N.C. Real Estate Commission for prelicensing as a "State-licensed" appraiser are covered in this curriculum. These courses are Introduction of Real Estate Appraisal, Valuation Principles and Procedures, and Applied Residential Property Valuation.

The courses required by the N.C. Real Estate Commission for pre-certification as a "State-certified" appraiser are also provided. These courses are Introduction to Income Property Appraisal, Advanced Income Capitalization Procedures, and Applied Income Property Valuation. A good math background is very important in this curriculum. It is recommended that a student have mastered competencies found in a basic algebra course before taking Advanced Income Capitalization Procedures.

The courses required for the "State-licensed" appraiser and the "State-certified" appraiser must be completed in sequential order.

In addition to meeting the education requirements to become a "State-licensed" appraiser and/or a "State-certified" appraiser, an individual must pass the appraisal examinations given by the N.C. Real Estate Commission and meet the appraisal experience requirements. A "State-licensed" or "State-certified" appraiser will be able to identify himself or herself to the public as being state licensed and/or state certified, and will be qualified to perform appraisals in federally-related transactions.

Upon completion of the program, the student will receive a **certificate**.

**FIRST QUARTER**

APR-101	Intro to RE Appraisal	3	0	0	3
		<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>

**SECOND QUARTER**

APR-103	Valuation Princ & Proced	3	0	0	3
		<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>

REAL ESTATE APPRAISAL (continued)

THIRD QUARTER

APR-105	Appl Res Prop Valuation	2	2	0	3
		<u>2</u>	<u>2</u>	<u>0</u>	<u>3</u>
		2	2	0	3

FIFTH QUARTER

APR-203	Adv Income Capital. Proc	3	0	0	3
		<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
		3	0	0	3

FOURTH QUARTER

APR-201	Intro to Income Prop Appr	3	0	0	3
		<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
		3	0	0	3

SIXTH QUARTER

APR-203	App Income Prop Valuation	2	2	0	3
		<u>2</u>	<u>2</u>	<u>0</u>	<u>3</u>
		2	2	0	3

TOTAL REQUIRED CREDITS.... 18



# 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, 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 for 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.

Upon completion of the program, the student will receive an **associate degree**.

## FIRST QUARTER

ENG-101	Grammar for Composition	3	0	0	3
REC-111	Intro to Recreation	5	0	0	5
REC-112	Arts & Crafts	2	0	3	3
REC-119	Team Sports & Officiating	2	4	0	4
REC-146	Pathways to Wellness	2	2	0	3
		—	—	—	—
		14	6	3	18

## SECOND QUARTER

CAS-101	Intro to Microcomputers	0	0	3	1
ENG-102	Composition I	3	0	0	3
REC-125	Scheduling Activities	3	0	0	3
REC-136	Low Organized Games	1	0	3	2
REC-168	Athletic Injuries	2	0	3	3
SAF-101	First Aid and Safety	3	2	0	4
	Major Elective	3	0	0	3
		—	—	—	—
		15	2	9	19

## THIRD QUARTER

ENG-103	Composition II	3	0	0	3
MAT-111	Basic Mathematics	5	0	0	5
REC-113	Adaptive Populations	5	0	0	5
REC-114	Intramural Management	1	0	3	2
REC-120	Cultural Art	2	0	3	3
		—	—	—	—
		16	0	6	18

## SUMMER QUARTER

Elective	2	0	3	3
	—	—	—	—
	2	0	3	3

## FOURTH QUARTER

PSY-101	Intro to Psychology	3	0	0	3
REC-209	Maint & Facility Mgt	3	2	0	4
REC-210	Outdoor Education	1	2	0	2
REC-231	Social Recreation	1	4	0	3
REC-238	Therapeutic Activities	3	2	0	4
		—	—	—	—
		11	10	0	16

## FIFTH QUARTER

REC-221	Program Planning	5	0	0	5
REC-224	Fitness Management	3	2	0	4
REC-237	Gerontology/Older Adult Act	4	2	0	5
SOC-101	Intro to Sociology	3	0	0	3
		—	—	—	—
		15	4	0	17

RECREATION ASSOCIATE (continued)

SIXTH QUARTER

TOTAL REQUIRED CREDITS.... 111

REC-203	Basic Sign Language	2	2	0	3
REC-204	Camp Management	2	0	3	3
REC-222	Public Relations in Rec	2	4	0	4
REC-223	Commercial Rec & Tourism	3	0	0	3
REC-240	Volunteer Services - Rec	1	0	3	2
	Humanities/Fine Arts				
	Elective	5	0	0	5
		<u>15</u>	<u>6</u>	<u>6</u>	<u>20</u>

**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 they acquire the approval of the Co-op Director and Department Chairperson.

**RESIDENTIAL CARPENTRY**

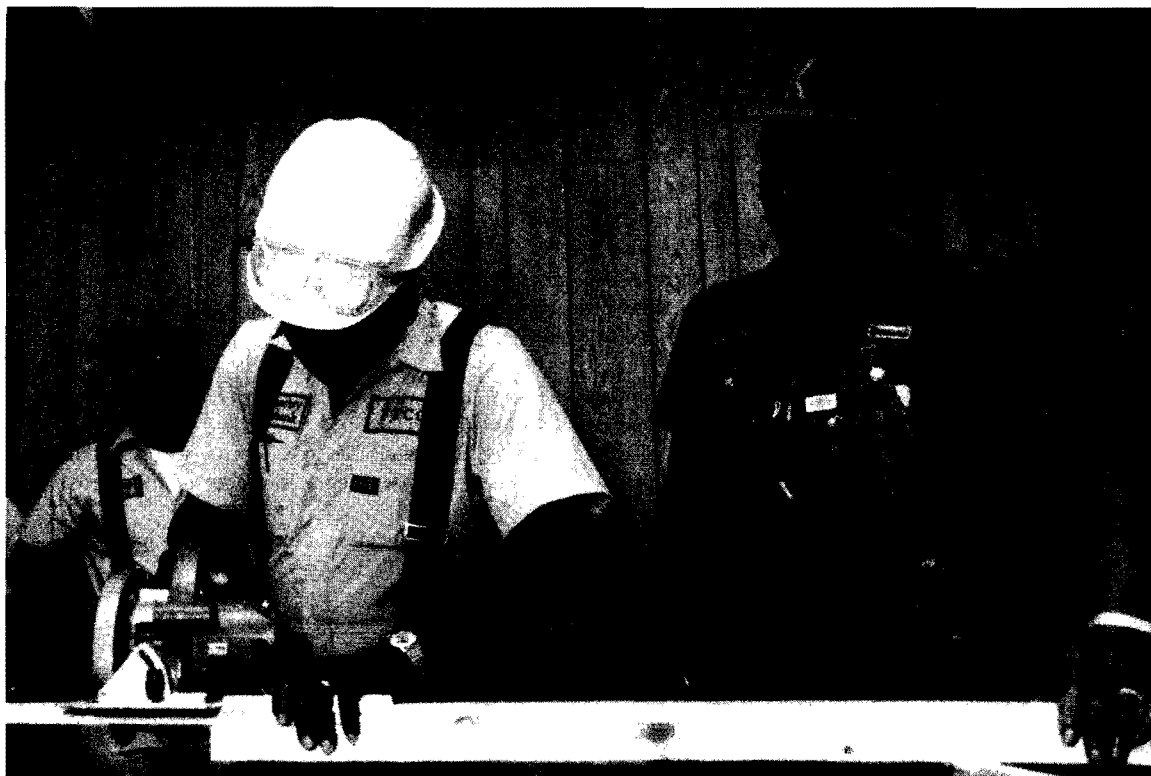
**(V-007)**

The Residential Carpentry curriculum trains students to construct and make repairs to residential structures using standard building materials and hand and power tools. This curriculum is designed to teach carpentry skills and a general knowledge of residential construction. Instruction also includes the study of mathematics, blueprint reading, building codes and energy efficient construction.

Graduates will have a working knowledge of building materials, concrete form construction, rough framing, roofing, stair construction, insulation and the application of interior and exterior trim.

Graduates should qualify for employment in the residential building construction field as rough carpenters, framing carpenters, roofers, maintenance carpenters, and other related job titles.

Upon completion of the program, the student will receive a **diploma**.





**RESIDENTIAL CARPENTRY (continued)**

**FIRST QUARTER**

BPR-1110	BPrint Read Bldg Trades	1	2	0	2
CAR-1101	Carpentry	5	0	15	10
<b>OR</b>					
CAR-1101A	Carpentry	1	0	6	3
<b>AND</b>					
CAR-1101B	Carpentry	1	0	6	3
<b>AND</b>					
CAR-1101C	Carpentry	3	0	3	4
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1101	General Math	3	2	0	4
		<hr/>	<hr/>	<hr/>	<hr/>
		12	4	15	19

**THIRD QUARTER**

CAR-1103	Exterior Finish Carpentry	5	0	15	10
CAR-1113	Carpentry Estimating	3	0	0	3
PHY-1103X	Work, Energy & Power	3	0	0	3
PHY-1103Y	PHY-1103 Lab	0	2	0	1
		<hr/>	<hr/>	<hr/>	<hr/>
		11	2	15	17

**FOURTH QUARTER**

BUS-1103	Small Business Operations	3	0	0	3
CAR-1104	Interior Finish Carpentry	5	0	15	10
CAR-1114	Building Regulations	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		11	0	15	16

**SECOND QUARTER**

BPR-1111	BPrint Read & Sketching	1	2	0	2
CAR-1102	Carpentry Framing	5	0	15	10
CAS-101	Intro to Microcomputers	0	0	3	1
PSY-1101	Psych of Formal/ Informal Org	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		9	2	18	16

**TOTAL REQUIRED CREDITS.... 68**

**RESPIRATORY CARE TECHNOLOGY (TECHNICIAN AND/OR THERAPIST)**

**(T-091)**

Respiratory Care Technology offers career education for individuals interested in becoming a respiratory therapy technician or respiratory therapist.

The respiratory therapist is qualified to assume primary responsibility for respiratory and cardiac care, including the supervision of technicians. The therapist makes patient care decisions concerning the use of life-support systems, oxygen therapy and other breathing treatments. They also perform heart and lung studies. Graduates of the therapist program receive an associate degree.

The technician performs tasks which include oxygen therapy, breathing treatments and equipment maintenance. Graduates of the technician program receive a diploma.

Graduates of accredited programs are eligible to apply for admission to the entry-level examination. Graduates of an accredited therapist program are also eligible to take the advanced practitioner examinations. These examinations are given by the National Board for Respiratory Care.

Graduates may be employed in hospitals, clinics, nursing homes, education, industry, and home care.

Upon completion of the program, the student will receive an **associate degree**.

**RESPIRATORY CARE TECHNOLOGY (TECHNICIAN AND/OR THERAPIST)**

(continued)

**FIRST QUARTER**

BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
CHM-101X	Chemistry I	3	0	0	3
CHM-101Y	CHM-101 Lab	0	2	0	1
MAT-150	Intermediate Algebra	5	0	0	5
RSP-105	Resp Ther Theory/Equip	4	2	0	5
		—	—	—	—
		17	4	3	20

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**SECOND QUARTER**

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
PHM-148	Respiratory Pharmacology	3	0	0	3
PHY-110X	Topical Physics	4	0	0	4
PHY-110Y	PHY-110 Lab	0	2	0	1
RSP-106	Resp Ther Theory/Equip II	3	2	6	6
		—	—	—	—
		15	4	9	20

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**THIRD QUARTER**

ENG-151	English Composition	5	0	0	5
RSP-107	Resp Ther Theory/Equip III	3	2	0	4
RSP-111	Clinical Practice I	1	0	15	6
RSP-131	Clinical Applications I	4	0	0	4
		—	—	—	—
		13	2	15	19

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**SUMMER QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
RSP-112	Clinical Practice II	1	0	6	3
RSP-132	Clinical Applications II	4	4	0	6
SOC-101	Intro Sociology	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		11	4	9	16

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**FOURTH QUARTER**

ENG-160	Oral Communications	3	0	0	3
PSY-110	Occupational Psychology	3	0	0	3
RSP-213	Clinical Practice III	1	0	15	6
RSP-233	Clinical Application III	3	2	0	4
RSP-236	Neonatal/Peds Resp Care	3	2	0	4
		—	—	—	—
		13	4	15	20

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**FIFTH QUARTER**

ENG-152	English Composition & Lit	5	0	0	5
RSP-214	Clinical Practice IV	1	0	15	6
RSP-234	Clinical Application IV	3	2	0	4
RSP-237	Cardiopulmonary Evaluat	4	0	0	4
		—	—	—	—
		13	2	15	19

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**SIXTH QUARTER**

RSP-215	Clinical Practice V	2	0	21	9
RSP-235	Respiratory Review	2	2	0	3
		—	—	—	—
		4	2	21	12

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**TOTAL REQUIRED CREDITS.... 126**

Students with a felony conviction will have limited licensure and employment opportunities.

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 physician's offices.

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

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

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	3
ENG-1101	Comm Skills in Grammar	3	0	0	3
SUR-1091	Intro to Surgical Tech.	9	4	0	11
		<hr/>	<hr/>	<hr/>	<hr/>
		18	8	0	22

**SUMMER QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
SUR-1100	Surgical Procedures III	4	0	0	4
SUR-1101	Clinical Practice III	0	0	18	6
SUR-1102	Seminar III	2	0	0	2
		<hr/>	<hr/>	<hr/>	<hr/>
		6	0	21	13

**TOTAL REQUIRED CREDITS.... 69**

**SECOND QUARTER**

BIO-1096X	Anatomy & Physiology II	3	0	0	3
BIO-1096Y	BIO-1091 Lab	0	2	0	1
SUR-1093	Surgical Procedures I	6	0	0	6
SUR-1094	Clinical Practice I	0	0	15	5
SUR-1098	Seminar I	2	0	0	2
		<hr/>	<hr/>	<hr/>	<hr/>
		11	2	15	17

Students with a felony conviction will have limited certification and employment opportunities.

**THIRD QUARTER**

PHM-1085	Surgical Pharmacology	1	0	0	1
PSY-1101	Human Relations	3	0	0	3
SUR-1095	Clinical Practice II	0	0	15	5
SUR-1097	Surgical Procedures II	6	0	0	6
SUR-1099	Seminar II	2	0	0	2
		<hr/>	<hr/>	<hr/>	<hr/>
		12	0	15	17



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 physician's offices.

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

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

BIO-160X	Human Anat & Physiology I	5	0	0	5
BIO-160Y	BIO-160 Lab	0	0	3	1
ENG-101	Grammar for Composition	3	0	0	3
SUR-1091	Intro to Surgical Tech.	11	4	0	13
		—	—	—	—
		19	4	3	22

**SUMMER QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
SUR-1100	Surgical Procedures III	4	0	0	4
SUR-1101	Clinical Practice III	0	0	18	6
SUR-1102	Surgical Technology Review	2	0	0	2
		—	—	—	—
		6	0	21	13

**SECOND QUARTER**

BIO-161X	Human Anat & Physiology II	5	0	0	5
BIO-161Y	BIO-161 Lab	0	0	3	1
SUR-1093	Surgical Procedures I	6	2	0	7
SUR-1094	Clinical Practice I	0	0	15	5
		—	—	—	—
		11	2	18	18

**TOTAL REQUIRED CREDITS.... 69**

Students with a felony conviction will have limited certification and employment opportunities.

**THIRD QUARTER**

PHM-1085	Surgical Pharmacology	1	0	0	1
PSY-101	Intro to Psychology	3	0	0	3
SUR-1095	Clinical Practice II	0	0	15	5
SUR-1097	Surgical Procedures II	6	2	0	7
		—	—	—	—
		10	2	15	16

This program is designed to provide training for technicians in the many areas of surveying. Surveyors are involved in land surveying, route surveying, photogrammetry, mapping, and other areas of land description and measurements. Nearly all construction of buildings, bridges, dams, highways, airfields, and other engineered projects requires one or more types of surveying.

Students will be trained as technicians to work with skilled professionals as instrument men, party chiefs, surveying aides, highway surveyors, mappers, and in many other surveying activities. Graduates of this program will be prepared to pursue the requirements necessary to become a registered land surveyor.

Upon completion of the program, the student will receive an **associate degree**.

**FIRST QUARTER**

CIV-105	Civil CAD I	2	0	6	4
CIV-107	Civil Engr Computations	3	0	3	4
ENG-101	Grammar for Composition	3	0	0	3
MAT-114	Algebra & Trigonometry I	5	0	0	5
SRV-101	Surveying I	2	0	6	4
		—	—	—	—
		15	0	15	20

**SUMMER QUARTER**

SRV-103	Surveying III	2	0	6	4
	Elective	3	0	0	3
		—	—	—	—
		5	0	6	7

**SECOND QUARTER**

ENG-102	Composition I	3	0	0	3
MAT-115	Algebra & Trigonometry II	5	0	0	5
PHY-101X	Properties of Matter	3	0	0	3
PHY-101Y	PHY-101 Lab	0	2	0	1
PSY-110	Occupational Psychology	3	0	0	3
	Elective	3	0	0	3
		—	—	—	—
		17	2	0	18

**FOURTH QUARTER**

CIV-202	Properties of Soil	4	0	3	5
CIV-210	Const. Methods & Mgt	3	2	0	4
SRV-201	Topo and Photogrammetry	3	0	3	4
SRV-210	Const. & Site Surveying	3	0	3	4
		—	—	—	—
		13	2	9	17

**THIRD QUARTER**

CIV-112	Construction Estimates	2	0	6	4
ENG-103	Composition II	3	0	0	3
MAT-116	Basic Calculus I	5	0	0	5
PHY-102X	Work, Energy & Power	3	0	0	3
PHY-102Y	PHY-102 Lab	0	2	0	1
SRV-102	Surveying II	2	0	6	4
		—	—	—	—
		15	2	12	20

**FIFTH QUARTER**

CIV-220	Hydraulics & Drainage	4	0	3	5
CIV-226	Cement & Asphalt Concrete	3	0	3	4
CIV-227	Subdivision Design	1	0	6	3
CIV-228	City & Regional Planning	3	0	0	3
SRV-224	Surveying Law	3	0	3	4
		—	—	—	—
		14	0	15	19

SIXTH QUARTER

TOTAL REQUIRED CREDITS.... 119

CIV-229	Municipal Engineering	3	0	3	4
CIV-230	Design of Roads & Pavement	3	0	3	4
ENG-160	Oral Communications	3	0	0	3
SRV-204	Surveying IV	2	0	6	4
	Social/Behav Science Elec	3	0	0	3
		<hr/>	<hr/>	<hr/>	<hr/>
		14	0	12	18

**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 they acquire approval from the Co-op Director and Department Chairperson.

TOOL, DIE AND MOLD MAKING

(V-048)

STUDENTS ACCEPTED FOR THE V048 TOOL, DIE AND MOLD MAKING CURRICULUM MUST HAVE COMPLETED V032 MACHINIST CURRICULUM OR BE ABLE TO DEMONSTRATE JOURNEYMAN-LEVEL MACHINIST SKILLS.

The Tool, Die and Mold Making curriculum prepares machinists for the machining of tools, dies and molds 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, die and mold 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, Die and Mold 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 tool maker trainee, die maker trainee, mold maker trainee, piece part inspector and tool inspector. Tool, die and mold makers analyze a variety of specifications, lay out metal stock and set up and operate machine tools. They fit and assemble parts to make and repair metal working dies, molds, cutting tools, jigs, fixtures, and gauges. They compute dimensions, decide on machining to be done and plan layout and assembly operations.

Upon completion of the program, the student will receive a **diploma**.

FIRST QUARTER

SECOND QUARTER

ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-131	Trigonometry I	5	0	0	5
MEC-1154	Die Making I	2	0	6	4
MEC-1290	EDM Machining I	2	2	3	4
PLA-1160	Intro to Plastic Molding	2	2	6	5
		<hr/>	<hr/>	<hr/>	<hr/>
		14	4	15	21

MAT-132	Trigonometry II	5	0	0	5
MEC-1155	Die Making II	2	0	9	5
MEC-1291	EDM Machining II	2	2	0	3
PLA-1161	Mold Making I	2	2	6	5
		<hr/>	<hr/>	<hr/>	<hr/>
		11	4	15	18

**TOOL, DIE, AND MOLD MAKING (continued)**

**THIRD QUARTER**

CAS-101	Intro to Microcomputers	0	0	3	1
MEC-1152	Gauges & Special Tools	1	0	6	3
MEC-1156	Die Making III	2	0	6	4
PHY-130X	Technical Physics I	3	0	0	3
PHY-130Y	PHY-130 Lab	0	2	0	1
PLA-1162	Mold Making II	2	0	6	4
		—	—	—	—
		8	2	21	16

**SUMMER QUARTER**

ENG-1102	Vocational Communications	3	0	0	3
ISC-203	Safety and Health	2	2	0	3
MEC-1153	Tool Making	2	2	6	5
PLA-1163	Mold Making III	1	0	9	4
		—	—	—	—
		8	4	15	15

**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 missiles, heavy equipment, railroads, construction, pipefitting, production shops, job shops and many others.

Upon completion of the program, the student will receive a **diploma**.

**FIRST QUARTER**

BPR-1104	BPrint Read - Mechanical	1	2	0	2
ENG-1101	Comm Skills in Grammar	3	0	0	3
MAT-1101	General Math	3	2	0	4
MEC-1104	Structure of Metals	3	2	0	4
WLD-1120	Oxy-Fuel & Basic Welding	3	0	12	7
	<b>OR</b>				
*WLD-1120A	Oxy-Fuel & Basic Welding	2	0	6	4
	<b>AND</b>				
*WLD-1120B	Oxy-Fuel & Basic Welding	1	0	6	3
		—	—	—	—
		13	6	12	20

**SECOND QUARTER**

BPR-1117	BPrint Read - Welding	1	0	3	2
CAS-101	Intro to Microcomputers	0	0	3	1
ELC-1180	Basic Electricity	3	0	0	3
MAT-1103	Geometry	3	0	0	3
WLD-1121	Shield Metal Arc Welding	3	0	15	8
	<b>OR</b>				
*WLD-1121A	Shield Metal Arc Welding	2	0	6	4
	<b>AND</b>				
*WLD-1121B	Shield Metal Arc Welding	1	0	9	4
		—	—	—	—
		10	0	21	17

**WELDING (continued)**

**THIRD QUARTER**

DFT-1118	Pattern Devel & Layout	3	0	0	3
PSY-1101	Psych of Formal/ Informal Org	3	0	0	3
*WLD-1123	Gas Shielded Arc Welding	2	0	6	4
WLD-1124	Pipe Welding	4	0	12	8
<b>OR</b>					
WLD-1124A	Pipe Welding	2	0	6	4
<b>AND</b>					
WLD-1124B	Pipe Welding	2	0	6	4
		<hr/>	<hr/>	<hr/>	<hr/>
		12	0	18	18

**FOURTH QUARTER**

MEC-1112	Machine Shop Processes	1	0	6	3
WLD-1126	Mech Testing & Inspection	1	2	3	3
WLD-1127	Comm & Industrial Pract	2	0	9	5
WLD-1128	Certification Practice	3	0	6	5
		<hr/>	<hr/>	<hr/>	<hr/>
		7	2	24	16

**TOTAL REQUIRED CREDITS.... 71**

\*VO50C Evening Basic Welding Certificate requires 19 credit hours. Courses are not necessarily listed in proper sequence, therefore, the student should see his/her advisor before registering.









**COURSE DESCRIPTIONS**

**Fayetteville Technical  
Community College**

## **NOTE:**

All numbers to the right of the course titles in the Course Description section refer to contact hours and total quarter credit hours for classes in the following order:

### **Example:**

		<b>Lecture Hours</b>	<b>Lab Hours</b>	<b>Shop/ Clinic Hours</b>	<b>Quarter Credit Hours</b>
ENG-101	Grammar	3	0	0	3

FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

COURSE DESCRIPTIONS

**ACC-105 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

**ACC-110 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

**ACC-115 Accounting for Managers 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: ACC 110

**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 cash flow, 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-123 Accounting on Computers 0 0 3 1**

This course is a concentrated study of a commercial computerized accounting system. Topics include system requirements, disk operating system, conversion, customizing, audit trail, data backup, general ledger and other records, payroll, and annual closing. Upon completion, students will set up a computerized accounting system for a small business, record and report accounting transactions utilizing computer hardware and accounting software. Prerequisite: ACC 120

**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 110 or ACC 223

**ACC-221 Intermediate Acct I****4 2 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****4 2 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, 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****4 2 0 5**

This course includes concentrated studies of long-term debt, pensions, leases, revenue recognition, earnings per share, changes in cash flow, and income taxes. Topics include long-term debt, pensions, leases, revenue recognition, earnings per share, changes in cash flow, and income taxes. 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

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 115 or ACC 121

## ACC-235 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-110 Soil Science &amp; 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

## AGR-201 Agricultural Chemicals

3 2 0 4

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 agricultural chemicals. Upon completion, students will be able to understand the uses of agricultural chemicals and precautions that should be used during application. Prerequisites: None

## AGR-228 Plant Disease &amp; 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 125 and/or HOR 120 and 121

## AGR-230 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

## AGR-231 Prod of Plants &amp; 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

**AHR-101A Refrig. Fundamentals I****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, refrigerant cycle, and the safe use of hand tools. Upon completion, students will be able to explain the function of a compression refrigeration system, the pressure temperature relationship, and safe use of hand tools. Prerequisites: None

**AHR-101B Refrig. Fundamentals I****1 0 6 3**

This course is a continuation of AHR 101A and provides a more in-depth study of system components and operation. Emphasis is placed on components, equipment, and the use of gauges and thermometers 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 Refrig. Fundamentals I****4 0 0 4**

This course introduces the student to the fundamentals of basic refrigeration cycles. Emphasis is placed on terminology, refrigeration system components, 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. Prerequisites: None

**AHR-101Y AHR-101 Lab****0 0 9 3**

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

**AHR-102A Refrig. Fundamentals II****3 0 3 4**

This course is a continuation of AHR 101 with greater depth in refrigeration theory, procedures and small commercial equipment. Emphasis is placed on refrigerant charging, electrical system troubleshooting, and installation of reach-in and walk-in freezers and coolers. Upon completion, students will be able to install, diagnose, and repair small commercial refrigeration units. Prerequisites: AHR 101X and AHR 101Y or AHR 101B

**AHR-102B Refrig. Fundamentals II****1 0 6 3**

This course is a continuation of AHR 102A and introduces refrigeration accessories. Emphasis is placed on high and low pressure switch calibration, defrost systems, pump down systems, and troubleshooting. Upon completion, students will be able to use proper tools to adjust, troubleshoot, and repair small refrigeration systems. Prerequisite: AHR 102A

**AHR-102X Refrig. Fundamentals II****4 0 0 4**

This course is a continuation of AHR 101 with greater depth in refrigeration theory, procedures, and small commercial equipment. Topics include low, medium, and high temperature small commercial systems operation, and refrigeration accessories. Upon completion, students will be able to install many of the common small commercial units and to troubleshoot their refrigeration and mechanical problems. Prerequisites: AHR 101X or AHR 101B

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

**AHR-110X Circuits and Controls I**

3 0 0 3

This course introduces the student to basic electricity and basic circuits in the refrigeration field. Topics include Ohms Law, electron theory, series and parallel circuits, symbols, and components. Upon completion, students will be able to understand and construct simple pictorial and schematic wiring diagrams. Prerequisites: None

**AHR-110Y AHR-110 Lab**

0 0 6 2

This course provides hands-on experience using test instruments and constructing basic electrical circuits. Emphasis is placed on electricity safety, electric meter use, and component operation. Upon completion, students will be able to wire complete electrical circuits and measure amps, ohms, and voltage. Prerequisites: None

**AHR-111X Circuits and Controls II**

3 0 0 3

This course is a continuation of AHR 110. It provides in-depth study of more complex circuits and more system electrical components. Topics include defrost timers, motor starting, relays, transformers, single phase motor, thermostats, and pressure switches. Upon completion, students will be able to explain single phase motor operation and most of the small commercial refrigeration wiring components. Prerequisite: AHR 110X

**AHR-111Y AHR-111 Lab**

0 0 6 2

This course provides hands-on training, wiring, and testing motors and small commercial refrigeration system's electrical components. Emphasis is placed on use of wiring diagrams, and testing electrical component's mechanical and electrical operation. Upon completion, students will be able to troubleshoot and make electrical and mechanical repairs to components covered in this course. Prerequisite: AHR 110X

**AHR-1121 Basic Heating & Air Cond.**

3 0 3 4

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-112X Circuits & Controls III**

2 0 0 2

This course is a continuation of AHR 111 and introduces the electrical system of warm air furnaces. Topics include fan-limit control, room thermostats, gas valves, oil primary, electronic ignition, and ignition transformers. Upon completion, students will be able to explain warm air gas and oil furnace electrical operation. Prerequisite: AHR 111X

**AHR-112Y AHR-112 Lab**

0 0 6 2

This course provides hands-on training in wiring and testing oil and gas warm air furnaces. Emphasis is placed on identifying and understanding the operation of controls. Upon completion, students will be able to test, troubleshoot and repair oil and gas furnaces. Prerequisite: AHR 111X



**AHR-145A All-Weather Systems I****3 0 3 4**

This course introduces students to the fundamentals of warm air gas furnaces with electric air conditioning. Emphasis is placed on safety, repair, installation, equipment selection, and refrigeration as it pertains to air conditioning. Upon completion, students will be able to service, repair, diagnose, charge, adjust, evaluate gas heating and air conditioning systems. Prerequisite: AHR 101X or AHR 101B

**AHR-145B All-Weather Systems I****1 0 6 3**

This course introduces students to the fundamentals of warm air oil furnaces with electric air conditioning. Emphasis is placed on safety, repair, installation, equipment selection and refrigeration as it pertains to air conditioning. Upon completion, students will be able to service, repair, diagnose, charge, adjust, and evaluate oil heating systems with air conditioning. Prerequisite: AHR 145A

**AHR-145X All-Weather Systems I****4 0 0 4**

This course introduces the student to the fundamentals of warm air gas and oil furnaces with air conditioning. Emphasis is placed on safety, repairs, equipment selection, installation and refrigeration as it pertains to air conditioning. Upon completion, students will be able to service, repair, diagnose, charge, adjust, and evaluate oil and gas furnaces with air conditioning. Prerequisites: AHR 102X and AHR 102Y

**AHR-145Y AHR-145 Lab****0 0 9 3**

This course provides hands-on practice with the components and controls of all weather systems. Emphasis is placed on service, repair, and installation procedures required of technicians involved with gas and oil furnaces with air conditioning. Upon completion, students will be able to diagnose, service, repair, and install gas and oil furnaces with air conditioning. Prerequisites: AHR 145X and AHR 145Y

**AHR-146X All-Weather Systems II****4 0 0 4**

This course is a continuation of AHR 145 and introduces electric 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 145X or AHR 145B

**AHR-146Y AHR-146 Lab****0 0 6 2**

This course provides hands-on training in installing and servicing electric 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 electric furnaces and heat pumps in the field and to perform many trouble-shooting functions. Prerequisite: AHR 145X or 145B

**AHR-147X Air Systems Fabrication****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 ready to lay out straight duct, elbows, offsets, transitions, Y joints, and all common air duct fittings. Prerequisites: None

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

**AHR-201 Principles of Air Cond**

4 0 6 6

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

**AHR-220 Refrig. System Design**

3 0 6 5

This course is designed to complement AHR 102 and introduces the student to load calculation. Emphasis is placed on refrigeration equipment selection, component location, and freon pipe sizing. Upon completion, students will be able to calculate the heat load on small commercial refrigeration boxes, and use manufacturers' catalogs to select equipment. Prerequisite: AHR 102X

**AHR-221 Air Cond System Design**

4 0 6 6

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. Upon completion, students will be able to compute the heat gain and loss from a residential building and design a suitable system. Prerequisite: AHR 201

**AHR-230 Hydronic Systems**

3 0 9 6

This course deals with hydronic systems, chilled 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 201

**AHR-247 Advanced Heat Pumps**

2 0 9 5

This course is a continuation of AHR 146 and introduces current heat pump technology. Topics include electronic control systems, variable speed systems, and water source heat pumps. Upon completion, students will be able to analyze the performance of these systems, and make electrical and mechanical repairs. Prerequisite: AHR 146X

**AHR-249 Service Problems**

3 0 6 5

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 146X

**APR-101 Intro to RE Appraisal**

3 0 0 3

This course introduces the student to real estate appraisal and provides an overview of the entire valuation process. Topics include basic real property law, concepts of value, real estate markets, and real estate finance. Upon completion, students will be able to understand property data collection and analysis. Prerequisite: RLS 101 or College Algebra

**APR-103 Valuation Princ & Proced****3 0 0 3**

This course covers the procedures used to develop an estimate of property value and their application. Emphasis is placed on appraisal of residential 1-4 unit properties and small farms. Upon completion, students will be able to understand the derivation of property value estimates. Prerequisite: APR-101

**APR-105 Appl Res Prop Valuation****2 2 0 3**

This course covers laws, rules, and standards which must be followed by appraisers and their application. Topics include N.C. Real Estate Appraisers Act and related Commission rules. Upon completion, students will be able to prepare an appraisal of a single-family home using the URAR form. Prerequisite: APR 103

**APR-201 Intro to Income Prop Appr****3 0 0 3**

This course will provide a review of the income property appraisal method. Topics include basic income capitalization, valuation process, real estate market analysis, basic algebra finance mathematics, mortgage loan calculations, future gross income and operating expenses, net operating income and before tax cash flow. Upon completion, students will be able to perform a basic income property appraisal. Prerequisites: APR 101, APR 103, and APR 105 or certification by the NC Real Estate Appraisal Commission as a State Licensed Residential Appraiser

**APR-203 Adv Income Capital. Proc****3 0 0 3**

This course covers some of the advanced income capitalization procedures. Topics include basic income capitalization, concepts of value components, basic investment methods, DCF analysis and Ellwood & Akerson mortgage equity analysis. Upon completion, students will be able to perform an advanced income capitalization appraisal. Prerequisites: APR 101, APR 103, APR 105, APR 201, or certification by the NC Real Estate Appraisal Commission as a State Certified Residential Appraiser

**APR-205 App Income Prop Valuation****2 2 0 3**

This course covers the basics of applied income property valuation. Topics include federal regulations of appraiser, NC Real Estate Appraiser Act, uniform professional standards, report preparation and appraising lease and development interest. Upon completion, students will be able to perform an income property valuation using the proper techniques and generate an appraisal report using the standard appraisal forms. Prerequisites: APR 101, APR 103, APR 105, APR 201 and APR 203 or equivalent from a state approved program.

**ARC-100 Sketching, Drawing & Comp****1 0 3 2**

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 Tech & Dsgn I****2 4 0 4**

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

**ARC-102 Arch Tech & 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 Tech & 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**

1 2 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 0 3 4

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**

1 0 3 2

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. Prerequisite: ARC 112

**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 112 or Department Chair Consent

**ARC-135 Arch CADD Systems I****0 0 3 1**

This course provides a student an opportunity to gain a working level of competency in basic microcomputer operation and familiarization with operating systems. Emphasis is placed on learning the functions of all components of microcomputers and especially CADD systems. Upon completion, students will be familiar with microcomputer hardware and software, and will be able to use basic operating commands to control the computer. Prerequisites: None

**ARC-136 Arch CADD Systems II****0 0 3 1**

This course provides a student an opportunity to gain a working level of competency in basic use of CADD software. Emphasis is placed on learning the functions of 2 dimensional (2-D) software. Upon completion, students will be able to perform basic CADD 2-D operations. Prerequisites: ARC 135 and ARC 101

**ARC-137 Arch CADD Systems III****1 0 3 2**

This course provides a student an opportunity to gain high levels of proficiency in the use of CADD 2-D software. Emphasis is placed on complete CADD systems operations and management. Upon completion, students will be able to operate, manage and output CADD 2-D drawings. Prerequisites: ARC 136 and ARC 102

**ARC-138 Arch CADD Systems IV****3 4 0 5**

This course provides a student an opportunity to gain a working level of competency in CADD 3-D operation and use. Emphasis is placed on learning the function of 3 dimensional (3-D) software. Upon completion, students will be able to produce and output CADD 3-D drawings. Prerequisites: ARC 137 and ARC 103

**ARC-201 Arch Tech & 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 ARC 138

**ARC-202 Arch Tech & 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 Tech & Dsgn VI****1 2 9 5**

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-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-221 Arch Environment 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 103

**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

**ARC-230 Project Seminar**

2 6 0 5

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 138 and ARC 203

**ARC-235 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. Prerequisite: ARC 203

**ART-103 Basic Drawing**

2 4 0 4

This course provides an introduction to theory and practice in the elements of drawing in a variety of media, surfaces, and techniques. Emphasis is placed on graphic visualization, both representational and imaginary, and includes considerations of composition, perspective, form and space. Upon completion, students will be able to employ these techniques and tools as a means toward personal expression and communication. Prerequisites: None

**ART-105 Life Study**

2 4 0 4

This course provides an introduction to drawing the human figure using a variety of media. Topics include gesture, contour, modeling, structure, hatching, wash, and positive and negative space. Upon completion, students will be able to achieve a reasonable likeness of the human form. Prerequisites: None

**ART-107 Watercolor**

2 2 0 3

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-151 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 relationship between art and man and discuss the various philosophies behind the development of style. Prerequisites: None

**ART-152 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-281 Sculpture II**

5 0 0 5

This course is directed to help the student explore three-dimensional designs in a variety of materials concentrating on the exploration of creative concepts and form. Emphasis is placed on creativity, form relationships, and surface treatment. Upon completion, students will be able to create sculptural forms using a variety of media. Prerequisite: ART 152

**AUT-101 Internal Comb Engines I**

2 4 0 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 2 0 3

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 4 0 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 2 0 3

This course provides a thorough understanding of the operation and use of various test instruments, ohmmeters, voltmeters, ampmeters, and oscilloscopes. 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-106 Auto Power Train Sys I**

2 4 0 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 2 0 3

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 4 0 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

**AUT-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

**AUT-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

**AUT-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: AUT 1101A

**AUT-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: AUT 1101

**AUT-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: AUT 1101

**AUT-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: AUT 1102A

**AUT-1110 Automotive Repair** 2 0 6 4

This course is designed to provide the student with an opportunity to gain knowledge and develop skills in assembling and disassembling the components of the automobile or light truck. Subject areas will include automobile electrical, chassis and suspension, power train, and air conditioning. Prerequisites: None



**AUT-1111 Auto Body Repair I****6 0 12 10**

This course includes instruction for basic knowledge and skills necessary in repairing and restoring an automobile body. Topics include making minor repairs by straightening and filling with body filler and fiberglass. Upon completion, students will be able to apply their understanding of basic body repair and component parts in repair and restoration of automobile bodies. Prerequisites: None

**AUT-1111A Auto Body Repair I****3 0 6 5**

This course includes instruction for basic knowledge and skills necessary in repairing and restoring an automobile body. Topics include making minor repairs by straightening and filling with body filler and fiberglass. Upon completion, students will be able to apply their understanding of basic body repair and component parts in repair and restoration of automobile bodies. Prerequisites: None

**AUT-1111B Auto Body Repair I****3 0 6 5**

This course, a continuation of AUT 1111A, includes instruction for basic knowledge and skills necessary in repairing and restoring an automobile body. Topics include making minor repairs by straightening and filling with body filler and fiberglass. Upon completion, students will be able to apply their understanding of basic body repair and component parts in repair and restoration of automobile bodies. Prerequisite: AUT 1111A

**AUT-1112 Auto Body Repair II****6 0 12 10**

This course includes an introduction to analyzing the damaged areas of automobile bodies and replacing parts. Topics include accurate estimating of the cost of auto body repair including labor, materials, and parts. Upon completion, students will be able to make estimates of damage and costs of repairing or replacing the damaged area. Prerequisite: AUT 1111 or AUT 1111B

**AUT-1112A Auto Body Repair II****3 0 6 5**

This course includes an introduction to analyzing the damaged areas of automobile bodies and replacing parts. Topics include accurate estimating of the cost of auto body repair including labor, materials, and parts. Upon completion, students will be able to make estimates of damage and costs of repairing or replacing the damaged area. Prerequisite: AUT 1111 or AUT 1111B

**AUT-1112B Auto Body Repair II****3 0 6 5**

This course, a continuation of AUT 1112A, includes an introduction to analyzing the damaged areas of automobile bodies and replacing parts. Topics include accurate estimating of the cost of auto body repair including labor, materials, and parts. Upon completion, students will be able to make estimates of damage and costs of repairing or replacing the damaged area. Prerequisite: AUT 1112A

**AUT-1113 Auto Body Repair III****8 0 12 12**

This course consists of preparing the car for painting and the actual painting of a car. Topics include repairing body damage, sanding, masking, priming, sealing, and painting. Upon completion, students will be able to prepare properly a vehicle for painting and will know the fundamentals of painting. Prerequisite: AUT 1112 or AUT 1112B

**AUT-1113A Auto Body Repair III****4 0 6 6**

This course consists of preparing the car for painting and the actual painting of a car. Topics include repairing body damage, sanding, masking, priming, sealing, and painting. Upon completion, students will be able to prepare properly a vehicle for painting and will know the fundamentals of painting. Prerequisite: AUT 1112 or AUT 1112B

**AUT-1113B Auto Body Repair III****4 0 6 6**

This course, a continuation of AUT 1113A, consists of preparing the car for painting and the actual painting of a car. Topics include repairing body damage, sanding, masking, priming, sealing, and painting. Upon completion, students will be able to prepare properly a vehicle for painting and will know the fundamentals of painting. Prerequisite: AUT 1113A

**AUT-1114 Auto Body Repair IV****7 0 15 12**

This course includes an introduction to repairing frame damage and making necessary alignments. Topics include frame straightening, body and frame components, and the frame and suspension system. Upon completion, students will be able to straighten a frame and make necessary alignment using the body straightening equipment. Prerequisite: AUT 1113 or AUT 1113B

**AUT-1114A Auto Body Repair IV****2 0 6 4**

This course includes an introduction to repairing frame damage and making necessary alignments. Topics include frame straightening, body and frame components, and the frame and suspension system. Upon completion, students will be able to straighten a frame and make necessary alignment using the body straightening equipment. Prerequisite: AUT 1113 or AUT 1113B

**AUT-1114B Auto Body Repair IV****2 0 6 4**

This course, a continuation of AUT 1114A, includes an introduction to repairing frame damage and making necessary alignments. Topics include frame straightening, body and frame components, and the frame and suspension system. Upon completion, students will be able to straighten a frame and make necessary alignment using the body straightening equipment. Prerequisite: AUT 1114A

**AUT-1114C Auto Body Repair IV****3 0 3 4**

This course, a continuation of AUT 1114B, includes an introduction to repairing frame damage and making necessary alignments. Topics include frame straightening, body and frame components, and the frame and suspension system. Upon completion, students will be able to straighten a frame and make necessary alignment using the body straightening equipment. Prerequisite: AUT 1114B

**AUT-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

**AUT-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: AUT 1123A

**AUT-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

**AUT-1123Y AUT-1123 Lab****0 0 9 3**

This course allows the students to apply the classroom principles acquired in AUT 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

**AUT-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

**AUT-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

**AUT-1124B Power Train Systems****1 0 6 3**

This course, a continuation of AUT 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: AUT 1124A

**AUT-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: AUT 1123, AUT 1133 and AUT 1183

**AUT-1125Y AUT-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: AUT 1123, AUT 1133 and AUT 1183

**AUT-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: AUT 1102

**AUT-1133X Computers & 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 computer systems. Prerequisites: None

**AUT-1133Y AUT-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: AUT 1181

**AUT-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: AUT 1181 and AUT 1133

**AUT-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

**AUT-1135Y AUT-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

**AUT-1170A Power Plant Trouble Shoot****2 0 3 3**

This course is designed to offer the fundamentals of proper troubleshooting. 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: AUT 1123, AUT 1133, AUT 1182, and AUT 1183

**AUT-1170B Power Plant Trouble Shoot****1 0 3 2**

This course is designed to offer the student opportunities to practice troubleshooting. Emphasis is placed on using test equipment in troubleshooting. Upon completion, students will be able to diagnose auto difficulties efficiently. Prerequisite: AUT 1170A

**AUT-1170X Power Plant Trouble Shoot****3 0 0 3**

This course is designed to train the students in proper troubleshooting. Emphasis is placed on the use of test equipment. Upon completion, students will be able to efficiently troubleshoot. Prerequisites: AUT 1123, AUT 1133, AUT 1182 and AUT 1183

**AUT-1170Y AUT-1170 Lab****0 0 6 2**

This course is designed to train the student in proper procedures of troubleshooting. Emphasis is placed on proper procedures for troubleshooting. Upon completion, students will be able to gain experience in troubleshooting. Prerequisites: AUT 1123, AUT 1133, AUT 1182 and AUT 1183

**AUT-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: AUT 1102

**AUT-1181Y AUT-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: AUT 1102

**AUT-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

**AUT-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: AUT 1182A

**AUT-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: AUT 1124

**AUT-1182Y AUT-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: AUT 1124

**AUT-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 troubleshoot and make repairs to these electrical systems using the proper test equipment. Prerequisite: AUT 1102

**AUT-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: AUT 1102 and AUT 1183A

**AUT-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 troubleshoot and make repairs to these electrical systems using the proper test equipment. Prerequisite: AUT 1102

**AUT-1183Y AUT-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: AUT 1102

**AUT-121 Basic Engines****3 0 12 7**

This course develops a thorough knowledge of the construction and operation of automobile engines. Topics include tools, shop safety, and the construction and operation of automobile engines. Upon completion, students will be able to recondition automobile engines. Prerequisites: None

**AUT-122 Automotive Brake Systems****2 0 6 4**

This course is designed to teach the student the operation of drum brakes, disc brakes, brake hydraulic systems, parking brakes and brake boosters. Emphasis is placed on diagnosis, inspection and correct repair practices. Upon completion, the student will be able to diagnose, repair, and test automobile brake systems. Prerequisites: None

**AUT-123 Engine Electrical Systems****6 0 9 9**

This course is designed to teach the student the fundamentals of electricity and Ohms Law. Topics include principals of electricity as applied to the automobile, fundamentals of starters, batteries, charging systems and ignition systems. Upon completion, students will be able to explain electrical fundamentals, Ohms Law, and operation of the starting, charging and ignition systems. Prerequisites: None

**AUT-124 Automotive Fuel Systems****2 4 0 4**

This course is designed to teach the basic automotive carburetor fuel system. Topics include characteristics of fuels, types of fuel systems, fuel pumps, carburetors, fuel tanks, fuel lines, and filters. Upon completion, the student will be able to explain the operation of fuel systems and disassemble, inspect, repair, and reassemble carburetors. Prerequisites: None

**AUT-125 Automotive Power Trains****3 0 6 5**

This course introduces the student to the automotive power train using clutches, manual transmissions and differentials. Topics include operating principles of clutches, manual transmissions, drivelines and differentials. Upon completion, students will be able to disassemble, inspect, repair, and reassemble clutches, manual transmissions, differentials and drive- lines. Prerequisites: None

**AUT-126 Fundamentals of Auto Comp****2 0 3 3**

This course is designed to acquaint the student with the operation, testing, and servicing of automotive computer systems. Emphasis is placed on operation of computer controlled systems and the use of test equipment used to diagnose problems in the system. Upon completion, students will be able to explain the operation of computer systems, diagnose computer systems using available test equipment and make necessary adjustments. Prerequisites: None

**AUT-127 Emission & Elect Controls** 2 0 3 3

This course introduces the student to the emissions control devices used to control automotive emissions. Topics include causes of pollution, systems used on the vehicle to reduce emissions, and testing and servicing automotive emission systems. Upon completion, the student will be able to explain the operation of emission control devices, and to test emission systems using test equipment and service manuals. Prerequisites: None

**AUT-128 Auto Heating & Air Cond** 3 0 3 4

This course provides an introduction to the principles of refrigeration and to the components of the automotive air conditioning system. Emphasis is placed on the principles of refrigeration, operation of system components, and methods of control. Upon completion, students will be able to explain air conditioning principles, identify components in the system, diagnose problems in the system and make repairs using proper equipment. Prerequisites: None

**AUT-129 Power Trains Service** 1 0 3 2

This course is designed to teach the student the proper methods for servicing automotive power train components. Topics include clutch adjustment, checking and replacing universal joints, servicing transmissions and rear ends, and proper lubrication. Upon completion, the student will be able to service transmissions, change filter and oil, replace rear axle bearings, and remove and install transmission and clutch assemblies. Prerequisites: None

**AUT-130 Electronic Fuel Injection** 2 4 0 4

This course is designed to familiarize the student with electronic fuel injection systems used in domestic vehicles. This course includes "Port Fuel Injection Systems" as well as "Throttle Body Fuel Injection Systems." Upon completion, students will be able to diagnose, test, and repair problems within the computer controlled fuel injection systems. Prerequisites: None

**AUT-131 Tune-up & Electr Controls** 3 0 3 4

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, electrical, electronic, 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. Prerequisites: None

**AUT-201 Auto Chassis & Suspen Sys** 2 4 0 4

This course provides a thorough understanding of the 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-202 Auto Heating & Air Cond** 2 2 0 3

This course covers principles of refrigeration and its components. Topics include compressors, expansion valves, and their services. Upon completion, students will be able to test, service, and repair air conditioning systems and components. Prerequisites: None

**AUT-207 Engine & Pwr Tr Sys Diag** 2 2 0 3

This course covers the basics of repairing automotive transmissions and provides practical application of transmission repair. Emphasis is placed on proper repair procedures of transmissions. Upon completion, students will be able to diagnose and repair transmissions. Prerequisite: AUT 107

**AUT-208 Electrical/Fuel Sys Diag**

2 2 0 3

This course covers practical procedures for repairing electrical and fuel systems on automobiles. Emphasis is placed on fuel systems and engine electrical components. Upon completion, students will be able to test, diagnose, and repair fuel and electrical systems. Prerequisites: None

**AUT-213 Automotive Electronics**

3 2 0 4

This course covers basic electronically controlled systems on automobiles. Emphasis is placed on computer controlled systems. Upon completion, students will be able to diagnose and repair electronically controlled systems. Prerequisites: None

**AUT-214 Auto Chas & Susp Sys Diag**

2 2 0 3

This course covers the practical application of repairs of chassis and suspension systems. Emphasis is placed on steering gears and brakes. Upon completion, students will be able to perform work on live vehicles using manufacturers' procedures. Prerequisites: None

**AUT-215 Inst & Chassis Elec Sys**

2 4 0 4

This course covers electrical components of instrument panels and chassis. Topics include printed circuit board and turn signals. Upon completion, students will be able to diagnose and repair electrical system problems. Prerequisites: None

**AUT-216 Electronic Controlled Sys**

3 2 0 4

This course covers electronically controlled systems on today's cars. Topics include computers and braking systems. Upon completion, students will be able to diagnose and test electronically controlled systems. Prerequisites: None

**AUT-217 Electronic Contr Sys Diag**

3 2 0 4

This course, a continuation of AUT 216, covers the practical application of electronically controlled systems. Topics include on-board computers and computerized systems. Upon completion, students will be able to troubleshoot computer systems. Prerequisite: AUT 216

**AUT-218 Automotive Fuel Injection**

3 2 0 4

This course is designed to familiarize the student with electronic fuel injection systems used on domestic vehicles. The class will include "Port Fuel Injection Systems," classroom lecture, shop demonstration and hands-on use of test equipment used to diagnose, test and repair problems within the computer controlled fuel injection systems. Upon completion, students will be able to demonstrate the use of repair manuals and diagnostic charts. Prerequisites: AUT 208

**AUT-219 Auto Emissions Systems**

2 2 0 3

This course covers emission control systems on current automobiles. Emphasis is placed on servicing of emission control systems. Upon completion, students will be able to trouble-shoot, test, and service emission control systems. Prerequisites: None



**AUT-221 Susp & Computer Alignment****3 0 6 5**

This course introduces the student to front end alignment, repair, and adjustment. Topics include front suspension types, inspection for wear, replacement of ball joints, control arm bushings, steering gear service and wheel balancing. Upon completion, the student will be able to identify front end types, inspect, repair, adjust and align front ends, and balance tires. Prerequisites: None

**AUT-222X Automotive Machine Shop****2 0 6 4**

This course introduces the student to cylinder block boring, cylinder head surfacing, valve reconditioning, and piston pin servicing equipment. Emphasis is placed on proper operation of equipment and maintaining close tolerances to specifications. Upon completion, students will be able to explain the operations and functions of automotive engine reconditioning equipment. Prerequisites: None

**AUT-222Y AUT-222 Lab****0 0 3 1**

This course provides hands-on experience in operating automotive machining equipment. Topics include cylinder block boring, cylinder head surfacing, valve reconditioning, and fitting piston pins. Upon completion, the student will be able to properly and safely use automotive engine reconditioning equipment. Prerequisites: None

**AUT-223 Automatic Trans Rebuild****3 0 6 5**

This course introduces the student to the principles, operation, and service of automatic transmissions. Topics include construction, theory, principles of operation, disassembly, inspection, repair, and reassembly of automatic transmissions. Upon completion, students will be able to explain the principles of operation, disassemble, inspect, repair, and test the most popular transmissions used in today's cars. Prerequisites: None

**AUT-224 Electrical Power Accessor****4 0 6 6**

This course is designed to acquaint the student with the operation, design, diagnosis, and repair of chassis electrical systems. Topics include lights, turn signals, gauges, power windows, windshield wipers, and the proper use of electrical test equipment. Upon completion, students will be able to explain the operation of diagnosis, and repair chassis electrical systems. Prerequisites: None

**AUT-225X Automotive Servicing****2 0 6 4**

This course is designed to train the student in proper shop procedures required in troubleshooting 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 troubleshoot effectively in the vehicle systems and use available test equipment in the process. Prerequisites: None

**AUT-225Y AUT-225 Lab****0 0 3 1**

This course is designed to train the student in the proper use of automotive test equipment. Emphasis is placed on the effective use of engine analyzers. Upon completion, students will be able to use available engine analyzers. Prerequisites: None

**AUT-226 Driveability & Elec Diag****2 0 6 4**

This course is designed to train students in the proper technique of troubleshooting electronic control devices and associated driveability problems. Emphasis is placed on the use of different types of electronic and mechanical test equipment. Upon completion, students will be able to troubleshoot driveability problems in the engine electronic controls and mechanical malfunctions within the engine or accessories. Prerequisites: None

**BAF-101 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

**BAF-103 Principles of Banking**

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

**BAF-105 Money and Banking**

4 0 0 4

This course takes an in-depth 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

**BAF-107 Marketing for Bankers**

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

**BAF-109 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 regulatory issues affecting this vital area. Prerequisites: None

**BAF-202 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

**BAF-204 Law & Banking: Principles**

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

**BAF-206 Law & Banking: Application****4 0 0 4**

This course introduces laws pertaining to secured transactions, letters of credit, and the bank collection process. Emphasis is placed on negotiability, the concept of holder-in-due-course, primary and secondary contractual liability, secured transactions, and letters of credit. Upon completion, students will be able to discuss the aspects of negotiable instruments and how it affects the bank's organization and operation. Prerequisites: None

**BAF-208 Bank Investments****4 0 0 4**

This course explains the nature of bank investments, factors influencing investment decisions, and the basic principle 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

**BAF-210 Trust Business****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

**BAF-212 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: ACC 110

**BAF-226 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

**BAF-228 Deposit Operations****4 0 0 4**

This course is designed to explain deposit operations and provide an overview of the U.S. payments system, banking law and regulation, and current industry practices. Topics include banking law and regulation, current industry practices, bank deposit-taking activities, managing deposited funds, and EFT systems. Upon completion, students will be able to discuss bank deposit operations and how banks are organized to accomplish this task. Prerequisites: None

**BAF-230 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

**BAF-232 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

**BAF-236 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

**BAF-244 Economics for Bankers** 4 0 0 4

This course is designed to provide bankers with an introduction to the fundamental principles of economics. Emphasis is placed on the basics of economic theory, macroeconomics, and examples of the application of economics to banking. Upon completion, students will be able to interpret economic indicators, relate basic principles of economic theory, describe inflation, compare and contrast economic systems. Prerequisites: None

**BIO-1005 Anatomy & Physiology** 2 0 0 2

This course is designed to acquaint the dental assistant student with basic body structures and functions particularly as they relate to general and oral health. Topics include cell structure and function, tissue types, and the ten anatomical systems. Upon completion, students will be able to describe the relationship of the ten anatomical systems and how they might affect oral health. Prerequisites: None

**BIO-1013 Microbiology** 2 0 0 2

This course is a basic introductory course covering classification and characterization of microorganisms along with the concepts of control and asepsis. Topics include the bacteria, viruses, fungi, metazoans, microscopy, pathogenesis, and man's defenses against these microorganisms. Upon completion, students will be able to list the characteristics of microorganisms and explain their clinical significance in health and disease. Prerequisites: BIO 1005 and DEN 1011

**BIO-105X Fundamentals of Microbio** 3 0 0 3

This course covers the history, terminology, equipment, procedures, and characteristics of microbes in an introductory manner. Topics include an overview of different types of microbes, control agents, and their uses and microbial interactions with man. Upon completion, students will be able to characterize the various microbial agents and discuss methods of controlling them typically and chemically, as well as biologically. Prerequisite: H.S. Biology or equiv.

**BIO-105Y BIO-105 Lab** 0 2 0 1

This course, designed to accompany BIO 105X, includes laboratory exercises emphasizing the ubiquity of microorganisms and their control. Topics include basic microbiological laboratory techniques as well as microscopy. Upon completion, students will be able to apply aseptic techniques to their vocational area, competently use a microscope, and apply microbial control procedures. Prerequisite: H.S. Biology or equiv.

**BIO-1091X Anatomy & Physiology I****3 0 0 3**

This course covers a general study of the normal structure and function of the human body and certain abnormal conditions. Emphasis is placed on points of reference, basic concepts, and on the integumentary, locomotor, digestive, reproductive, genitourinary, and respiratory systems. Upon completion, students will be able to associate the various body functions and systems with operative procedures observed. Prerequisites: None; Corequisite: BIO 1091Y

**BIO-1091Y BIO-1091 Lab****0 2 0 1**

This course is designed to provide experiences that support components of the lecture material of BIO 1091X. Emphasis is placed on activities that will enhance the student's ability to understand points of reference and the body systems covered. Upon completion, students will be able to correlate laboratory experiences with the human body as viewed in the operating room. Prerequisites: None; Corequisite: BIO 1091X

**BIO-1092X Microbiology****3 0 0 3**

This course introduces the student to the study of microorganisms and their association with man and his activities, with emphasis upon control of pathogenic agents. Topics include bacterial morphology, physiology, growth requirements, modes of transmission, pathology, physical and chemical methods of microbial control, and sterilization procedures. Upon completion, students will be able to understand the ubiquity of microorganisms and the importance of controlling the presence and spread of disease organisms. Prerequisites: None; Corequisite: BIO 1092Y

**BIO-1092Y BIO-1092 Lab****0 2 0 1**

This course provides laboratory instruction in microbial identification, culture, physical and chemical methods of microbial control, and aseptic/sterile techniques. Topics include microscopy, staining procedures, culture preparation, and physical and chemical methods of microbial control, with emphasis on sterile laboratory techniques. Upon completion, students will be able to apply sterile techniques to limit presence of microorganisms and demonstrate aseptic procedures to control spread of pathogenic agents. Prerequisites: None; Corequisite: BIO 1092X

**BIO-1096X Anatomy & Physiology II****3 0 0 3**

This course is a continuation of the study of structure and function of the human body and certain abnormal conditions. Emphasis is placed on the senses of vision and hearing and on nervous, blood, cardiovascular, lymphatic, and endocrine systems. Upon completion, students will be able to associate the more complicated body systems with operative procedures observed. Prerequisite: BIO 1091; Corequisite: BIO 1096Y

**BIO-1096Y BIO-1096 Lab****0 2 0 1**

This course is designed to provide experiences that support components of the lecture material in BIO 1096X. Emphasis is placed on activities that will enhance the students' ability to understand the more complicated body systems. Upon completion, students will be able to correlate laboratory experiences with the human body as viewed in the operating room. Prerequisite: BIO 1091; Corequisite: BIO 1096X

**BIO-110X Bio Chem for Health Sci****3 0 0 3**

This course is an elementary introduction to carbohydrates, proteins, enzymes, lipids, nucleic acids, vitamins, and hormones. Emphasis is placed on the role of the molecules on the cellular level and their essential function in the organism. Upon completion, students will be able to describe basic molecular metabolism and molecular, genetic, and essential nutritional requirements of the body as a whole. Prerequisite: CHM 92 or CHM 102

**BIO-110Y BIO-110 Lab**

0 0 3 1

This course is a series of demonstrations or laboratory exercises of topics discussed in BIO 110X. Topics include demonstration of buffers, energy of reaction, carbohydrate metabolism, enzymes, molecular structure, and other subjects. Upon completion, students will be able to translate concepts into practical application to future health related courses. Prerequisite: CHM 92 or CHM 102

**BIO-151X General Biology I**

5 0 0 5

This course introduces the major themes of biology that form the foundation for all subsequent learning in this dynamic field. Emphasis is placed on cell structure, biochemistry, cellular energetics, photosynthesis, respiration, cellular reproduction, genetics, and evolution. Upon completion, students will be able to apply their knowledge of cell biology to the study of multicellular organisms, including man. Prerequisites: None; Corequisite: BIO 151Y

**BIO-151Y BIO-151 Lab**

0 2 0 1

This course correlates the major areas of coverage in lecture and "hands-on" participation with the microscope, biochemical processes, and genetics. Topics include microscopy, testing for carbohydrates and proteins, cytology, photosynthesis, cellular respiration, cellular reproduction, and plant and human genetics. Upon completion, students will be able to demonstrate an understanding of laboratory methods and techniques by applying these techniques in subsequent related courses. Prerequisites: None; Corequisite: BIO 151X

**BIO-152X General Biology II**

5 0 0 5

This course introduces the study of multicellular organisms that represent each of the six kingdoms which comprise all life on our planet. Topics include virology and the evolution of the eucaryotic cell along with development, physiology, and reproduction of organisms culminating in an overview of ecology. Upon completion, students will be able to relate their knowledge of organismic biology to the more highly specialized causes in biology. Prerequisite: BIO 151 or equiv.; Corequisite: BIO 152Y

**BIO-152Y BIO-152 Lab**

0 2 0 1

This course covers the main headings of BIO 152X in a laboratory situation, such as lower forms of life, plant and animal systems, and ecology. Topics include bacteriology, fungi, nonvascular and vascular plants, plant and animal maintenance and reproduction, and inter-relationship in the biosphere. Upon completion, students will be able to compare lower forms of life to modern plants and animals and will know their similarities and differences. Prerequisite: BIO 151 or equiv.; Corequisite: BIO 152X

**BIO-160X Human Anat & Physiology I**

5 0 0 5

This course emphasizes the morphological and physiological aspects of the body, including cellular physiology, and the cardiovascular, respiratory, skeletal, and muscular systems. Topics include homeostasis, cell metabolism, and maintenance and support of the human body. Upon completion, students will be able to identify the nature and behavior of the anatomy and physiology of maintenance and support systems of the body. Prerequisites: BIO 93 and CHM 92 or equiv.

**BIO-160Y BIO-160 Lab**

0 0 3 1

This course's primary purpose is to familiarize students with laboratory methods and techniques as they relate to the instructional materials in BIO 160X. Topics include the use of the microscope, cells and tissues, blood components, cardiovascular anatomy and physiology, respiratory measurements, bone, and muscles. Upon completion, students will be able to recognize body cells, tissues, passive processes, and vascular and respiratory physiology. Prerequisites: BIO 93 and CHM 92 or equiv.

**BIO-161X Human Anat & Physiology II**

5 0 0 5

This course includes the nervous, endocrine, digestive, urinary, and reproductive anatomy and physiology. Topics include homeostasis, digestion, nutrition, metabolism, negative feedback, fluids and electrolytes, and the maintenance and control of the body systems. Upon completion, students will be able to identify the maintenance and control processes of the human body. Prerequisite: BIO 160

**BIO-161Y BIO-161 Lab**

0 0 3 1

This course includes laboratory methods and techniques as they relate to the supporting instructional materials in BIO 161X. Topics include organ dissections, sensation tests, nutrient digestion, chemical urinalysis, gametogenesis, hormones, and microscopic studies of organ tissues. Upon completion, students will be able to recognize the processes in the maintenance and control of the human body. Prerequisite: BIO 160

**BIO-162X Microbiology I**

5 0 0 5

This course is a general study of microbiology which differentiates microbes from each other as well as from other organisms. Emphasis is placed on energy metabolism, control, microbial interactions, and the microbial diseases of man. Upon completion, students will be able to show a working knowledge of the principles of disease, pathogenicity, and asepsis. Prerequisites: BIO 160 and CHM 92

**BIO-162Y BIO-162 Lab**

0 0 3 1

This course, designed to accompany BIO 162X, includes laboratory exercises emphasizing characterization of the bacteria. Topics include microbiological laboratory techniques including microscopy, control assays, and the use of differential media. Upon completion, students will be able to apply aseptic techniques to their vocation area, use a microscope, and be able to identify an unknown bacterium. Prerequisites: BIO 160 and CHM 92

**BIO-200X Human Biology**

4 0 0 4

This course includes an overview of cell biology, tissues, and all human organ systems. Topics include cell metabolism, support and locomotion, nutrition, excretion, respiration, control and maintenance of body systems, and reproduction. Upon completion, students will be able to apply their understanding of human biology as it relates to their major curriculum. Prerequisites: None

**BIO-200Y BIO-200 Lab**

0 2 0 1

This course includes laboratory studies as they relate to the supporting instructional materials in BIO 200X. Topics include general anatomical studies of cells, tissues, and all human organ systems. Upon completion, students will be able to apply their understanding of these systems to the maintenance and control of the human body. Prerequisites: None

**BIO-251X Plant Biology**

5 0 0 5

This course introduces general principles of plant physiology, morphology, development and the ecology of plants. Emphasis is placed on comparative structure and function of major plant phyla. Upon completion, students will be able to recognize major plant groups and their ecological roles and uses by mankind. Prerequisite: BIO 152; Corequisite: BIO 251Y

**BIO-251Y BIO-251 Lab**

0 2 0 1

This course accompanies and supports the instructional materials presented in general botany lecture. Emphasis is placed on tissue identification, life cycles and taxonomy of major phyla representatives. Upon completion, students will be able to apply laboratory procedures in the identification and classification of major plant groups. Prerequisite: BIO 152; Corequisite: BIO 251X

**BIO-261X Animal Biology**

5 0 0 5

This course introduces general principles of invertebrate and vertebrate biology. Emphasis is placed on the phylogeny, morphology and physiology of major animal phyla. Upon completion, students will be able to recognize major animal groups and identify their ecological roles and significance to mankind. Prerequisite: BIO 152; Corequisite: BIO 261Y

**BIO-261Y BIO-261 Lab**

0 2 0 1

This course accompanies and supports the instructional materials presented in general zoology lecture. Emphasis is placed on life cycles and taxonomy of major animal phyla. Upon completion, students will be able to apply laboratory procedures in the identification and classification of major animal groups. Prerequisite: BIO 152; Corequisite: BIO 261X

**BIO-92X Fundamental Biology I**

3 0 0 3

This course provides an introduction to the study of biology at the cellular level, with emphasis on the biochemical and cellular unity of living organisms. Topics include basic chemistry of living organisms, cell structure and function, enzymes, and the role of enzymes in digestive processes. Upon completion, students will be able to describe the biochemical and cellular composition and the processes common to all living organisms. Prerequisites: None; Corequisite: BIO 92Y

**BIO-92Y BIO-92 Lab**

0 2 0 1

This course introduces students to the biology laboratory and the methods, techniques, and equipment used to examine living cells and their biochemical processes. Topics include the scientific method, biochemical testing, microscopy, examination of cells and cellular transport processes, and enzyme activities. Upon completion, students will be able to describe some basic methods and equipment used in the laboratory to study living cells and their biochemical activities. Prerequisites: None; Corequisite: BIO 92X

**BIO-93X Fundamental Biology II**

3 0 0 3

This course is a continuation of the study of living organisms begun in BIO 92, examining cellular processes and activities, genetics, and human reproduction. Topics include photosynthesis and cellular respiration, cell division and gamete formation, Mendelian and molecular genetics, and human reproduction and development. Upon completion, students will be able to describe major biochemical and physical processes of cells and will know how genes regulate these processes and determine heredity. Prerequisite: BIO 92; Corequisite: BIO 93Y

**BIO-93Y BIO-93 Lab**

0 2 0 1

This course provides laboratory experience to support the material covered in BIO 93X lecture, including experimentations, microscope observations, problem solving, and model manipulations. Topics include experiments demonstrating photosynthesis and cellular respiration, observing cell division, working genetics problems, and examining DNA structure and function. Upon completion, students will be able to describe basic laboratory techniques of experimentation, microscopic examination of specimens, and methods of working simple genetics problems. Prerequisite: BIO 92; Corequisite: BIO 93X

**BIO-94X Fundamental Biology III**

3 0 0 3

This course introduces the general principles and concepts of ecology, with emphasis on man's role in his environment. Topics include population genetics, variation and selection, growth curves, food webs, biomes, speciation, pollution, and overpopulation. Upon completion, students will be able to explain the ecological problems associated with the impact of man's activities upon his environment. Prerequisite: BIO 93; Corequisite: BIO 94Y



This course includes laboratory studies as they relate to the supporting instructional materials in BIO 94X. Topics include population genetics studies, classification of biome life, observation of food chains, and classroom debates on controversial ecological problems. Upon completion, students will be able to apply their understanding of these topics as they relate to their personal and professional lifestyles. Prerequisite: BIO 93; Corequisite: BIO 94X

**BPR-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

**BPR-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

**BPR-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

**BPR-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: BPR 1110 or equiv.

**BPR-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

**BPR-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: BPR 1104 or equiv.

**BUS-101 Introduction to Business 3 0 0 3**

This course is designed to provide students with an understanding of the general concepts of business. Emphasis is placed on foundations of business, social responsibility in business, forms of business ownership, management process, marketing, and finance. Upon completion, students will be able to explain the broad aspects of business and its role in society and in the economy. Prerequisites: None

**BUS-110 Bus Math With Calculators 2 0 3 3**

This course provides instruction in business math problems emphasizing the touch operation on ten-key electronic calculators. Topics include computing interest, payroll, markup, discounts, proration, and depreciation schedules. Upon completion, students will be able to solve business math problems demonstrating the touch method. Prerequisites: None

**BUS-1103 Small Business Operations 3 0 0 3**

This course provides basic techniques in the operation of a small business. Emphasis is placed on starting a business, records-keeping, financing, employee relations, and inventory control. Upon completion, students will be able to start and operate a small business. Prerequisites: None

**BUS-112 Business Statistics 5 0 0 5**

Business Statistics is an introductory course to general statistical principles which will be found useful to all individuals regardless of their field of specialization. Emphasis will be oriented toward business, economic and industrial concepts. The course presents clear statements, pertinent definitions, theorems and principles followed by problems drawn from actual business situations. Prerequisites: None

**BUS-115 Business Law I 4 0 0 4**

This course provides students with an overview of principles of business law and the Uniform Commercial Code. Emphasis is placed on the judicial system, forms of business ownership, contracts, and agencies. Upon completion, students will be able to apply business law and Uniform Commercial Code principles to appropriate business situations. Prerequisites: None

**BUS-116 Business Law II 4 0 0 4**

This course, a continuation of BUS 115, provides students with an overview of principles of business law and the Uniform Commercial Code. Emphasis is placed on bailments, personal property, real property, sales contracts, and commercial paper. Upon completion, students will be able to apply business law and Uniform Commercial Code principles to appropriate business situations. Prerequisite: BUS 115

**BUS-117 Business Law III 3 0 0 3**

This course covers areas of government regulation that directly affect businesses. Topics include antitrust laws, administrative agencies, consumer protection, and direct regulation of business. Upon completion, students will be able to explain the interactions between government and business. Prerequisites: None

**BUS-121 Business Math 5 0 0 5**

This course introduces students to the use of math in the business world. Topics include consumer credit, financial statements, depreciation, retail math, investments, insurance, compound interest, annuities, simple interest, and statistics. Upon completion, students will be able to compute discounts, finance charges, simple interest, and insurance premiums; and analyze financial statements, bank statements, and statistical data. Prerequisite: MAT 111

**BUS-123 Business Finance I**

2 2 0 3

This course is a study of basic financial management for a business. Emphasis is placed on financial analysis, planning, budgeting, working capital management, and short-term financing. Upon completion, students will be able to compute and analyze short-term financial information used in the management of a business. Prerequisites: ACC 110 or ACC 120 and BUS 121 or MAT 163

**BUS-124 Business Finance II**

2 2 0 3

This course, a continuation of BUS 123, is a study of basic financial management for a business. Topics include capital budgeting, valuation, the cost of capital, long-term financing sources, and growth dynamics. Upon completion, students will be able to demonstrate a working knowledge of capital budgeting and evaluate various long-term financing options for a business. Prerequisite: BUS 123

**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-141 Business English**

3 0 0 3

This course is designed to help the Administrative Office and General Office Technology students become proficient in producing mailable 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. Prerequisite: ENG 101 Corequisite: OSC 136

**BUS-142 Business Communications**

2 0 3 3

This course is designed to develop skills in the techniques of effective communications. Emphasis is placed on correct procedure in writing business correspondence typical of the business office. Upon completion, students will be able to compose and keyboard mailable correspondence, and demonstrate proper telephone technique and etiquette. Prerequisites: ENG 101, OSC 101, and OSC 118

**BUS-202 Supervision**

3 0 0 3

This course provides the student with concepts and practices in supervising others. Topics include leadership, time management, motivation, morale, discipline, and decision making. Upon completion, students will be able to direct the efforts of others to achieve desired results. Prerequisites: None

**BUS-206 Contemp Bus & Econ Prob**

3 0 0 3

This course provides an opportunity for students to apply principles learned in Macroeconomics (ECO 152) and Microeconomics (ECO 153) to current economics-related events. Emphasis is placed on current events such as the national debt, fiscal policy, monetary policy, and foreign trade. Upon completion, students will be able to explain the impact of economic principles on their lives and on the well-being of the nation. Prerequisites: ECO 152 and ECO 153

This course covers the basic concepts of international business activity and theory. Emphasis is placed on the economic and financial environment, institutions and markets, trade policy issues, business-government interface, and strategic management issues. Upon completion, students will be able to realize that virtually all companies and individuals making business decisions today are affected by international events. Prerequisites: None

**BUS-215 Public Admin Seminar****1 0 0 1**

This course provides students with a review of each course in the curriculum and discusses current events in the public administration field. Topics include sharing of learning experiences encountered in internship training, research projects, and job possibilities. Upon completion, students will be able to use their new skills in reaching solutions to the many diversified problems in the area of public administration. Prerequisite: Dept. Chrp. Approval

**BUS-217 Ethics in Government****3 0 0 3**

This course introduces the student to developing an awareness of the ethical issues and problems within the public administration field. Emphasis is placed on building analytical skills; stimulating moral imagination; and recognizing the discretionary power of the administrator's role. Upon completion, students will be able to understand the moral dimensions of public administrative decision-making. Prerequisite: BUS 138

**BUS-231 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

**BUS-232 Small Business Start-up****3 0 0 3**

This course is designed for students with an interest in starting a small business. Emphasis is placed on the development of the business plan and the processes involved in acquiring funds, personnel, licenses, permits, and facilities. Upon completion, students will be able to develop and properly utilize a well-developed business plan for establishing a small business. Prerequisite: BUS 101 is recommended

**BUS-233 Human Resource 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 human resource management principles to the manager's function. Prerequisites: None

**BUS-234 Management****2 0 3 3**

This course introduces students to modern concepts of management. Emphasis is placed on team managements, goal setting, problem solving and the functions of management. Upon completion, students will be able to enter into the field of management. Prerequisites: None

**BUS-235 Small Business Management****2 0 3 3**

This course is designed for students with an interest in managing or owning a small business. Topics include getting started, planning and managerial skills, inventory, financial, production, risk, ethics, marketing, taxation and various forms of analysis. Upon completion, students will be able to start and manage a successful small business. Prerequisites: None

**BUS-236 Integrative Management 3 2 0 4**

This course includes business simulations which require students to make analyses and decisions in all the functional areas of a business. Emphasis is placed on decisions in the areas of management, marketing, production, purchasing, and finance. Upon completion, students will be able to better perform the variety of analytical and decision requirements that they will face in a business. Prerequisites: BUS 123, CAS 128, BUS 234, MKT 139 or 224, and BUS 233

**BUS-237 Public Personnel Admin 3 0 0 3**

This course examines the role of people in public organizations, the personnel functions from recruitment to selection and career development. Topics include the Civil Service system, Public Employee unions, Employee-Employer relations, and personnel functions and the merit system. Upon completion, students will be able to exercise critical judgment in matters of personnel administration. Prerequisite: BUS 138

**BUS-238 Problems of Public Admin 3 0 0 3**

This course is an analysis of contemporary problems related to the administration of public organization. Topics include organizational theory, human resources, decision making, and control of administration by congress and courts. Upon completion, students will be able to explain the administration of governmental affairs by describing, critically analyzing, and interrelating administrative theories and practices. Prerequisite: BUS 138

**BUS-240 Public Finance 3 0 0 3**

This course presents students an understanding of a government budget and its allocation of financial resources through political processes to serve differing human purposes. Topics include government expenditures, the revenue policy, the taxation policy, and the relations of government finance to its economy. Upon completion, students will be able to explain the effects of government revenue and expenditure policies on the fulfillment of allocation, distribution, and stabilization objectives. Prerequisites: None

**BUS-241 Public Policy Analysis 3 0 0 3**

This course is a study of the methods and techniques used to determine the effectiveness of public programs. Emphasis is placed on the concept of Ecology; Informal Groups; Information Networks and the relationships between the Public and Private Sectors. Upon completion, students will be able to analyze case studies with the use of policy analysis techniques. Prerequisite: BUS 138

**BUS-245 Total Quality Management 2 2 0 3**

This course introduces the philosophy of Total Quality Management and techniques for increasing customer satisfaction by continually improving the quality of products and services provided. Emphasis is placed on understanding Total Quality principles, developing critical thinking skills, and working as a member of a team. Upon completion, students will be able to apply the total quality processes and the continuous improvement tools with a focus on customer needs. Prerequisites: None

**BUS-250 Public Budgeting 3 0 0 3**

This course introduces the student to the process and politics used to allocate public resources. Emphasis is placed on the political environment of the public budgeting process; budgetary theories and techniques and analytical methods of evaluation. Upon completion, students will be able to understand the role of the budgeting in the determinative of governmental policy, and inter-governmental relations. Prerequisites: None

**CAB-1110 Shop Operations****3 0 3 4**

This course provides considerations for establishing and maintaining a custom cabinet shop. Topics include financing, equipment acquisition, maintenance, inventory, OSHA requirements, shop layout, benefit programs and product delivery systems. Upon completion, students will be able to effectively organize and maintain a custom cabinet business. Prerequisites: None

**CAB-1111 Cabinetmaking I****4 0 12 8**

This course introduces wood technology, purchasing considerations and cabinet construction. Topics include wood identification and use, hand tools, machine operations, wood joinery, cabinet nomenclature and variations in cabinet construction. Upon completion, students will be able to select appropriate wood species for projects, process these materials and make the proper production decisions. Prerequisites: None

**CAB-1112 Cabinetmaking II****5 0 15 10**

This course is a continuation of Cabinetmaking I and introduces design considerations, cost estimating, contracts and finishing techniques. Topics include kitchen and bath layout and design, plastic laminate application, drawer construction, customer relations, job estimating and finishing methods. Upon completion, students will be able to measure, design, build and install kitchen and bathroom cabinets while maintaining good customer relations. Prerequisite: CAB 1111

**CAB-1115 Cabinetmaking III****5 0 15 10**

This course includes utilization of skills learned in previous classes, incorporates special cabinet requirements and introduces furniture construction. Topics include special counter top design, 32 MM cabinetry, millwork projects, furniture design and repair, and methods to increase productivity. Upon completion, students will be able to design and construct unique kitchen counter tops, understand repair techniques, and have the skills to produce quality products. Prerequisites: CAB 1112

**CAB-1116 Cabinetmaking IV****6 2 15 12**

This course provides students the opportunity to design and build a piece of furniture, cabinet or millwork project of their choosing. Emphasis is placed on wood carving, inlaying, forming cabriole legs for furniture, veneering and special finishing innovations. Upon completion, students will be able to complete a variety of woodworking projects. Prerequisite: CAB 1115

**CAR-1101 Carpentry****5 0 15 10**

This course introduces the tools, materials, and procedures of the construction industry. Topics include operation, care, and safety of carpenters' tools, preparation of building site, building layout, footings, and foundation construction. Upon completion, students will be able to use carpenters' tools safely, select materials, interpret prints and specifications, and lay out foundation lines. Prerequisites: None

**CAR-1101A Carpentry****1 0 6 3**

This course introduces the tools, materials, and procedures of the construction industry. Topics include operation, care, and safety of carpenters' hand tools, and an introduction to power tools. Upon completion, students will be able to use carpenters' tools safely. Prerequisites: None

**CAR-1101B Carpentry**

1 0 6 3

This course is a continuation of 1101A with advanced studies of tool use and an introduction to materials and building procedures. Topics include proper use of power tools and materials and preparation of building site. Upon completion, students will be able to use carpenters' power tools safely and will have a knowledge of site preparation. Prerequisite: CAR 1101A

**CAR-1101C Carpentry**

3 0 3 4

This course is a continuation of CAR 1101B with advanced studies of building procedures and introduces footing and foundation construction. Topics include building layout, footings, and foundation construction. Upon completion, students will be able to use carpenters' tools safely, select materials, interpret prints and specifications, and lay out foundation lines. Prerequisite: CAR 1101B

**CAR-1102 Carpentry Framing**

5 0 15 10

This course introduces the principles and practices of framing for residential construction. Topics include selecting and installing sills, girders, joists, bridging, subflooring, studs, rafters, trusses, and bracing. Upon completion, students will be able to lay out and frame floor, wall, and roof systems. Prerequisites: None

**CAR-1103 Exterior Finish Carpentry**

5 0 15 10

This course covers exterior trim and finish carpentry. Emphasis is placed on the selection of materials and methods of application used for exterior finish carpentry. Upon successful completion, students will be able to select and apply the exterior finish material to a residential structure. Prerequisites: None

**CAR-1104 Interior Finish Carpentry**

5 0 15 10

This course covers interior trim and finish carpentry. Emphasis is placed on the selection of materials and methods of application used for interior finish carpentry. Upon successful completion, students will be able to select and install the trim material used in residential structure. Prerequisites: None

**CAR-1113 Carpentry Estimating**

3 0 0 3

This course introduces the procedures for estimating the construction cost of residential buildings. Emphasis is placed on computing the quantities of materials required to construct various components and structures. Upon completion, students will be able to prepare a quantity take-off from prints and determine the cost of constructing a residential building. Prerequisites: None

**CAR-1114 Building Regulations**

3 0 0 3

This course covers building codes and the requirements for local and state construction regulations. Emphasis is placed on the minimum requirements of the North Carolina Building Codes relating to residential structures. Upon completion, students will be able to determine if a structure is in compliance with the North Carolina residential Building Codes. Prerequisites: None

**CAS-101 Intro to Microcomputers**

0 0 3 1

This course provides the student with an opportunity to gain a working level of competency in basic microcomputer operation and familiarization with the disk operating system (DOS). Emphasis is placed on learning the functions and uses of the components of microcomputers and how to use the disk operating system. Upon completion, students will be able to discuss the functions of computer components and be able to use the basic set of DOS commands to control the computer. Prerequisites: None

This course provides a student an opportunity to gain an advanced level of competency in DOS command operations, system files, and graphical user interfaces. Emphasis is placed on configuring a system and advanced use of the DOSHELL and WINDOWS graphical user interfaces. Upon completion, students will be familiar with system setup and memory management and will be able to use graphical user interfaces to control the computer. Prerequisite: CAS 101 or OSC 110

**CAS-126 Intro to Spreadsheets****0 0 3 1**

This course, using Lotus 1-2-3 software, is designed to introduce the student to basic, simple techniques for developing and using electronic spreadsheets in the business environment. Topics include the basic mathematical concepts of spreadsheets and template design, an introduction to graphics, and some of the more common business uses of spreadsheets. Upon completion, students will be familiar with basic spreadsheet concepts and be able to develop simple spreadsheets and graphs. Prerequisites: CAS 101 or OSC 110 and OSC 101

**CAS-128 Spreadsheets****2 0 3 3**

This course, with hands-on use of Lotus 1-2-3 software, is designed to help the student continue to improve and expand upon the basic techniques for developing and using spreadsheets developed in the CAS 126 intro course. Emphasis is placed on in-depth business math and database spreadsheet concepts and analysis, graphs, template design, macros and common business spreadsheet uses. Upon completion, students will be familiar with spreadsheet concepts and practices and will be able to develop spreadsheets, graphs, spreadsheet database products, templates, macros, and use spreadsheet analysis techniques. Prerequisites: CAS 126

**CAS-130 Micro Data Management****0 0 3 1**

This course is designed to introduce database management concepts, strategies, and specific commands used to manipulate files using dBase III Plus software. Topics include database terminology, creating and managing files, retrieving file information and designing reports. Upon completion, students will be able to design, search, organize, retrieve a file and produce reports and labels. Prerequisites: OSC 110 or CAS 101

**CAS-132 Advanced Spreadsheets****1 0 3 2**

This course is a continuation of CAS 128. Emphasis is placed on the more complex features of spreadsheet software. Upon completion of the course, students will be able to use advanced spreadsheet techniques in business. Prerequisite: CAS 128

**CAS-134 Integrated Software Appli****2 0 3 3**

This course teaches the strategies to carry out data transfer among software programs and also teaches the various features of WordPerfect Office. Emphasis will be placed on data interchange among dBase III+, Lotus 1-2-3, WordPerfect, WordStar, and Display Write 4 plus the capabilities of electronic mail, calendaring, and scheduling will be explored. Upon completion, the student should be able to integrate data to produce business documents to communicate by computer through a networked system. Prerequisites: CAS 130, OSC 118, and CAS 126

**CAS-136 Desktop Publishing****1 0 3 2**

This course is designed to prepare students for desktop publishing applications. Emphasis is placed on key layout and graphic design techniques, printing terminology, typography, composition and article placement in addition to hardware requirements. Upon completion, students will be able to use the mouse and access the menu systems of the major software packages. Prerequisites: OSC 101 and CAS 103



**CAS-137 Advanced Micro Data Mgt****1 0 3 2**

This course is a continuation of CAS 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: CAS 130

**CAS-138 Bus Graphics Presentation****1 0 3 2**

This course is designed to enable students to gain a working level of competency in preparing presentation material and making business presentations using business graphics software. Emphasis is placed on essential theory of business graphics with several examples of graphic applications in the business world today. Upon completion, students will be able to use business graphics software to prepare presentation material, and develop and make a presentation using graphics software and the computer. Prerequisites: CAS 128 or equiv. PC experience.

**CAS-140 Data Access****3 0 3 4**

This course is designed to introduce students to the basic fundamentals of data access from both commercial and noncommercial networks but with major emphasis on the Internet. The three major services provided by the Internet—remote login (telnet), file transfer (ftp), and electronic mail (email)—will be covered along with information about getting an Internet connection. Tools for navigating the Internet such as Archie, WAIS, Gopher, MOSIAC, and World Wide Web and major research systems such as CARL, DIALOG, OCLC, and ERIC will be utilized during the course. Internetiquette, or acceptable behaviors and standards of conduct on the Internet, will be discussed. Prerequisite: CAS 101 or equivalent

**CAS-142 Video Integration I****3 2 0 4**

This course provides a student an opportunity to gain an advanced level of competency integration of digital and analog video into distance learning facilities, stand-alone personal computers, and local/wide area networks. Emphasis is placed on configuration, troubleshooting and management of video resources. Upon completion, students will be familiar with video setup and configurations and will be able to integrate video resources. Prerequisites: CAS 103 and CSC 200

**CAS-144 Media Sys. Design/Impl.****3 2 0 4**

This course provides the student with experience in the design and implementation of an entire multimedia platform. Emphasis is placed on using the system life cycle method and structured design techniques to design media integration platforms, scheduling the project for completion within a specified time and preparation of an implementation plan for a system. Upon completion, the student will be able to design and implement an appropriate multimedia platform based on user provided specifications. Prerequisite: CAS 142

**CAS-146 Audio Integration****3 2 0 4**

This course provides a student an opportunity to gain an advanced level of competency in integration of digital audio into distance learning facilities, stand-alone personal computers, and local/wide area networks. Emphasis is placed on configuration, troubleshooting and management of audio resources. Upon completion, students will be familiar with audio setup and configurations and will be able to integrate audio resources. Prerequisites: CAS 103 and CSC 200

**CAS-203 Advanced Desktop Publish****1 0 3 2**

This course is designed to prepare students for advanced desktop publishing applications. Emphasis is placed on creating, designing, and editing business forms, brochures, financial reports, newsletters and a catalog. Upon completion, the student will be able to prepare multipage documents from word processing text and place graphics using a scanner. Prerequisite: CAS 136

**CAS-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: CSC 114

**CAS-215 UNIX Operating System****3 0 3 4**

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: CSC 104 and 1 programming course

**CAS-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: CSC 114

**CAS-218 Network Technology****2 0 6 4**

This course continues the concepts of data communications covered in CAS 217, Data Communications. Topics include LAN concepts, hardware and software components, installation of a Novell file server and system administration of a simple local area network. Upon completion, students will be able to install and maintain a local area network, using Novell Netware. Prerequisite: CAS 217 or equivalent

**CAS-226 Computers/Funeral Serv****0 0 3 1**

This course introduces the student to automated record keeping in the funeral service environment. Topics include automated case documentation, service arrangement, merchandise, selection cemetery, physician, and account information, stored and retrieved from the computer. Upon completion, students will be able to prepare standard printouts to include death certificates, V.A. forms, account information, obituaries, etc. Prerequisite: CAS 101 preferred

**CAS-240 Computer Programming Proj****2 0 9 5**

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. Prerequisite: 6th quarter standing

**CER-153 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

**CER-154 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

**CER-261 Ceramics II** 5 0 0 5

This course is designed to help the student develop advanced skills and knowledge in the creation of hand-built vessels. Emphasis is placed on design, technique combinations, surface decoration, originality, and creativity. Upon completion, students will be able to create hand-built vessels, glaze, and fire their work. Prerequisites: CER 153

**CER-271 Pottery II** 5 0 0 5

This course is designed to help the student develop advanced skills and knowledge in the use of the pottery wheel as a tool to create various vessels. Emphasis is placed on technique, form, function, decoration, and originality. Upon completion, students will be able to create pottery on the wheel, glaze, fire and prepare for an exhibit or craft show. Prerequisite: CER 154

**CHM-101X Chemistry I** 3 0 0 3

This course is an introduction to the chemical principles of inorganic compounds. Emphasis is placed on atomic structures, bonding, nomenclature, reactions, and stoichiometric calculations. Upon completion, students will be able to explain the structure, nomenclature, and reaction of elements and compounds. Prerequisite: Algebra

**CHM-101Y CHM-101 Lab** 0 2 0 1

This course is an introductory chemistry lab that supports the instructional material in CHM 101X. Emphasis is placed on safety, techniques, and scientific observations as students perform selected experiments utilizing concrete examples of CHM 101X concepts. Upon completion, students will be able to apply the chemistry concepts discussed in CHM 101X by observing concrete examples of the concepts. Prerequisite: Algebra

**CHM-102X Chemistry II** 3 0 0 3

This course is a continuation of CHM-101X with further study of inorganic reactions and an introduction to organic chemistry. Topics include gas laws, solutions, acids, bases, salts, redox, kinetics, and structure and nomenclature of inorganic compounds. Upon completion, students will be able to understand the basic gas laws, solutions, chemical kinetics, and basic organic chemical nomenclature. Prerequisite: CHM 101X; Corequisite: CHM 102Y

**CHM-102Y Chemistry 102 Lab** 0 2 0 1

This course is an introductory lab that supports the instructional materials in CHM-102X. Emphasis is placed on safety, techniques and scientific observations as they perform selected experiments that show concrete examples of concepts. Upon completion, students will be able to apply the chemistry concepts discussed in CHM-102X by observing concrete examples of the concepts. Prerequisite: CHM 101Y; Corequisite: CHM 102X

**CHM-151X General Chemistry I** 5 0 0 5

This course is an introduction to inorganic chemistry. Topics include formulas, equations, stoichiometry, bonding, nomenclature, kinetic theory, solution, and acid, bases, and salts. Upon completion, students will be able to explain the structure, nomenclature, and reaction of various inorganic compounds. Prerequisite: College Algebra; Corequisite: CHM 151Y

**CHM-151Y CHM-151 Lab**

0 0 3 1

This course is an introduction chemistry lab that supports instructional materials in CHM-151X. Emphasis is placed on safety, techniques, and scientific observations as students perform selected experiments utilizing concrete examples of CHM-151X concepts. Upon completion, students will be able to better understand the concepts of CHM-151X because of the concrete examples they observed. Prerequisite: College Algebra; Corequisite: CHM-151X

**CHM-152X General Chemistry II**

5 0 0 5

This course is a continuation of CHM 151 with a further study of redox reactions, thermodynamics, kinetic and organic chemistry. Topics include oxidation, reduction, chemical kinetics, equilibrium, electrochemistry, simple hydrocarbon, and functional groups. Upon completion, students will be able to explain the kinetics of chemical reactions, name and draw structure for simple organic compounds. Prerequisites: College Algebra, CHM 151; Corequisite: CHM 152Y

**CHM-152Y CHM-152 Lab**

0 0 3 1

This course is an introduction chemistry lab that supports instructional material in CHM 152X. Emphasis is placed on safety, techniques, and scientific observations as students perform selected experiments utilizing concrete examples of CHM 152X concepts. Upon completion, students will be able to better understand the concepts of CHM 152X because of the concrete examples they observed. Prerequisites: College Algebra, CHM 151X, CHM 151Y; Corequisite: CHM 152X

**CHM-251X Organic Chemistry I**

5 0 0 5

This course is designed to introduce students to the study of hydrocarbons as well as alkyl halides and alcohols. Emphasis is placed on nomenclature, structure, stereoisomerism, properties, preparation, and reactions of aliphatic and aromatic hydrocarbons, alkyl halides, and alcohols. Upon completion, students will be able to distinguish between alkanes, alkynes, aromatic hydrocarbons, alkyl halides and alcohols. Prerequisite: CHM-152; Corequisite CHM-251Y.

**CHM-251Y CHM-251 Lab**

0 0 3 1

This course is an introductory chemistry lab that supports instructional materials in CHM-251X. Emphasis is placed on safety, techniques. And scientific observations as students perform selected experiments utilizing concrete examples of CHM-251X concepts. Upon completion, students will be able to better understand the concepts of CHM-251X because of the concrete examples they observed. Prerequisite: CHM-152; Corequisite: CHM-251X.

**CHM-252X Organic Chemistry II**

5 0 0 5

This course is a continuation of CHM-251 and introduces ethers, phenols, aldehydes, ketones, carboxylic acids, and their derivatives. Emphasis is placed on nomenclature, structure, properties, and preparations and reactions of these organic functional groups. Upon completion, students will be able to recognize and distinguish between ethers, phenols, aldehydes, ketones, carboxylic acids, and their derivatives. Prerequisite: CHM-251; Corequisite: CHM-252Y.

**CHM-252Y CHM-252 Lab**

0 0 3 1

This course is an introductory chemistry lab that supports instructional material in CHM-252X. Emphasis is placed on safety, techniques, and scientific observations as students perform selected experiments utilizing concrete examples of CHM-252X concepts. Upon completion, students will be able to better understand the concepts of CHM-252X because of the concrete examples they observed. Prerequisite: CHM-251; Corequisite: CHM-252X.

This course covers the principles and methods of volumetric and gravimetric analysis. Emphasis is placed on the stoichiometric calculations of quantitative analysis. Upon completion, students will be able to perform instrumental as well as classical quantitative analytical procedures. Prerequisite: CHM-152.

**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: 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-105 Civil CAD I**

2 0 6 4

This course introduces the student to computer aided drafting. Emphasis is placed on AUTOCAD as the skeletal framework for specific civil engineering software. Upon completion, students will be able to make simple civil engineering drawings using computers and associated plotters. Prerequisites: None

**CIV-106 Civil CAD II**

1 0 6 3

This course is a continuation of Civil CAD I. Emphasis is placed on understanding and drawing steel, concrete, and wood structural details using CAD and conventional methods. Upon completion, students will be able to interpret and draft plans and details of basic structures. Prerequisite: CIV 105

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 programs 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-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. Prerequisite: MAT 115

**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. Prerequisite: MAT 116

**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 116 and PHY 101

**CIV-210 Const. Methods & Mgt****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-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-220 Hydraulics & Drainage****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 116 and PHY 102

**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-226 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: None

**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

**CIV-228 City & Regional Planning****3 0 0 3**

This course presents an 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. Prerequisites: None

**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 220 and CIV 227

**CIV-230 Design 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: SRV 103, CIV 202, and CIV 227

**CJC-100 Basic Law Enforcement Trn****15 0 30 25**

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

**CJC-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

**CJC-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

**CJC-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

**CJC-104 Law Enforcement Operations****3 0 0 3**

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

**CJC-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

**CJC-106 Correctional Counseling****4 2 0 5**

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 CJC 105 or instructor consent

**CJC-107 Comm Based Corrections****5 0 0 5**

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. Prerequisites: CJC 105 or instructor consent

**CJC-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: CJC 102 or Instructor consent



**CJC-109 Search and Seizure****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: CJC 102

**CJC-110 Investigative 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

**CJC-112 Confinement Facilities****5 0 0 5**

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

**CJC-114 Organizational Theory****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

**CJC-115 Crime Victims****3 0 0 3**

This course is an objective study of the myths and realities pertaining to crime victims based on research and case studies. Topics include street crimes, missing and abused children, victims of bias crimes and persons injured or killed by drunk drivers. Upon completion, students will be able to identify the characteristics of victims as they relate to specific crimes and the role of the police, courts and related agencies in response to the crime victims. Prerequisites: None

**CJC-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: CJC 102

**CJC-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: Second year standing or Instructor consent

**CJC-209 Juvenile Delinquency** 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: CJC 103 or Instructor consent

**CJC-210 Criminal Investigation I** 4 2 0 5

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

**CJC-211 Community Relations** 3 2 0 4

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

**CJC-212 Prisoners Rights** 3 0 0 3

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: CJC 102

**CJC-214 Criminal Investigation II** 4 2 0 5

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: CJC 210

**CJC-219 Intro to Criminalistics** 4 2 0 5

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, luminal, 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. Prerequisites: None

**CJC-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

**CJC-231 Intro to Security 3 0 0 3**

This course provides an overview of the role of Security and the security Practitioner 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

**CJC-232 Advanced Security 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: CJC 231

**COE-101 Personal Develop & Comm 3 0 0 3**

This course is designed to help students develop skills necessary for academic success in their chosen curricula and learn employability skills. Emphasis is placed on study and test taking skills, resume development, interview techniques and job search strategies. Upon completion, students will be able to exhibit student success skills and demonstrate how to conduct a job search. Prerequisites: None

**COE-110 Food Serv Internship I 0 0 20 2**

This course includes work in a foodservice operation under the direction of the instructor and with the cooperation of the employer. Training areas include sanitation, warehousing, service (plate, tray set up), and meat, vegetables, salads, breads, desserts, and beverage preparation. Upon completion, students will be able to apply these techniques in the foodservice industry areas. Prerequisites: All other foodservice courses

**COE-111 Cooperative Work Exper 0 0 10 1**

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-112 Cooperative Work Exper 0 0 10 1**

refer to COE 111.

**COE-113 Cooperative Work Exper 0 0 10 1**

refer to COE 111.

**COE-114 Cooperative Work Exper 0 0 10 1**

refer to COE 111.

**COE-115 Cooperative Work Exper 0 0 10 1**

refer to COE 111.

**COE-116 Cooperative Work Exper 0 0 10 1**

refer to COE 111.

<b>COE-117</b>	<b>Cooperative Work Exper</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>
	refer to COE 111.				
<b>COE-118</b>	<b>Cooperative Work Exper</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>
	refer to COE 111.				
<b>COE-119</b>	<b>Cooperative Work Exper</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>
	refer to COE 111.				
<b>COE-121</b>	<b>Cooperative Work Exper</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>2</b>
	refer to COE 111.				
<b>COE-122</b>	<b>Cooperative Work Exper</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>2</b>
	refer to COE 111.				
<b>COE-123</b>	<b>Cooperative Work Exper</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>2</b>
	refer to COE 111.				
<b>COE-124</b>	<b>Cooperative Work Exper</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>2</b>
	refer to COE 111.				
<b>COE-131</b>	<b>Automotive Co-Op Work Exp</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>3</b>

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.

<b>COE-132</b>	<b>Automotive Co-Op Work Exp</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>3</b>
	refer to COE 131.				

<b>COE-202</b>	<b>Programming Practicum</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>2</b>
	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				

<b>COE-210</b>	<b>Food Serv Internship II</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>2</b>
	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				

**COE-212 FSE Embalming Practicum I****0 0 10 1**

This course is designed for students with the general knowledge of embalming techniques. Emphasis is placed on the actual preparation of the remains in a funeral home. Upon completion, students will be able to utilize sanitation and disinfection procedures properly and prepare the body for burial. Prerequisites: None

**COE-213 FSE Embalming Practicum II****0 0 10 1**

This course is a continuation of COE 212 and covers proficient embalming skills which the student is required to demonstrate. Emphasis is placed on the student's ability to understand and relate to the actual embalming process. Upon completion, students will be able to analyze each case to determine the proper techniques to be used in that particular embalming situation. Prerequisite: COE 212

**COE-216 EMS Practicum****0 0 10 1**

This course focuses on providing an opportunity for intensive experience in the field ambulance at the paramedic level. Emphasis is placed on perception of skills in actual field situations by paramedics. Upon completion, students will have achieved the national and state requirements for a paramedic training program. Prerequisite: EMS 230

**COE-218 FSE Professional Practicum****0 0 20 2**

This course will provide experience in the funeral home under the direction of a licensed funeral director. Emphasis is placed on all phases of funeral service operations in and around the funeral home. Upon completion, students will be able to function more professionally within the funeral service environment. Prerequisite: Dept. Chrp. Approval

**COE-220 Secretarial Internship****0 0 10 1**

This course provides assistance in the development of office responsibilities, office ethics, and office work habits through on-the-job work experience. Emphasis is placed on the application of acquired academic skills and on the acquisition of additional knowledge encountered in the practicum. Upon completion, students will be able to use the experience and the skills gained to become successfully employed in the office. Prerequisites: Advisor consent and 1.85 GPA

**COE-224 LEX Internship****0 20 0 2**

This course includes supervised on-the-job training in a law office for twenty 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 have been involved in the actual workings of an office and have put skills learned in class into practice. Prerequisites: All courses except LEX 216, LEX 217, and the elective; Corequisite: LEX 230

**COE-226 Intern In Public Admin****0 0 10 1**

This course provides students an opportunity to work in a public administration setting, ten (10) hours per week, under close supervision. Emphasis is placed on skills acquired during academic training and to gain additional skills and knowledge from on-the-job work experience. Upon completion, students will be able to apply for entry into middle-management positions in state and local government and nonprofit organizations. Prerequisite: Dept. Chrp. Approval

**COE-231 Automotive Co-Op Work Exp****0 0 30 3**

refer to COE 131.

**COE-232 Automotive Co-Op Work Exp** 0 0 30 3

refer to COE 131.

**COS-1101 Intro To Cosmetology** 2 0 0 2

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

**CSC-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

**CSC-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

**CSC-109 COBOL I****4 0 3 5**

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. Prerequisites: CSC 103 and CSC 104

**CSC-110 COBOL II****4 0 3 5**

This course is a continuation of CSC 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: CSC 109

**CSC-114 Operating Systems****3 0 3 4**

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. Prerequisite: CSC 116 or CSC 109

**CSC-116 Business BASIC Language****3 0 3 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: CSC 103

**CSC-117 BASIC Prog. Using Windows****3 0 3 4**

This course is a continuation of CSC 116, including more advanced programming concepts and techniques in the BASIC language using object-oriented programming methods. Topics include designing graphical user interface, interactive data entry and validation, sorts, menus, and sequential and random access file handling. Upon completion, students will be able to develop a event-driven window based business applications. Prerequisite: CSC 116

**CSC-119 Circuit Analysis w/Pascal****3 2 0 4**

This course introduces the programming language Pascal to students in Electronics Engineering Technology. Topics include an introduction to 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. Prerequisites: ELC 103X and ELC 103Y

**CSC-130 Hardware Selection****3 0 0 3**

This course introduces multimedia technicians to the hardware selection process, emphasizing user requirements and system specifications as well as economic issues. Topics include determining basic hardware requirements, minimum acceptable specifications, economic considerations, preparing RFPs and final selection criteria. Upon completion, students will be able to develop hardware selection criteria and select the best hardware solution to provide users with an acceptable multimedia platform. Prerequisites: CAS 103 and CSC 200

**CSC-200 Care & Upgrade of Micros****1 0 3 2**

This course is designed to provide business students with non-technical skills in the setup, operations, and limited user/operator maintenance and care of microcomputers. Emphasis is placed on micro- computer installation, conversion, expansion, upgrade, troubleshooting and maintenance for IBM Micros and compatibles from a non-technical aspect. Upon completion, students will be able to install, upgrade, operate, troubleshoot and perform operator maintenance and component replacement of the IBM family and compatible computers. Prerequisite: CAS 101 or equivalent PC/Micro experience/familiarization

**CSC-204 COBOL III****4 0 3 5**

This course is a continuation of the concepts and techniques of programming in COBOL begun in CSC 109 and CSC 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: CSC 110

**CSC-205 Assembler Language PC****3 0 3 4**

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: CSC 114

**CSC-207 FORTRAN****3 0 3 4**

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. Prerequisite: CSC 109 or CSC 116.



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: CSC 103, CSC 104, and CSC 109 or equiv. programming experience.

**CSC-213 Data Base Programming****3 0 3 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: CAS 212

**CSC-218 C Language I****3 0 3 4**

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

**CSC-219 C Language II****3 0 3 4**

This course is a continuation of CSC 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: CSC 218

**CSC-220 Systems Analysis/Design****4 0 0 4**

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, file organization, and design with emphasis on CASE software. Upon completion, students will be able to analyze and design a business data processing system. Prerequisite: CSC 110

**CSC-221 System Implementation****3 0 3 4**

This course is a continuation of the concepts of systems analysis and design begun in CSC-220. Topics include file organization emphasizing indexed files, data base design, hardware and software procurement, and on-line processing. Upon completion, students will be able to analyze, design, and produce a business data processing system utilizing indexed file organizations. Prerequisites: CSC-220 and CSC-204

**CSC-224 System Administration****1 0 6 3**

This course covers the basic principles of computer systems administration. Topics include hardware and software resources, job control languages, operating systems, input/output devices and secondary storage devices. Upon completion, students will be able to efficiently manage system resources using system software and hardware tools. Prerequisite: CSC 114

**CSC-226 Intro to C++ Programming**

3 0 3 4

This course introduces C programmers to the C++ programming language, emphasizing development of systems and business applications using object oriented programming techniques. Topics include object oriented programming concepts, C++ classes, function overloading, polymorphism, stream I/O, file handling, templates, and exception handling. Upon completion, students will be able to develop and implement complex applications using C++ and involving advanced object oriented programming techniques. Prerequisite: CSC 218 or Equivalent C Programming Experience

**CSC-230 RPG Language I**

3 0 3 4

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, exception output, arrays and tables. Upon completion, students will be able to write RPG-II report generation programs for a variety of business problems. Prerequisites: CSC 109 and CSC 116

**CSC-231 RPG Language II**

3 0 3 4

This course is a continuation of CSC 230 and emphasizes features of the RPG-III programming language. Topics include structured programming, DO loops, creating and maintaining physical and logical files, and design of interactive systems. Upon completion, students will be able to demonstrate competency in writing business applications in RPG-III. Prerequisite: CSC 230

**CSC-240 Tech Implementation Proj**

3 0 6 5

This course provides the student with experience in the design and implementation of an entire multimedia platform. Emphasis is placed on designing an appropriate media integration platform, scheduling the project for completion within eleven weeks and implementing a functioning media platform that meets user requirements. Upon completion, the student will be able to function as a media integration technician in a multimedia environment. Prerequisites: CAS 144 and 6th Quarter Standing

**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. Prerequisite: DEN 1011X; 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 structure 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. Prerequisite: Prior approval for DA Curriculum

**DEN-1008 Dental Infection Control****2 0 0 2**

This course is designed to provide students with necessary infection control policies and procedures. Topics include microbiology, aseptic techniques, sterilization, disinfection, OSHA policies, and implementation of infection control procedures. Upon completion, students will be able to understand infectious diseases, disease transmission, infection control procedures, universal precautions, biohazard management and OSHA guidelines in the dental office. Prerequisite: Prior approval into DA curriculum

**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. Prerequisite: Prior approval for DA Curriculum

**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

**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****3 0 0 3**

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: Prior approval into DA curriculum

**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: Prior approval into DA curriculum

**DEN-1020X 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. Prerequisite: DEN 1011X

**DEN-1020Y DEN-1020 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

**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

**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

**DEN-1023X Dental 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

**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

**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-1026 Dental Office Emergencies****2 0 0 2**

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

**DEN-1030X Dental Materials II** 2 0 0 2

This course is a continuation of DEN 1020 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 1020

**DEN-1030Y DEN-1030 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 1020

**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, DEN 1014, DEN 1021, DEN 1023, and DEN 1034

**DEN-1032 Dental Office Management** 3 0 0 3

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. Prerequisite: DEN 1034X

**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 DEN 1021

**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 DEN 1021

**DEN-1040 Dental Office Practice I** 1 0 39 14

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 1014, 1021, DEN 1023, DEN 1030 and DEN 1034

**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

**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, OCHA requirements, patient evaluation to include medical histories, oral inspections, and soft and hard deposits. Upon completion, students will be able to state the importance of equipment care, patient evaluation, and procedures leading to the oral prophylaxis. Prerequisites: None

**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

**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 160 and DEN 112

**DEN-116 Dental Emergency Care** 1 0 0 1

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. 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 gingiva and its related structures, principles of instrumentation, sharpening and polishing, and oral hygiene instructions. Upon completion, students will be able to explain the principles for performing the oral prophylaxis. Prerequisite: DEN 111X and DEN 111Y

**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

**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****3 0 0 3**

This course is a continuation of DEN 121 in which the students will expand their knowledge of patient care. Topics include fluorides, occlusion, diseases of the teeth and oral cavity and special needs patients. Upon completion, students will be able to understand the principles of fluorides and the needs of special patients. Prerequisite: DEN 121

**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

**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

**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

**DEN-141X Dental Hygiene IV****1 0 0 1**

This course is a continuation of DEN-131 in which the students will learn how to deal with special patient needs. Emphasis is placed on the patient with oral cancer, 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 131

**DEN-141Y DEN-141 Lab****0 0 6 2**

This course is a continuation of DEN 131Y, allowing students the opportunity to put into practice techniques learned in DEN 141X. Emphasis is placed on usage of the ultrasonic scaler, the use of the phase contrast microscope, and the PDR. Upon completion, students will be able to perform clinical procedures effectively in accordance with pre-existing criteria. Prerequisite: DEN 131Y

**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 prophylaxis jet. Upon completion, students will be able to demonstrate their knowledge in a clinical environment to a pre-established criteria. Prerequisite: DEN 141

**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 prophylaxis, radiographs, and other expanded dental procedures effectively and in accordance with a pre-established criteria. Prerequisite: DEN 141

**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

**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

**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 162 and BIO 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 and 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 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 DEN 214, NUT 101



**DEN-221X Dental Hygiene VI****1 0 0 1**

This course is a continuation of DEN 211X in developing the theories and practices of patient care. Emphasis is placed on oral prophylaxis, polishing amalgams, sealant application, use of study models, and radiographs. Upon completion, students will be able to perform clinical procedures and expanded dental procedures effectively in accordance with preestablished criteria. Prerequisite: DEN 211

**DEN-221Y DEN-221 Lab****0 0 15 5**

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 performance of oral prophylaxis, polishing amalgams, sealant application, study models, and radiographic interpretation. Upon completion, students will be able to perform clinical procedures and expanded dental procedures effectively in accordance with preexisting criteria. Prerequisite: DEN 211Y

**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 DEN 122

**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 DEN 122

**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

**DEN-225Y DEN-225 Lab****0 2 0 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

**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

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 prophylaxis and other expanded dental procedures in accordance with pre-established criteria. Prerequisite: DEN 221

**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

**DES-104 Basic Design**

3 0 3 4

This course introduces the fundamentals of two-dimensional design through exercises which apply basic theories and concepts to visual problem solving. Emphasis is placed on manipulation of the elements of art as guided by the various principles of design. Upon completion, students will have a sense of visual order, enhanced manual and technical skills, and will be able to apply both toward the design of visual communications. Prerequisites: None

**DES-115 Advertising Design**

2 4 0 4

This course is an introduction to the study and application of basic design elements as they apply specifically to the field of Commercial Art/Advertising Design. Emphasis is placed on creative problem solving techniques for the advertising profession. Upon completion, students will recognize different types of ads, understand the elements of design in each and determine why one is more effective than another. Prerequisite: DES 104

**DES-135 Design Studio I**

3 0 3 4

This course is designed to apply skills thus far acquired to specific and practical graphic design assignments, such as covers, posters, advertisements, and brochures. Emphasis is placed on the concepts, procedures, research, and criteria the designer employs in problem solving. Upon completion, students will be able to explain the design process and the role and function of the designer. Prerequisites: DES 115 and GRA 108

**DES-205 Illustration I**

3 0 3 4

This course covers the creation of original illustrations in a wide range of media for a variety of communications needs. Topics include spot drawings and more complex assignments in various media such as watercolor, inks, markers, and collage. Upon completion, students will be able to deal with the requirements for reproduction and assess the appropriateness of concept and style in an illustration. Prerequisite: Full 4th quarter standing in curriculum

**DES-210 Layout 3 0 3 4**

This course is a continuation of Advertising Design. Emphasis is placed on the creative process, developing ideas, tools, techniques, layout stages, color, presentation, and various advertising media. Upon completion students will be able to develop an advertising concept from thumbnails through roughs to comprehensive form suitable for presentation to the client. Prerequisites: DES 135 and GRA 118

**DES-215 Illustration II 2 4 0 4**

This course is a continuation of DES 205 and concentrates primarily on the requirements for editorial and advertising illustration. Emphasis is placed on refining a methodology for the selection of appropriate form, style, and medium to interpret specific content. Upon completion, students will be able to apply advanced conceptual skills in understanding and creating images from the standpoints of cultural context and symbolic content. Prerequisite: DES 205

**DES-235 Design Studio II 2 4 0 4**

This course is designed to achieve more complex solutions to visual problems, sometimes using team or group efforts. Topics include projects which may be single, sequential, or multimedia in nature. Upon completion, students will be able to evaluate traditional design methods and assimilate new approaches to problem solving. Prerequisites: DES 135 and GRA 118

**DES-240 Portfolio 3 0 3 4**

This course covers preparation for employment in the profession, including refinement of existing samples and rounding out the scope of the portfolio. Emphasis is placed on writing and producing the resume, structuring the portfolio, and interviewing and presentation skills. Upon completion, students will be able to identify short- and long-range objectives and present themselves in a manner consistent with professionalism. Prerequisite: Full 6th quarter standing in curriculum

**DES-245 Client/Media Relations 2 4 0 4**

This course introduces the student to media pricing and scheduling. It also helps the student deal with clients and their advertising problems while using skills previously acquired. Upon completion, students will be able to communicate effectively with clients and media representatives and be able to keep the various elements of Commercial Art/Advertising Design in proper perspective. Prerequisites: Current enrollment as a sixth quarter Commercial Art/Advertising Design student with GPA of 2.0 or better or instructors consent.

**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-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: BPR 1104 and BPR 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 combination of these. Topics include intersection of planes, intersection of solids, visibility, 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. Prerequisite: DFT 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 1173

**DFT-1140 Cab Sketching & Drafting**

2 2 0 3

This course introduces basic concepts of sketching and drafting as related to kitchen cabinets, bathroom vanities, furniture construction and millwork projects. Emphasis is placed on the use of drafting tools, dimensioning, lettering and the language of drafting. Upon completion, students will be able to construct axonometric, oblique, perspective and orthographic projections and understand their application. Prerequisites: None

**DFT-1141 Cabinetry Design**

2 2 0 3

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-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** 1 0 3 2

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-1174 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. Prerequisite: MEC 1111

**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-1190X Industrial Drafting II** 1 2 0 2

This course provides instruction in several industrial drafting applications beginning with problems concerning precision and limit dimensioning. Emphasis is placed on simple designs, basic mechanisms, motion transfer and accurate drawings of these principles. Upon completion, students will be able to produce neat, accurate drawings incorporating these principles. Prerequisites: DFT 1173 and MEC 1111

**DFT-1190Y DFT-1190 Lab** 0 0 3 1

This course provides hands-on application of the principles and techniques introduced in DFT 1190X. Emphasis is placed on producing drawings of simple designs, basic mechanisms and accurately dimensioning these drawings. Upon completion, students will be able to produce accurate working drawings. Prerequisites: DFT 1173 and MEC 1111

**DFT-1191 Tool Drafting I/Computer** 1 0 6 3

This course introduces tool drafting as it relates to manufacturing and machine tools. Topics include basic drafting and design problems involving jigs and fixtures, and standard parts used in assembly of same using computer software. Upon completion, students will be able to produce drawings of basic tooling components. Prerequisites: DFT 1173 and MEC 1111

**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: DFT 1173 and MEC 1111

**DFT-1193X Industrial Drafting III**

1 0 3 2

This course introduces design sketching, design drawings, layout drafting, production drawings, and simplified drafting practices. Emphasis is placed on specifications, parts list and bill of materials. Upon completion, students will be able to produce a complete set of working drawings. Prerequisites: DFT 1190X and DFT 1190Y

**DFT-1193Y DFT-1193 Lab**

0 0 3 1

This course provides hands-on application of the principles and techniques introduced in DFT 1193X. Emphasis is placed on producing drawings including specifications, parts list and bill of materials. Upon completion, students will be able to produce a complete set of working drawings. Prerequisites: DFT 1190X and DFT 1190Y

**DFT-1194 Tool Drafting II/Computer**

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. Prerequisite: DFT 1191

**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

**DFT-121 Computer Aided Dft I**

1 0 3 2

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-122 Computer Aided Dft II**

1 0 3 2

This course is a continuation of DFT 121 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 121

**ECO-107 Free Enterprise Applic I**

0 0 3 1

This course provides students the opportunity to apply their communications and team-building skills in free enterprise projects. Topics include small-group activities that promote the free enterprise system to the community and that build self-esteem. Upon completion, students will be able to plan, organize and present free enterprise issues in innovative ways either as an individual or as part of a group. Prerequisites: ECO 152 and ECO 153 recommended

**ECO-108 Free Enterprise Applic II****0 0 3 1**

This course is a continuation of Free Enterprise Applications I. Topics include the continued participation in free enterprise activities and the building of self-esteem. Upon completion, students will be able to plan, organize and present a wider range of free enterprise issues in more innovative ways. Prerequisite: ECO 107

**ECO-109 Free Enterprise Appli III****0 0 3 1**

This course is a continuation of Free Enterprise Applications I and II. Topics include refinement of free enterprise activities and team-building skills culminating in participation in annual collegiate competitions. Upon completion, students will be able to plan, organize and present an extensive array of free enterprise issues in a wide range of innovative ways. Prerequisite: ECO 108

**ECO-151 Basic Economics****5 0 0 5**

This course is designed to improve the student's understanding of economics for non-business and non-economics majors. Topics include introduction to the principles of macroeconomics and microeconomics and their application to contemporary domestic and international relations. Upon completion, students will be able to relate basic economic principles to everyday situations. Prerequisites: None

**ECO-152 Macroeconomics****5 0 0 5**

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-153 Microeconomics****5 0 0 5**

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-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

**EDU-125 Childcare Credential I****3 0 0 3**

This course provides the first half of instruction necessary to qualify for the NC Child Care Credential. Areas of study include an introduction to the child care profession, child growth and development, and getting to know the whole child. Upon completion, the student will understand the caregiver's role in fostering quality child care. Prerequisites: None

**EDU-126 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-127 Creative Teaching****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-128 Childcare Credential II****3 0 0 3**

This course provides the second half of instruction necessary to qualify for the NC Child Care Credential. Areas of study include developmentally appropriate practices, positive guidance, and providing a safe and healthy environment. Upon completion, the student will be able to plan and prepare a safe, healthy, developmentally appropriate environment for young children. Prerequisite: EDU 125

**EDU-130 Creative Curr Activities****3 2 0 4**

This course spans the theoretical and developmental activities for children in the early primary grades (1-3). 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-131 Positive Discipline****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-132 Language Arts 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-134 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-135 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-136 Creative Writing & Speak****1 0 3 2**

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-137 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-225 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-226 Pgm Planning 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, students will be able to formulate their own philosophies and approaches to caring for young children. Prerequisites: None

**EDU-227 Childrens 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-228 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-229 Pgm Plng for Infants/Todd****3 2 0 4**

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-231 Child Care Applications****1 0 6 3**

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: EDU 128 and EDU 131

**EDU-232 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

This course focuses on the organization and administration of a child care program. Topics include planning, operating, and implementing the program with emphasis on state rules and regulations. Upon completion, students will be able to apply child care administration principles in programs for young children. Prerequisite: EDU 128

**ELC-101A Fundamentals of Elect I**

2 2 0 3

This course introduces the elementary principles of electricity with reference to direct current voltage sources. Topics include basic electric units, Ohm's Law, Kirchhoff's Laws, Super-position Theorem and Power. Upon completion, students will be able to analyze basic D.C. circuits. Prerequisites: None

**ELC-101B Fundamentals of Elect I**

2 2 0 4

This course is a continuation of elementary principles of electricity with reference to both alternating current and direct current voltage sources. Topics include Norton's 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: MAT 114 and ELC 101A

**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, Super-position 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

**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

**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. Prerequisites: ELC 101X and ELC 101Y

**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. Prerequisites: ELC 101X and ELC 101Y

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 ACDC Current**

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 ACDC Current**

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 ACDC Current**

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 ACDC Machines & Controls**

This course provides basic concepts of AC/DC current flow, inductive and capacitive reactance, phase angle impedance, 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 or ELC 1112C

**ELC-1113A ACDC Machines & Controls**

This course provides basic concepts of AC/DC current flow, inductive and capacitive reactance, phase angle impedance, 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 or ELC 1112C

**ELC-1113B ACDC Machines & Controls**

This course, a continuation of ELC 1113A, provides the basic concepts of AC/DC current flow, inductive and capacitive reactance, phase angle impedance, 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 1113A

**ELC-1113C ACDC 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 impedance, 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 1113B

**ELC-1123 National Electrical Code****4 0 0 4**

This course introduces the National Electrical Code and local and state laws covering installation of electrical wiring and equipment. Emphasis is placed on services, calculations, grounding wire size, types of insulation, motor control, and hazardous locations. Upon completion, students will be able to select materials and design equipment installation in accordance with the National Electrical Code. Prerequisites: None

**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 or ELC 1113C

**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-1124X Residential Wiring****5 0 6 7**

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 or ELC 1113C

**ELC-1124Y ELC-1124 Lab****0 0 3 1**

This course provides hands-on experience in installing wiring in residential applications. Topics include service, switchboards, branch circuits, fuses, breakers, and conduits. Upon completion, students will be able to install the service and wiring in a residential structure. Prerequisite: ELC 1113 or ELC 1113C

**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 1124X or ELC 1124B

**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-1125X Commercial & Indus Wiring**

5 4 3 8

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 conduit 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 1124X or ELC 1124B

**ELC-1125Y ELC-1125 Lab**

0 0 3 1

This course provides hands-on experience in installing wiring systems in commercial and industrial applications. Emphasis is placed on layout, floor plans, motor control, wire, conduit, heaters, and switches. Upon completion, students will be able to install conduit and connect wires to lights, receptacles, motor switches and panels. Prerequisite: ELC 1124X or ELC 1124B

**ELC-1131 Preventive Maintenance**

2 0 3 3

This course provides general preventive maintenance (P.M.) procedures for various types of electrical apparatus such as motors, switchgear, transformers, batteries, etc. Topics include instruction on setting up a P.M. Program with specifics concerning record keeping and evaluation of information gathered. Upon completion, students will be able to study chart recordings of current, voltage, temperature, and speed to aid in troubleshooting problems before they occur. Prerequisites: None

**ELC-1132 Ind. Instrumentation**

2 0 6 4

This course is a study of the basic principles and instruments used in the measurement and control of industrial processes. Emphasis is placed on electronic, pneumatic, and hydraulic measurement devices which measure and control temperature, pressure, flow, humidity, etc. Upon completion, students will be able to assist in maintaining and troubleshooting industrial instrumentation devices. Prerequisites: None

**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-140 Intro to Electricity**

4 6 0 7

This course introduces fundamental principles, concepts, and theories of direct and alternating current. Emphasis is placed on relationships among resistance, current, voltage, capacitance, inductance, time constants, and reactance; in the context of simple series, parallel, and series-parallel circuits. Upon completion, students will have a knowledge of basic D.C. And A.C. Circuits and laboratory methods of analysis associated with them. Prerequisites: None

This course is a study of the theory and operation of selected electromechanical devices used in industrial automatic control systems. Topics include electrical motors, sensors, actuators, and switching devices. Upon completion, students will be able to describe the operating characteristics and limitations of selected electromechanical devices. Prerequisite: ELN 1101

**ELN-100 Intro to Electronics**

3 2 0 4

This course is a study of electronic devices and circuits and their applications in electronic control circuitry. Topics include diodes, SCR's, 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 control circuitry. Prerequisites: None

**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. Prerequisites: ELC 101X and ELC 101Y

**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. Prerequisites: ELC 101X and ELC 101Y

**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: ELC 103X, ELC 103Y, ELN 103X and ELN 103Y

**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: ELC 103X, ELC 103Y, ELN 103X and ELN 103Y

**ELN-105X 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. Prerequisites: ELN 103X and ELN 103Y

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 circuits 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. Prerequisites: ELN 103X and ELN 103Y

**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 103X, ELC 103Y and MAT 115

**ELN-1101 Basic Electronics**

2 0 3 3

This course is a study of solid-state devices and usage of electronics by electricians in industry. Emphasis is placed on basic theory, construction and placement in equipment. Upon completion, students will be able to understand solid state and perform some maintenance procedures. Prerequisite: ELC 1113 or ELC 1113C

**ELN-1118 Industrial Electronics I**

3 0 6 5

This course covers operating characteristics and application of industrial electronics, such as switch gear, motor starters, time delay, counters, timers, power supplies and programmable controls. Emphasis is placed on push buttons and control stations, time relays, overload protection, individual dashpot relay, and programmable controllers. Upon completion, students will be able to perform maintenance, trouble-shoot industrial gear, and program simple logic. Prerequisite: ELC 1113 or ELC 1113C

**ELN-1119 Industrial Electronics II**

3 0 6 5

This course covers industrial electronic systems, such as motor controls, alarm system controls, welding controls, programmable controllers, and other basic types of industrial systems. Topics include solid state control, logic concept, and descriptions of programming devices. Upon completion, students will be able to perform maintenance, trouble-shoot industrial switch gear, and program simple logic. Prerequisite: ELC 1118

**ELN-120 Elec Testing Procedures**

3 0 3 4

This course provides a student an opportunity to gain a basic level of competency in using electronic testing equipment, software, and testing procedures. Emphasis is placed on procedures to troubleshoot potential problems at the hardware level. Prerequisites: None

**ELN-141 Solid State Devices**

4 6 0 7

This course is a study of electronic concepts dealing with solid state devices. Topics include characteristics, operation and functions of solid state devices. Upon completion, the student will be able to diagnose and troubleshoot solid state devices. Prerequisite: ELC 140

**ELN-142 Solid State Circuits**

2 4 0 4

This course is a study of active control devices and circuits. Topics include characteristics, performance, and troubleshooting. Upon completion, the student will be able to collect data, verify predictions, and troubleshoot solid state circuits. Prerequisite: ELN 141

**ELN-143 Digital Electronics** 4 6 0 7

This course examines basic numbering systems, computer logic, and computer organization. Topics include logic fundamentals, gates, logic symbols, diagrams, microcomputer terminology, machine language programming, and input/output devices. Upon completion, students will have an understanding of microcomputer logic and techniques of microcomputer programming and troubleshooting. Prerequisite: ELN 141

**ELN-144 Micro C Troubleshooting** 3 6 0 6

This course introduces the techniques required for troubleshooting and repairing microcomputers. Topics include flow diagrams, diagnostic software, and hands-on experience. Upon completion, the student will be able to analyze, diagnose, and repair microcomputers. Prerequisites: ELN 142 and ELN 143

**ELN-145 Computer Sys Diagnosis** 3 6 0 6

This course covers digital system diagnosis and repair. Topics include disk drives, printers, receivers, signal tracing procedures, and the proper use of tools and equipment used to troubleshoot and repair computer systems. Upon completion, students will be able to diagnose, calibrate and repair computer systems. Prerequisite: ELN 144

**ELN-206 Active Network 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. Prerequisites: ELN 104X and ELN 104Y

**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 ELN 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 ELN 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, ELN 209, and ELN 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, ELN 209, and ELN 214

**ELN-235 Indus Mechanisms & Instr**

5 6 0 8

This course introduces electro-mechanical and electronic circuits as they apply to industrial control systems. Topics include three phase systems, transducers, classification of control systems, measuring means, final control elements, and special solid state components. Upon completion, students will be able to understand the methods, techniques, and skill required for installation, service, and operation of various industrial control systems. Prerequisites: ELN 207, ELN 209, and ELN 216

**ELN-240 Industrial Appl. Of Micro**

4 0 3 5

This course is a continuation of ELN 216 with emphasis on the expanding family of special purpose chips and computer peripherals. Topics include theory of special purpose chips, computer peripherals, and computer applications to industrial processes. Upon completion, students will be able to maintain, modify, operate, and assist in the design of computers for industry. Prerequisite: ELN 216

**EMS-120 Intro to Emer Med Science**

4 2 0 5

This course introduces the student to the emergency medical care system, the components of the system, and their professional roles as emergency Medical Technicians. Topics include basic life support material and basic EMT skills presented in a class and laboratory setting. Upon completion, students will have fulfilled the first part of the Emergency Medical Technician-Basic program. Prerequisites: None

**EMS-121 Emergency Skills I**

3 2 6 6

This course is a continuation of material in EMS 120. Emphasis is placed on the fundamental cognitive and manipulative skills practiced in emergency medical care. Upon completion, students will be able to apply for the Emergency Medical Technician-Basic Level certification exam. Prerequisite: EMS 120

**EMS-130 Emergency Skills II**

7 6 0 10

This course covers principles involved in performing physical assessment, medical and trauma management. Topics include shock, intravenous therapy, MAST, EOA, combitube, intubation, semiautomatic defibrillators, subcutaneous injections, intermediate pharmacology and drug calculations. Upon completion, students will be able to apply for the Emergency Medical Technician-Intermediate level certification exam. Prerequisites: EMS 120 and EMS 121

**EMS-131 Clinical I**

0 0 6 2

This course provides initial advanced life support emergency medical experience in the clinical and field settings at the EMT-Intermediate level. Emphasis is placed on rotation sites which include the emergency department, IV team, venipuncture laboratory, clinics, and field ambulance. Upon completion, students will have fulfilled a component of the required rotational hours for these clinical sites. Prerequisites: EMS 120 and EMS 121

**EMS-132 Med Comm: Extrication/Res****2 2 0 3**

This course presents an introduction to medical communications, extrication, and rescue. Emphasis is placed on two-way radios, transmitting units, telemetry, disentanglement, packaging, and removal of patient. Upon completion, students will have fulfilled the majority of the hours required in the EMT-P program for the modules corresponding to these topics. Prerequisite: Departmental approval

**EMS-140 Emergency Skills III****4 2 0 5**

This course is designed to prepare the student for advanced cardiac life support. Emphasis is placed on the respiratory system and pharmacology skills including drug administration, ET insertion, and drug calculations. Upon completion, students will be able to advance to EMS 220. Prerequisites: EMS 130 and EMS 131

**EMS-141 Clinical II****0 0 12 4**

This course provides paramedic level emergency medical experience in specific clinical settings and in the field environment. Emphasis is placed on rotation sites including the operating room, recovery room, respiratory therapy team, emergency department, and field ambulance. Upon completion, students will have fulfilled a component of the required rotational hours for these clinical sites. Prerequisite: EMS 130 and EMS 131

**EMS-220 Cardiology****5 2 0 6**

This course provides exposure to the mechanical and electrical anatomy and physiology of the cardiovascular system. Emphasis is placed on arrhythmia recognition, pharmacological and electrical intervention. Upon completion, students will be able to apply for the Emergency Medical Technician-Advanced Intermediate level certification exam. Prerequisites: EMS 140 and EMS 141

**EMS-221 Clinical III****0 0 12 4**

This course provides paramedic level emergency medical experience in specific clinical sites and in the field ambulance. Emphasis is placed on rotation sites including the cardiac care unit, intensive care unit, operating room, emergency department, and field ambulance. Upon completion, students will have completed the majority of the required hours for these clinical sites. Prerequisites: EMS 140 and EMS 141

**EMS-230 Emergency Skills IV****3 0 0 3**

This course presents cognitive and motor manipulative skills necessary in administering advanced life support emergency medical care to patients with specific system complications. Topics include the following modules: musculoskeletal system, soft tissue system, pediatrics, ob-gyn patients, and psychiatric patients. Upon completion, students will have fulfilled the majority of the hours required in the EMT-P program for the modules. Prerequisites: EMS 220 and EMS 221

**EMS-231 Clinical IV****0 0 12 4**

This course provides paramedic level emergency medical experience in specific clinical sites and in the field ambulance. Emphasis is placed on rotational sites including the newborn nursery, intensive care nursery, pediatric area, labor and delivery, and the field ambulance. Upon completion, students will have completed the required rotation hours for these clinical sites as prescribed for a paramedic program of instruction. Prerequisites: EMS 220 and EMS 221

**EMS-233    Emergency Skills V** **2   2   0   3**

This course is a review of all EMT skills. Emphasis is placed on all basic, intermediate, and paramedic level skills utilized in caring for medical and trauma patients. Upon completion, students will be able to perform all skills included in a paramedic program at basic, intermediate, and paramedic levels. Prerequisites: EMS 230 and EMS 231

**EMS-234    Clinical V** **0   0   9   3**

This course provides paramedic level emergency medical experience in specific clinical settings and in the field environment. Emphasis is placed on rotation sites including the psychiatric care unit, the emergency department, and the field ambulance. Upon completion, students will have fulfilled a component of the required clinical and field hours for these sites. Prerequisites: EMS 230 and EMS 231

**EMS-235    Methods of Instruction** **2   2   0   3**

This course provides the student experience in a teaching role. Topics include all previous EMS material. Upon completion, students will be able to develop mini-courses that will be required for their continuing education credits. Prerequisite: EMS 233

**EMS-237    Seminar** **3   0   0   3**

This course provides an environment for advanced study in EMS topics. Emphasis is placed on researching emergencies resultant from infectious disease, drugs and alcohol, endocrine problems, CNS problems, the environment, and trauma. Upon completion, students will be able to research and hold discussions on topics related to their profession. Prerequisite: EMS 233

**ENG-101    Grammar for Composition** **3   0   0   3**

This course is designed to improve students' communicative skills by a thorough analysis of standard English usage. Emphasis is placed on the components of grammar and their function in communicating ideas effectively in sentences and short compositions. Upon completion, students will be able to construct sentences reflecting standard English usage. Prerequisite: None

**ENG-102    Composition I** **3   0   0   3**

This course is designed to help students improve self-expression in expository writing. Emphasis is placed on principles of standard English usage, effective organization (paragraph and essay level) and transition, and the writing process. Upon completion, students will be able to compose various modes of discourse such as description, classification, and illustration. Prerequisite: ENG 101

**ENG-103    Composition II** **3   0   0   3**

This course is designed to help students improve their communication skills. The course emphasizes the fundamentals involved, offers assorted specimens of current professional writing for study and analysis, and requires students to produce a variety of compositions such as process, description, progress, status, and periodic reports. Prerequisite: ENG 102

**ENG-1101    Comm Skills in Grammar** **3   0   0   3**

This course is designed to help students improve 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 principles of standard English grammar in both formal and informal situations. 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 for most curriculums

**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 reports, memoranda, business letters, letters of application, and data sheets with accuracy and clarity. Prerequisite: ENG 1102

**ENG-120 Comp for Non Native Speak****3 0 0 3**

This composition course is designed to meet the unique language needs of students who are non-native speakers of English. Reading, speaking, and grammatical skills will be developed through extensive writing exercises. Upon completion, students will be able to construct a variety of paragraphs in clear English prose. Prerequisites: None

**ENG-150 Prep for College Writing****5 0 0 5**

This is an intensive writing course designed to provide entry-level skills for ENG 151 and instruction and practice in writing effective sentence structures, logical paragraphs, and essays. Emphasis is placed on standard English usage. Upon completion, students will be able to write various modes of discourse such as description, classification, and illustration. Prerequisite: Appropriate score on placement test.

**ENG-151 English Composition****5 0 0 5**

This is a computer-assisted composition course designed to develop the student's expression of clear, effective, standard 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. Prerequisite: Appropriate score on placement test or ENG 150

**ENG-152 English Composition & Lit****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 literary 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 151

**ENG-160 Oral Communications****3 0 0 3**

This course is a study of basic concepts, techniques, and principles of oral communications. Emphasis is placed on preparation and delivery of informative, demonstrative, and persuasive speeches, and other speaking assignments. Upon completion, students will be able to produce effective oral presentations. Prerequisites: None

**ENG-161 Comm through Speech****5 0 0 5**

This course is designed to improve students' communication skills as speakers and to emphasize their analytical and critical responsibilities as listeners. Emphasis is placed on research, organization, listener analysis, and delivery skills. Upon completion, students will be able to communicate more effectively in both formal and informal situations. Prerequisite: ENG 160

**ENG-251 American Literature I****5 0 0 5**

This course provides a survey of American literature from the seventeenth through nineteenth centuries, focusing on major literary trends and featuring authors from John Smith to Walt Whitman. Topics include Colonialism, Neoclassicism, Romanticism, and revolution. Upon completion, students will be able to understand, appreciate, and write compositions about the major literary works of the period. Prerequisites: ENG 151 and ENG 152

**ENG-252 American Literature II****5 0 0 5**

This course provides a survey of American literature from the mid-nineteenth century to the present, focusing on major literary trends and featuring authors from Walt Whitman to Donald Barthelme. Emphasis is placed on Realism and twentieth-century literature. Upon completion, students will be able to understand, appreciate, and write about the major literary works of the period. Prerequisites: ENG 151 and ENG 152

**ENG-261 English Literature I****5 0 0 5**

This course provides a chronological survey of English literature from Anglo-Saxon poetry to Restoration drama. Emphasis is placed on 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 151 and ENG 152

**ENG-262 English Literature II****5 0 0 5**

This course covers readings from the late 1700's to the present, focusing on major literary trends of the era. Topics include Romantic, Victorian, and Modern English literature, and the course covers authors from William Blake through Ted Hughes. Upon completion, students will be able to analyze, appreciate, and write compositions about the major works of the period. Prerequisites: ENG 151 and ENG 152

**ENG-271 World Literature I****5 0 0 5**

This course surveys literary classics 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 have seized the Western mind. Prerequisites: ENG 151 and ENG 152

**ENG-272 World Literature II****5 0 0 5**

This course surveys literary classics of Western culture from the eighteenth century to the present day. Emphasis is placed on analyzing works characteristic of Neoclassicism, Romanticism, Realism, Naturalism, and Modernism. Upon completion, students will be able to discuss major literary works and trends of the eighteenth through twentieth centuries. Prerequisites: ENG 151 and ENG 152

**ENG-281 Literature By Women****3 0 0 3**

This course provides an historical overview of the literary accomplishments of women. Emphasis is placed on works of women from six historical eras in the context of traditional genres and from the standpoint of gender-specific themes and forms. Upon completion, students will be able to analyze and discuss contemporary and historical issues with women as a central concern. Prerequisites: ENG 151 and ENG 152

**ENG-291 Creative Writing****3 0 0 3**

This course is designed to encourage students to find their own authentic voices through exposure to various examples of fiction, poetry, and the essay. Emphasis is placed on each individual's writing and contribution to class discussions. Upon completion, students will be able to make critical decisions concerning their own writing. Prerequisites: ENG 151 and ENG 152.

**ENG-97 Grammar and Composition****3 2 0 4**

This course is designed to help students employ standard English usage in written expression. Emphasis is placed on rules of grammar, sentence structure, punctuation, and spelling as applied to compositions. Upon completion, students will be able to apply standard rules of grammar. Prerequisites: None

**ENG-98 Composition****3 2 0 4**

This writing course is devoted to teaching developing writers the skills necessary for effective, college-level composition. Emphasis is placed on paragraph organization and the five-step writing process (generating and organizing ideas, writing, revising, and editing). Upon completion, students will be able to write college-level compositions. Prerequisites: None

**FLO-207 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

**FLO-209 Non-Commercial Floral Dsg****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

**FRE-151 Elementary French I****5 0 0 5**

This course introduces the beginning student to the basic elements of grammar, phonetics, every-day vocabulary and common expressions needed to develop language skills. Emphasis is placed on basic oral communication, reading and writing, drills and repetition of grammatical structure and laboratory exercises. Upon completion, students will be able to express basic needs, recognize and be understood with simple identifications, and use this level vocabulary. Prerequisites: None

**FRE-152 Elementary French II****5 0 0 5**

This course continues the goals of the first level, introducing more verb tenses, vocabulary, formats and structures with commonly used expressions. Emphasis is placed on the development of basic skills of reading, writing and oral competency, with drills, practices and laboratory work. Upon completion, students will be able to understand and convey basic thoughts and to participate in structured conversations. Prerequisite: FRE-151 or equiv.

**FRE-251 Intermediate French I****5 0 0 5**

This course is a more detailed study of grammar, designed to improve understanding, speaking, reading and writing at a level of moderate difficulty. Emphasis is placed on selected readings, dialogues, common idioms and expressions with attention to communicative use of advanced structures. Upon completion, students will be able to speak and understand at a simple conversational level, and read and write compositions using regular and irregular verbs. Prerequisite: FRE 152 or equiv.

This course introduces grammatical structure with more advanced verb tenses and vocabulary widely found in common native daily conversation. Emphasis is placed on controlled dialogues, short composition and essays, translations, and comments and interpretation of audio and video materials. Upon completion, students will be able to increase their mastery in oral-aural ability, and to engage in conversations at near native level. Prerequisite: FRE-251 or equiv.

**FSE-101 Intro to Funeral Service****3 0 0 3**

This course includes the principles of funeral service and its history. Emphasis is placed on the ethical obligations and fundamental requirements involving skill, aptitude, and qualifications of funeral directors. Upon completion, students will be able to recognize historical names, places, and events from the past which directly effect the future of funeral service. Prerequisites: None

**FSE-115 Funeral Law****3 0 0 3**

This course provides the student with insight into the fundamentals of mortuary law. Emphasis is placed on North Carolina Mortuary Law, OSHA, anatomical donations, vital statistics, and general law relative to mortuary law. Upon completion, students will be able to complete death certificates, notification of death forms, medical examiner forms, and other required forms. Prerequisites: None

**FSE-121 Funeral Service Practices****3 0 0 3**

This course helps develop a knowledge of funeral service procedure of various religions and provides a study of the customs and funeral practices in the U.S. Topics include the study of liturgical and non-liturgical Protestant, Catholic, Jewish, and many other religious groups. Upon completion, students will be able to discuss the different religious and fraternal groups and know how their services are conducted. Prerequisites: None

**FSE-122 Anatomy for Funeral Serv****4 0 0 4**

This course provides the student with sufficient knowledge of general anatomy to serve as a working basis for studies in other related subjects. Topics include anatomical terminology, understanding the normal structure and function of the human body with emphasis placed on the circulatory system. Upon completion, the student will be able to understand the normal structure and function of the human body in order to develop habits of healthy living. Prerequisites: None

**FSE-206 Embalming Chemistry****3 2 0 4**

This course covers the fundamentals of organic chemistry and biochemistry as related to the funeral service profession. Emphasis is placed on chemical changes in the human body during life, after life, and during chemical preservation. Upon completion, students will be able to use various embalming chemicals and various solutions in the embalming process. Prerequisites: None

**FSE-209 Intro to Embalming Pract****3 0 0 3**

This course introduces the student to the various procedures in an embalming room setting. Emphasis is placed on the laboratory environment and equipment employed in standard funeral homes. Upon completion, students will be able to identify various instruments, select chemicals, and conduct themselves in a professional manner in the preparation room. Prerequisites: None

**FSE-210 Embalming Theory I**

3 0 0 3

This course covers the purpose, history, and need for embalming, types of death, and signs of death which the student must fully understand. Topics include ethics of embalming law, laws relative to decomposition, anatomical limits, and linear guides, and discussion of theoretical cases. Upon completion, students will be able to demonstrate theoretical case analysis to actual embalming procedures used in funeral homes. Prerequisites: None

**FSE-211 Embalming Theory II**

3 0 0 3

This course is a continuation of FSE 210 primarily designed to go into more detail about disease and how it may affect the embalmer. Topics include sanitizing, positioning features, mixing of chemical solutions, and case analysis. Upon completion, students will be able to become more involved in the death process and protect themselves as well as the public. Prerequisite: FSE 210

**FSE-214 Restorative Arts I**

2 4 0 4

This course utilizes the general aspects of restorative art as applied to funeral service. Topics include anatomical modeling, expression, and familiarization with tools, materials, and techniques. Upon completion, students will be able to reconstruct human features, properly employ color in cosmetics, and demonstrate special laboratory skills. Prerequisites: None

**FSE-215 Restorative Arts II**

2 4 0 4

This course covers the terminology of traumatic and pathological conditions frequently seen and restored in funeral service. Topics include basic restoration, legal aspects, use of photographs, and stains and their solvents. Upon completion, students will be able to use materials and techniques in the actual restorations of human remains. Prerequisite: FSE 214

**FSE-222 Embalming Practice I**

0 0 3 1

This course is designed for students with the general knowledge of embalming techniques. Emphasis is placed on the actual preparation of the remains in our laboratory. Upon completion, students will be able to utilize sanitation and disinfection procedures properly and prepare the body for burial properly. Prerequisites: None

**FSE-223 Embalming Practice II**

0 0 3 1

This course is a continuation of FSE 222 and covers proficient embalming skills which the student is required to demonstrate. Emphasis is placed on the student's ability to understand and relate to the actual embalming process. Upon completion, students will be able to analyze each case to determine the proper techniques to be used in that particular embalming situation. Prerequisite: FSE 222

**FSE-224 Funeral Home Operations**

4 0 0 4

This course will outline all phases of funeral home operations, and students will develop a basic approach to successful business techniques. Topics include establishing a funeral home, choosing and financing a location, building, remodeling, merchandising, caskets, vaults, and planning. Upon completion, students will be able to discuss proper procedures in operating, supervising, and owning their own funeral home. Prerequisites: None

**FSE-245 Pathology**

3 0 0 3

This course is designed to provide the student with general knowledge of the disease process. Topics include pathological terminology, basic body functions, trauma, disease process, and etiology. Upon completion, students will be able to recognize various terminology used in the medical profession and will have a more acute awareness of the disease process. Prerequisites: None



**FSE-247 Funeral Counseling****3 0 0 3**

This course is a study of the principles of counseling that will be of assistance to funeral directors whose work requires counseling ability. Topics include the personality and role of the counselor, techniques of counseling, and philosophies of counseling. Upon completion, students will be able to relate more effectively to those who are experiencing the grief process. Prerequisites: None

**FSE-249 Seminar****3 0 0 3**

This course will review the entire two years of courses in Funeral Service Education. Topics include anatomy, chemistry, restorative art, embalming, pathology, microbiology, psychology, sociology, history, accounting, and business law. Upon completion, students will be able to successfully pass the National or State Board Exam. Prerequisite: Dept. Chrp. Approval

**FSO-101 Foodservice Math Princi.****2 0 0 2**

This course develops knowledge of the operational procedures for preparation, service and management roles in foodservice. Topics include portion control, converting recipes, production reports, recipe yields, sales checks, pricing menus and financial statements. Upon completion, students will be able to apply basic math skills to the operational procedures for preparation, service and management positions in foodservice operations. Prerequisites: None

**FSO-102X Food Preparation I****3 0 0 3**

This course includes the scientific principles of food preparation and cooking procedures. Topics include stocks, soups, sauces, gravies, beverages, cereals and cereal products, vegetables, fruits, and salads. Upon completion, students will be able to apply their understanding of these basic principles used in the foodservice industry. Prerequisites: None; Corequisite: FSO 102Y

**FSO-102Y FSO-102 Lab****0 0 6 2**

This course includes application of the scientific principles of food preparation and cooking procedures. Topics include stocks, soups, sauces, gravies, beverages, cereals and cereal products, vegetables, fruits, and salads. Upon completion, students will be able to apply their understanding of these basic principles used in the foodservice industry. Prerequisites: None; Corequisite: FSO 102X

**FSO-105 Sanitation & Equipment****3 2 0 4**

This course develops knowledge of the recommended standards of personal hygiene, use and care of equipment, sanitation and safety in foodservice operations. Topics include basic principles of personal hygiene, sanitation and safety as related to food storage, preparation and service. Upon completion, students will be able to develop a sanitation and safety plan and properly care and use equipment for a foodservice operation. Prerequisites: None

**FSO-107X Baking I****2 0 0 2**

This course is designed to teach fundamental principles, procedures and techniques used in the bakeshop. Students will learn bakeshop organization and how to use baking tools and equipment. Emphasis is placed on ingredient functions, bakers percentages, measuring techniques, yeast dough formulas and preparation and quick bread formulas and preparation. Upon completion, students will be able to select and accurately measure ingredients, use correct mixing techniques in the bakeshop, and successfully prepare yeast and quick bread products. Prerequisites: None; Corequisite: FSO-107Y

**FSO-107Y FSO-107 Lab****0 0 6 2**

This course provides hands-on training in the fundamental principles, procedures and techniques used in the bakeshop. Students will learn bakeshop organization and how to use baking tools and equipment. Emphasis is placed on ingredient functions, bakers percentages, measuring techniques, yeast dough formulas and preparation and quick bread formulas and preparation. Upon completion, students will be able to select and accurately measure ingredients, use correct mixing techniques in the bakeshop, and successfully prepare yeast and quick bread products. Prerequisites: None; Corequisite: FSO-107X

**FSO-112X Food Preparation II****3 0 0 3**

This course develops the skills and knowledge of meat analysis and identification. Topics include meats, beef, poultry, and seafood; also included are milk, eggs, cheese, and sandwiches. Upon completion, students will be able to apply the basic knowledge and techniques in the foodservice industry. Prerequisite: FSO 102; Corequisite: FSO 112Y

**FSO-112Y FSO-112 Lab****0 0 6 2**

This course provides hands-on training of laboratory methods and techniques as they relate to supporting instruction material of FSO 112X. Topics include meats, beef, poultry, and seafood; also included are milk, eggs, cheese, and sandwiches. Upon completion, students will be able to apply the basic knowledge and techniques in the foodservice industry. Prerequisite: FSO 102; Corequisite: FSO 112X

**FSO-113 Dining Room Service****2 2 0 3**

This course includes an overview of the waiter/waitress duties and responsibilities in a variety of foodservice operations. Topics include interpreting the menu, ordering the meal, serving and cleaning, and preparing and presenting the check. Upon completion, students will be able to apply their knowledge and skills in a job as a waiter or waitress in the foodservice field. Prerequisites: None

**FSO-115 Bar and Beverage Mgmt.****2 2 0 3**

This course is designed to give students basic skills and knowledge in bar management and the service of wine, beer and alcoholic beverages. Topics include equipment use, facility planning, staffing, products and techniques of mixology, purchasing, marketing, laws and regulations concerning alcoholic beverages. Upon completion, students will be able to properly organize and operate a mixology beverage station in order to service customer needs. Prerequisites: None

**FSO-117X Baking II****2 0 0 2**

Baking II (Intermediate) is designed to teach intermediate skills in baking and dessert preparation. This course provides practical bakeshop experiences with pies, pastries, and basic dessert products. Emphasis is placed on sugar cooking, basic creams, dessert sauces, pie doughs, short doughs, tarts, puff pastries, choux paste, strudel, phylla and meringues. Upon completion, students will be able to successfully prepare a variety of pastry products, assemble and bake a variety of pies and prepare attractive desserts. Prerequisite: FSO 107 or Department Chair approval; Corequisite: FSO 117Y

**FSO-117Y FSO-117 Lab****0 0 9 3**

This course provides hands-on training of intermediate skills in baking and dessert preparation. This course provides practical bakeshop experiences with pies, pastries, and basic dessert products. Emphasis is placed on sugar cooking, basic creams, dessert sauces, pie doughs, short doughs, tarts, puff pastries, choux paste, strudel, phylla and meringues. Upon completion, students will be able to successfully prepare a variety of pastry products, assemble and bake a variety of pies and prepare attractive desserts. Prerequisite: FSO 107 or Department Chair approval; Corequisite: FSO 117X

**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 Foodserv Menu Plng****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-122 Quantity Food Prod I****2 0 6 4**

This course is an overview of quantity meal preparation. Topics include menu planning, recipe development, recipe and menu costing, portion control, yield studies, meal organization and service. Upon completion, students will be able to plan, organize, cost and serve quantity meals. Prerequisites: FSO 112X and FSO 112Y

**FSO-124 Garnishing****1 0 3 2**

This course provides the fundamental principles of food decoration and design with emphasis on garnishing tools and materials. Topics include preparation of garnishes for plates, platters, special dishes, desserts, entrees, hors-d'oeuvres, buffets, and cafeteria lines. Upon completion, students will be able to apply their understanding of food design and decoration used in the foodservice industry. Prerequisites: None

**FSO-125 Catering****2 0 0 2**

This course is designed to provide the fundamental skills needed to carry out various types of catering events. Emphasis is placed on organizing 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 for various types of catering events. Prerequisites: None

**FSO-127 Baking III****2 0 6 4**

Baking III (Advanced) is designed to teach advanced baking principles and techniques in the bakeshop. This course provides practical experience with advanced dessert assembly and decoration. Emphasis is placed on cake formulas, mixing and baking cakes, tortes, European style cakes, cookies, assembling and decorating cakes, cookies and dessert products. Upon completion, students will be able to successfully prepare, assemble and decorate cakes, cookies, petits fours, tortes and a variety of dessert products in the bakeshop. Prerequisites: FSO 107, FSO 117 or Department Chair approval

**FSO-128 Resource Mgmt in FSO****3 0 0 3**

This course is a study of the responsibilities of workers and supervisors in dealing with personnel in the hospitality industry. Topics include planning of human resources, job analysis, recruitment and selection, training, team building, performance evaluation, compensation and labor relations. Upon completion, students will be able to be competitive and successful in dealing with people and obtain the skills necessary to meet organizational needs. Prerequisites: None

**FSO-130 Seminar I****2 0 0 2**

This course will use a seminar approach to prepare students for employment in the foodservice industry and review work experiences in COE 110. Emphasis is placed on foodservice opportunities, current trends and issues in the industry, problems in the industry and job seeking skills. Upon completion, students will be able to discuss current issues in the foodservice industry, provide solutions to work problems and write a professional resume. Prerequisite: Completion of all first year foodservice courses; Corequisite: COE 110

**FSO-131 Confectioneries I****1 0 6 3**

This course introduces the principles and development of skills in sugar cookery and candy making. Emphasis is placed on the elements of sugar cookery and the preparation of crystalline, noncrystalline, spongy, molded candies and fondants. Upon completion, students will be able correctly and successfully prepare and judge the quality of prepared confectioneries. Prerequisites: None

**FSO-132 Confectioneries II****1 0 6 3**

This course introduces the principles and development of skills in preparations of chocolates and marzipan. Emphasis is placed on hand-dipped candies, truffles, continental chocolates and marzipan. Upon completion, students will be able to correctly and successfully prepare and judge the quality of the prepared confectioneries. Prerequisite: FSO 131

**FSO-133 Modified Diet Preparation****1 0 6 3**

This course includes application of the scientific principles of food preparation to modified diets. Topics include preparation of diabetic low-fat, calorie controlled, low sodium and soft and bland diets. Upon completion, students will be able to properly prepare modified diets. Prerequisite: FSO 205

**FSO-134 Geriatric Nutrition****3 0 0 3**

This course discusses the physical, psychological and nutritional changes of the aging population. Topics include the aging process, nutritional status, energy and nutrient needs, and food choices and habits. Upon completion, students will be able to identify and understand the natural changing needs of the aging population. Prerequisite: FSO 106

**FSO-135 Garde Manger I****1 0 6 3**

This course is an introduction to basic cold food preparation and display. Topics include appetizers, cold sauces, salads, vegetable and fruit carvings, aspics, culinary arts and displays. Upon completion, students will be able to design and display cold food buffets and use basic culinary art skills. Prerequisites: FSO 102X and FSO 102Y, FSO 112X and FSO 112Y

**FSO-136 Garde Manger II****1 0 6 3**

This course exposes the students to advanced cold food production and culinary art design and display. Emphasis is placed on preparation of cold entrees, pates, galantines, chaud froids, terrines and display and presentation of cold buffets and centerpieces. Upon completion, students will be able to prepare, design and display a variety of cold buffets items for service or competition. Prerequisite: FSO 135

**FSO-137 Fast Food Management****3 0 0 3**

This course is an introduction to the operating procedures of fast food operations, chains and franchises. Emphasis is placed on marketing, cost controls, labor pools, computerized information systems, supervisory roles, short order cooking and delivery systems. Upon completion, students will be able to successfully maintain and operate a multi-unit facility within the company guidelines. Prerequisites: None

**FSO-138 Advanced Cake Decorating I****1 0 6 3**

This course is designed to provide intermediate and advanced cake decorating skills. Emphasis is placed on advanced border and flowers, color flow, marzipan, filigree, stringwork, pattern making, cake designing, and tier cake assembly. Upon completion, students will be able to design and decorate cakes and desserts using advanced cake decorating techniques. Prerequisite: FSO 127

**FSO-139 International Foods****1 0 6 3**

This course is designed to introduce students to a variety of cultural and international foods, meal styles and traditions. Emphasis is placed on French, Italian, German, Greek, Oriental, Asian and other cultural ethnic and multinational foods and preparation techniques. Upon completion students will be able to plan menus, prepare foods and serve meals using traditional methods of international foods. Prerequisites: FSO 102X and FSO 102Y, FSO 112X and FSO 112Y

**FSO-140 Professional Catering****3 0 0 3**

This course is designed to orient students in setup and operation of a successful catering business and preparation of foods used in catering. Topics include facility planning, legal aspects, sales and marketing, catering functions, hors d'oeuvres, canapes, hot foods, beverages and off-premise delivery. Upon completion, students will be able to prepare and serve foods and operate a professional catering business. Prerequisites: None

**FSO-141 FSO Computer Application****0 0 3 1**

This course is designed to introduce students to computer software to create spreadsheets of purchases, inventories, labor and sales reports, as a management tool. Emphasis is placed on introduction to computer systems and Lotus 123, daily sales reports, physical inventories, budgeting, recipe costing. Upon completion, students will be able to create and read computer spreadsheets to use in management of foodservice facility. Prerequisite: CAS 101

**FSO-145 Food Plan. In Childcare****2 0 3 3**

This course introduces students to nutrition and menu planning principles, food preparation and food management skills necessary to provide meals to children in childcare facilities. Emphasis is placed on child nutrition, USDA requirements in meal planning for different age levels, kitchen and meal organization and basic preparation techniques. Upon completion, students will be able to plan, organize and prepare appealing and nutritious meals for children of various age groups that meet USDA requirements. Prerequisite: None

**FSO-146 Ice Carving****1 0 3 2**

This course is designed to teach basic skills in ice carving. Topics include tools of the trade, ice handling, pattern design, and techniques of ice carving. Upon completion, students will be able to handle and carve ice for decoration. Prerequisites: None

**FSO-147 Practical Food Prep I****5 0 12 9**

This course introduces the principles of sanitation, equipment operation, kitchen safety, food theory, cooking terminology, cooking and baking principles. Emphasis is placed on sanitation, equipment, personal hygiene, accident prevention, recipe structure, terminology, measuring, weighing procedures, ingredients and cooking methods. Upon completion, students will be able to prepare soups, sauces, salads, fruits, vegetables, meats, poultry, fish, breads and eggs using various cooking tools.

**FSO-148 Practical Food Prep II**

5 0 12 9

This course is a continuation of FSO-147, expanding content to quantity cooking, meal organization, dining room operations, customer service and food presentations. Emphasis is placed on preparation of typical food dishes, convenience products, appetizers, desserts, garnishes, food presentation, quantity cooking, meal styles and service techniques. Upon completion, students will be able to prepare food in quantity for various meal styles, set up and provide service for various meal styles. Prerequisite: FSO 147

**FSO-202 Quantity Food Prod II**

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. Prerequisites: FSO 113 and FSO 122

**FSO-204 Purchasing**

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-211 Seminar II**

2 0 0 2

This course will be used to review experiences received in work experience COE 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. Prerequisites: All other FSO courses; Corequisite: COE 210

**FSO-212 Buffets and Banquets**

2 0 6 4

This course emphasizes production techniques on a large scale in the planning, preparing and merchandising of buffets, banquets and catered events. Topics include staffing, marketing, selecting appropriate menus and preparation of food for buffets, banquets and catered events. Upon completion, students will be able to plan and prepare buffets, banquets, and catered affairs for varying group sizes. Prerequisite: FSO 202

**FSO-223 Food Serv Cost Control**

3 0 0 3

This course is designed to orient students to maintaining budgets and controlling costs through analysis of purchasing, production and inventory systems. Emphasis is placed on forecasting income and expenses, analysis of control systems, inventory control, and calculating cost percentages. Upon completion, students will be able to effectively calculate and administer cost control measures to maintain budgeted dollars cost. Prerequisite: ACC 110

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

**GER-151 Elementary German I** 5 0 0 5

This course introduces the beginning student to the basic elements of grammar, phonetics, every-day vocabulary and common expressions needed to develop language skills. Emphasis is placed on basic oral communication, reading and writing, drills and repetition of grammatical structure and laboratory exercises. Upon completion, students will be able to express, recognize and be understood with simple identifications, and use this level vocabulary. Prerequisites: None

**GER-152 Elementary German II** 5 0 0 5

This course continues the goals of the first level, introducing more verb tenses, vocabulary, formats and structure with commonly used expressions. Emphasis is placed on the development of basic skills of reading, writing and oral competency, with drills, practices and laboratory work. Upon completion, students will be able to understand and convey basic thoughts and to participate in structured conversations. Prerequisite: GER 151 or equiv.

**GER-251 Intermediate German I** 5 0 0 5

This course is a more detailed study of grammar, designed to improve understanding, speaking, reading and writing at a level of moderate difficulty. Emphasis is placed on selected readings, dialogues, common idioms and expressions with attention to communicative use of advanced structures. Upon completion, students will be able to speak and understand at a simple conversational level, and read and write compositions using regular and irregular verbs. Prerequisite: GER 152 or equiv.

**GER-252 Intermediate German II** 5 0 0 5

This course introduces grammatical structures with more advanced verb tenses and vocabulary widely found in common native daily conversation. Emphasis is placed on controlled dialogues, short composition and essays, translations, and comments and interpretation of audio and video materials. Upon completion, students will be able to increase their mastery in oral-aural ability, and to engage in conversations at near native level. Prerequisite: GER 251 or equiv.

**GRA-108 Lettering/Typography** 2 4 0 4

This course introduces the discipline, functions, and tradition of typography in visual/verbal communication, exploring both the technical and aesthetic aspects of the letter form. Topics include terminology, hand lettering, type indication, copy-fitting, current methods of type composition, and field trips when they are feasible. Upon completion, students will be able to discuss the interrelationships of type and image in the creation of effective design. Prerequisites: None

**GRA-112 Intro to Computer Graphics** 2 4 0 4

This course provides an introduction to the artist or designer to operate the Macintosh computer. Emphasis is placed on drawing with the computer by using paint and object-oriented programs, as well as, basic word-processing and page layout. Upon completion, students will be able to have a basic understanding of the Macintosh operating system and various software programs. Prerequisites: None

**GRA-117 Production Basics****3 0 3 4**

This course covers basic information and current methods in the production of multiple printed communications. Topics include major printing processes, paper, ink, binding, color separation, preparing camera-ready art, and field trips when they are feasible. Upon completion, students will be able to utilize graphic arts terminology, tools, and production equipment such as stat cameras, platemakers, and film and paper processors. Prerequisites: DES 104 or Instructor consent

**GRA-118 Advanced Typography****2 4 0 4**

This course provides further exploration of typographic form through both abstract and applied exercises. Emphasis is placed on more involved assignments in typography, requiring research, an emphasis on phototype, and creative camera techniques. Upon completion, students will be able to utilize the technical and aesthetic potentials of typography in complex visual problem solving. Prerequisite: GRA-108

**GRA-212 Adv. Computer Graphic****3 2 0 4**

This course provides further instruction in the use of digital-laser equipment and specialized software to produce images and typographical elements for graphic design. Emphasis is placed on advanced software programs to generate professional quality illustrations, logotypes and similar applications. Upon completion, students will be able to utilize these tools and techniques in complex visual problem solving and will appreciate the potential of this medium for increased flexibility and productivity in the design process. Prerequisite: GRA 112

**GRA-217 Production/Printing****3 0 3 4**

This course includes advanced pre-press art and printing techniques with special emphasis on screen printing production. Topics include principles, history, contemporary applications, stencil methods, direct and indirect, printing equipment, and producing an edition. Upon completion, students will be able to understand the importance, versatility, and relevance to the designer of this important commercial process. Prerequisite: GRA 117

**GRA-232 Advertising Solutions****3 2 0 4**

This course is designed to allow the student to stress either design or illustration, depending upon evidence of his/her area of greater strength. Emphasis is placed on advanced solutions to more complex assignments which may be independently conceived and directed. Upon completion, students will be able to concentrate efforts toward achieving their highest levels of competence and professionalism. Prerequisite: Full 5th quarter standing in curriculum

**HIS-151 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 Middle 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-152 Western Civilization II****5 0 0 5**

This course is a continuation of HIS 151, 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-153 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-154 American History II****5 0 0 5**

This course is a continuation of HIS 153 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-155 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 Byzantine 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-156 World Civilization II****5 0 0 5**

This course is a continuation of HIS 155 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-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

**HIS-252 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-253 The French Revolution****5 0 0 5**

This course will investigate the French Nobility and the reason for the revolution, the 1st republic and the "Age of Metternich". Topics include the nobility, Napoleon's rise to power, the rise and fall of his empire, and the impact of the revolution. Upon completion, the students will be able to better understand France's relationship with other nations as a result of the French Revolution. Prerequisites: None.

**HIS-254 The Civil War Era**

5 0 0 5

This course will examine the social, political and economic forces that led to the outbreak of the civil war and the problems of reconstruction. Topics include taxes, economic embargoes, the dissolving of the union, slavery and abolitionists. Upon completion students will be able to understand the relationship that existed between the North and South during that period of time. Prerequisites: None

**HIS-255 U.S. Diplomatic History**

3 0 0 3

This course will research American diplomacy from the colonial period to the present with emphasis on present day foreign relations. Topics include the Monroe Doctrine and expansion, debate over imperialism, isolation and South American and European policies. Upon completion, student will be able to develop an understanding of the history of our relationships between nations of both hemispheres. 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-125 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 science. Prerequisites: None

**HOR-137 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 125 or Dept. Chrp. Approval

**HOR-139 Bedding Plant Production**

2 2 0 3

This course introduces students to 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: None

**HOR-141 Intro to Landscape**

2 2 0 3

This course is designed to introduce basic concepts of drafting and surveying skills necessary for topography site analysis. Emphasis will be placed on proper use of drafting and survey equipment. Upon completion, students will be able to draw a topographical site analysis map. 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 more 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-203 Residential Landscape Dsg** 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-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 125

**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-207 Indoor Plant Care & Ident** 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-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-213 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-215 Irrigation Design**

1 4 0 3

This course is designed to provide hands-on training and experience in plane surveying and irrigation technology for horticultural applications. Topics include care and use of instruments, taping, differential and profile leveling, transit, stadia, transit-tape surveys, hydraulics, basic irrigation design, overhead systems, low pressure "trickle" systems, distribution patterns, pump/reservoir requirements and installation methods. Upon completion, students will be able to apply the theory of surveying and irrigation technology to determine boundaries, areas, volumes, and implement a basic irrigation system design. Prerequisites: None

**HOR-217 Vegetable & Fruit Garden**

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-219 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-220 Computers in Horticulture**

1 0 3 2

This course introduces hands-on experience in the use of micro-computers 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: CAS 101

**HOR-233 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-235 Landscape Management**

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-237 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 125

**HOR-240 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

**HYD-1135 Hydraulics & Pneumatics****2 0 6 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

**INS-215 Life Insurance****5 0 0 5**

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. Prerequisites: None

**INS-216 Property & Casualty Ins****5 0 0 5**

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. Prerequisites: None

**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 discuss and apply various adjusting principles and concepts involved in settlement of property and casualty claims. Prerequisite: INS 216

**INS-218 Medicare Supp/L-T Care****2 0 0 2**

This course covers the types of medicare coverages, long-term care coverages, medicaid, policy provisions, applicable laws and regulations, and buying practices. Topics include hospital insurance, supplementary medical insurance, medicare supplement insurance, medicaid assistance, and long-term care. Upon completion, students will be able to discuss long-term care coverages, medicare coverages, medicaid, appropriate policy provisions, legal principles and their applicable use.

**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

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-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 3

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-234 Advanced Estate Planning**

2 2 0 3

This course addresses the federal estate and gift tax marital deductions as critical factors in the comprehensive estate planning process. Topics include TAMGRA rules (1988), rates of transfer taxation and citizen vs non-citizen spouse tax rates. Upon completion, students will be able to discuss the issue of taxation of inter-vivos transfers vs taxation of testamentary transfers.

**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

**INS-247 Principles of Insurance****3 0 0 3**

This course consists of a presentation of the basic principles of life, health, and accident insurance and the individual application thereof. Topics include the subject matter on which state examinations for life and/or accident and health agents will be based. Upon completion, students will be able to analyze and procure personal lines of insurance on a more consumer oriented basis. Prerequisites: None

**ISC-104 Operations 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-120 Operations Management****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 Processes and Materials****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 Management****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 112

**ISC-202 Statistical Process Cntrl****2 2 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 process control elements. Prerequisites: None

**ISC-203 Safety and Health****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-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. Prerequisite: ISC 140

**ISC-210 Production Management** 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, ISC 140, and MAT 112

**ISC-221 Operations 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 ISC 140

**ISC-225 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 112, CSC 103, CSC 116 and ISC 140

**ISC-226 Facilities Management** 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 ISC 140

**ISC-228 Computer Aided Design** 2 2 0 3

The concepts of computer graphics and design are examined. Topics include design opportunities, design analysis, design operations, product and system cost analysis, and design improvement strategies. Upon completion, students will be able to plan, develop, and present computer aided design projects: Prerequisites: ISC 120, ISC 140, ISC 202, and ISC 221

**ISC-234 Operations Seminar** 2 0 3 3

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-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 112, MAT 113, BUS 112, and ISC 140

**ISC-241 Training and Development****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-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

**LEX-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 instruction on ethics. Topics include an introduction to investigation, litigation, legal ethics, paralegal duties, constitutional law, legal research, and statutory and case law. 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

**LEX-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

**LEX-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. Prerequisite: LEX 135

**LEX-115 Contract Law & 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

**LEX-117 Tort Law****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 the settlement brochure as a course project. Upon completion, students will be able to identify the elements of various torts and prepare the settlement brochure. Prerequisite: LEX 135

This course covers the procedures involved in a criminal case including both police procedures and those procedures which govern the trial of a criminal case. Topics include arrest, search and seizure, confessions, pretrial discovery, guilty 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. Prerequisite: LEX 101

**LEX-129 Law Office Writing****1 2 0 2**

This course covers the basics of writing for the law office including the drafting of general correspondence and the briefing of cases. Emphasis is placed on legal vocabulary, spelling, grammar, punctuation and sentence construction in the context of letter writing and briefing cases. Upon completion, students will be able to draft letters to clients, opposing counsel, government entities and other organizations such as medical facilities. Prerequisites: LEX 101 and ENG 151

**LEX-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: LEX 101, LEX 113, LEX 117, LEX 119, and LEX 135

**LEX-131 Legal Writing****2 4 0 4**

This course is a continuation of LEX 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. Prerequisites: LEX 101, LEX 113, LEX 117, LEX 119, LEX 129, LEX 130, and LEX 135

**LEX-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

**LEX-136 Civil Litigation II****5 0 0 5**

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. Prerequisite: LEX 135

**LEX-140 Bankruptcy****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. Prerequisite: LEX 135

**LEX-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: LEX 101, LEX 117, and LEX 135

**LEX-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

**LEX-215 Property II-Title Search**

2 4 0 4

This course is a continuation of LEX 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: LEX 214 and LEX 224

**LEX-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: LEX 214 and LEX 215

**LEX-217 Collections**

2 0 0 2

This course covers both judicial and non-judicial procedures for the collection of debts. Emphasis is placed on the practical application of North Carolina collection procedures. Upon completion, the student will be able to prepare appropriate correspondence and legal documents to enforce a judgment. Prerequisites: LEX 135 and LEX 140

**LEX-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

**LEX-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: LEX 113, LEX 117, LEX 135, and LEX 136

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 LEX 216 and LEX 217 and the elective; Corequisite: COE 224

**LEX-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 LEX 216 and LEX 228

**MAS-1100 Intro 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 Fund 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**

3 0 18 9

This course introduces the practical application of selecting mortar, 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. Prerequisites: None

**MAS-1107A Fund of Bricklaying II**

1 0 6 3

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. Prerequisites: None

**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-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. Prerequisites: None

**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-1108X Fund of Masonry I****6 0 12 10**

This course introduces students to the layout and construction of footings and walls. Topics include brick and concrete footings, various types of walls, and bonding. Upon completion, the students will be knowledgeable in the construction of masonry footings and walls. Prerequisites: None

**MAS-1108Y MAS-1108 Lab****0 0 6 2**

This course provides hands-on application of the procedures and techniques introduced in MAS 1108X. Emphasis is placed on footing and masonry wall construction. Upon completion, the students will have the skills necessary to layout and construct footings and walls. Prerequisites: None

**MAS-1109A Fund of Masonry II****1 0 6 3**

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. Prerequisites: None

**MAS-1109B Fund of Masonry II****1 0 6 3**

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****1 0 6 3**

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-1109X Fund of Masonry II****3 0 12 7**

This course is designed to include all the fundamentals and techniques used in masonry construction. Emphasis is placed on columns, concrete masonry, and fireplaces. Upon completion, students will be knowledgeable in the fundamentals and techniques used in masonry construction. Prerequisites: None

**MAS-1109Y MAS-1109 Lab****0 0 6 2**

This course provides hands on application of the procedures and techniques introduced in MAS 1109X. Emphasis is placed on columns, concrete, and fireplaces. Upon completion, the students will have the skills necessary to construct columns and fireplaces and to pour concrete. Prerequisites: None

**MAS-1110 Masonry Estimating****3 0 0 3**

This course introduces the procedures for estimating costs of materials and labor in connection with masonry projects. Emphasis is placed on the total quantities of materials and labor needed to construct a building or other masonry project. Upon completion, students will be able to perform a quantity take-off from blueprints and determine the cost of constructing the project. Prerequisites: None

**MAS-1113 Masonry Regulations****3 0 0 3**

This course covers building codes and the minimum requirements for local and state masonry construction regulations. Emphasis is placed on the minimum requirements of the North Carolina Building Codes relating to residential structures. Upon completion, students will be able to determine if the masonry portion of a residential structure is in compliance with the North Carolina Building Codes. Prerequisites: None

**MAT-1101 General Math****3 2 0 4**

This course is designed to develop basic mathematical concepts and principles. Topics include whole numbers, fractions, decimal fractions, percents, and English and metric measurement systems. Upon completion, students will be able to solve practical problems in their specific area of study. Prerequisites: None

**MAT-1102 Algebra****3 2 0 4**

This course introduces basic algebraic concepts and develops basic algebraic skills. Topics include signed numbers, solving equations, exponents, roots, radicals, formula evaluation, and graphing. Upon completion, students will be able to apply these algebraic concepts to solve practical problems and employ them in subsequent math or science courses. Prerequisite: MAT 1101 or equiv.

**MAT-1103 Geometry****3 0 0 3**

This course provides an introduction to basic concepts in elementary geometry. Emphasis is placed on angles and their measures, triangles, areas, and perimeters of polygons, circles, geometric solids and geometric constructions. Upon completion, students will be able to apply their knowledge of these principles to their specific areas of study. Prerequisite: MAT 1101 or equiv.

**MAT-1104 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-111 Basic Mathematics**

5 0 0 5

This course provides a rapid review of concepts in arithmetic, systems of measurements, elementary algebra, and basic statistics. Topics include whole numbers, fractions, decimals, ratios, proportions, percents, English and metric measurement, signed numbers, linear equations, and statistical graphs. Upon completion, students will be able to employ their knowledge of these topics in the solution of practical problems in their specific areas of study. 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-112 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 solve practical problems. Prerequisite: MAT 111 or MAT 94 or equiv.

**MAT-113 Algebra II**

5 0 0 5

This course is a continuation of MAT 112 with additional study of algebraic techniques. Emphasis is placed on factoring, algebraic fractions, graphing and solving linear systems, roots, radicals, and quadratic equations. Upon completion, students will be able to apply their knowledge of algebra to solve practical problems. Prerequisite: MAT 112

**MAT-114 Algebra & Trigonometry I**

5 0 0 5

This course is designed to develop the elementary algebraic and trigonometric skills necessary for the solution of practical 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 problems. Prerequisite: MAT 97 or MAT 113 or equiv.

**MAT-115 Algebra & Trigonometry II**

5 0 0 5

This course, a continuation of MAT 114, 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 114



**MAT-116 Basic Calculus I**

5 0 0 5

This course, a continuation of MAT 115, 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 practical problems. Prerequisite: MAT 115

**MAT-130 Geometry**

5 0 0 5

This course introduces fundamental concepts of geometry and trigonometry that are necessary for solving problems related to the Machining Technology program. Emphasis is placed on using geometric and trigonometric concepts to solve related problems. Upon completion, students will be able to apply geometric and trigonometric concepts to machine shop problems. Prerequisite: MAT 112

**MAT-131 Trigonometry I**

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 130

**MAT-132 Trigonometry II**

5 0 0 5

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 131

**MAT-149 Graphing Calculator Apps**

3 0 0 3

This course covers the functions and principles necessary for operating the graphics calculator. Topics include graphing, solving equations and inequalities, trigonometry, matrices, statistics, and probability. Solve mathematical problems using the graphics calculator. Prerequisites: None

**MAT-150 Intermediate Algebra**

5 0 0 5

This course is designed to bridge the gap between beginning algebra and college algebra classes, with emphasis on problem-solving strategies and practical applications. Topics include equations, inequalities, polynomials, exponents, rational expressions, rational exponents, radicals, linear systems, quadratic equations and inequalities, and functions. Upon completion, students will be able to use algebraic skills acquired to permit them to achieve success in college algebra courses. Prerequisites: MAT 95 and MAT 96 or MAT 112 and MAT 113 or equivalent

**MAT-160 Euclidean Geometry**

5 0 0 5

This course provides an axiomatic development of Euclidean Geometry with an emphasis on deductive and inductive mathematical reasoning. Topics include points, lines, planes, angles, triangles, polygons, quadrilaterals, circles, spheres, surfaces, solids, congruence, similarity, locus relationships, ratio and proportion. Upon completion, students will be able to solve problems involving geometry in sequential mathematics, science, and engineering courses. Prerequisites: MAT 95 and MAT 96 or equivalent.

**MAT-162 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 equiv.

**MAT-163 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 equiv.

**MAT-167 Concepts of Math I****5 0 0 5**

This course is designed to provide the student with the concepts that are fundamental in elementary school teacher training. Topics include problem solving, logic, sets, numeration systems, number theory, rational numbers, real numbers, computer literacy and logo. Upon completion, students will be able to apply their knowledge of these topics to teaching mathematics in the elementary school. Prerequisites: MAT 163 or equivalent

**MAT-168 Concepts of Math II****5 0 0 5**

This course is a continuation of MAT 167 and will emphasize geometrical concepts, critical thinking and problem solving. Topics include plane geometry, three-dimensional geometry, coordinate geometry, probability and statistics. Upon completion, students will be able to apply their knowledge of these topics to teaching mathematics in the elementary school. Prerequisite: MAT 167 or equivalent

**MAT-170 Logic****5 0 0 5**

This course examines deductive and inductive reasoning with emphasis on Aristotelian and symbolic logic and common fallacies in the use of language. Topics include symbolic analysis, including the use of truth tables and validity indicators of categorical, hypothetical, conjunctive, and disjunction syllogisms. Upon completion, students will be able to use deductive and inductive methods into their reasoning process. Prerequisites: MAT 95 and MAT 96 or equivalent

**MAT-172 Finite Mathematics****5 0 0 5**

This course introduces a number of important mathematical concepts to students in a variety of disciplines. Topics include set theory, matrices, linear programming, probability, statistics, and the mathematics of finance. Upon completion, students will be able to better understand the use of quantitative mathematical concepts in their areas of study. Prerequisite: MAT 163

**MAT-175 Elements of Calculus****5 0 0 5**

This course introduces the student to concepts of differentiation, integration, and their applications to solving mathematical problems. Topics include functions, graphing, differentiation, integration, and their applications in problem solving. Upon completion, students will be able to apply graphing techniques, differentiation, and integration in solving practical problems. Prerequisite: MAT 163

**MEC-201Y MEC-201 Lab****0 0 3 1**

This course provides practical experience in programming the ANILAN GXM on a standard milling machine and the Compac 5 CNC Lathe. Emphasis is placed on the set-up and operation of control units. Upon completion, students will be able to set-up and operate the control unit for simple parts. Prerequisites: MAT 150 and MEC 104; Corequisite: MEC 201X

**MEC-202X Numerical Cntrl in Mfg II****2 0 0 2**

This course is designed to further acquaint the student with CNC controls including operating the (Fanuc) 3TC controller and the ANILAN GXM control unit. Emphasis is placed on complex part programs and machine set-up. Upon completion, students will be able to set-up equipment and run part programs. Prerequisites: MEC 201 and MAT 150; Corequisite: MEC 202Y

**MEC-202Y MEC-202 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 GXM control unit. Emphasis is placed on the Cartesian coordinates, keyboard, modes of operation, address codes, programming, and operation. Upon completion, students will be able to do complex part programming and run the machine. Prerequisites: MEC 201 and MAT 150; Corequisite: MEC 202X

**MEC-203X Numerical Ctrl in Mfg III****2 0 0 2**

This course is a continuation of MEC 202X and includes further development on CNC Controls and doing complex part programs with the use of personal computers. Emphasis is placed on doing complex part programs and showing how personal computers are interfaced with equipment. Upon completion, students will be able to complete a program on a computer and download it to the machine. Prerequisites: MAT 151, MEC 202X, MEC 202Y, and MEC 211; Corequisite: MEC 203Y

**MEC-203Y MEC-203 Lab****0 0 15 5**

This course is a continuation of MEC 202Y and includes further development of CNC Controls and doing complex parts program with the use of personal computers. Emphasis is placed on execution of these CNC programs and the ones developed with the use of a computer. Upon completion, students will be able to run these programs on the machine, do set-up and download from a personal computer. Prerequisites: MAT 151, MEC 202X, MEC 202Y, and MEC 211; Corequisite: MEC 203X

**MEC-211 Basic CAD/CAM****1 4 3 4**

This course introduces the student to the basics of Computer Aided Drafting and Computer Aided Manufacturing. It includes the study of computer graphics, the components and operation of computers, the methods of program execution, and how to develop a CNC program. Upon completion, the student will be able to construct a working drawing and produce a CNC Program. Prerequisite: MEC 201; Corequisite: MAT 151

**MEC-212 Advanced CAD/CAM****1 2 12 6**

This course is a continuation of MEC 203 and MEC 211 and includes further development of CAD/CAM as it is used in the machine shop by doing more difficult part programming. Topics include Master CAM and CNC programs for machine tool and setting up machine for different parts. Upon completion, students will be able to draw and design a complex part and develop a useable program. Prerequisites: MEC 203X, MEC 203Y, and MEC 211; Corequisite: MEC 213

This course provides the student with the opportunity to apply theory principles of CAD/CAM and CNC, as it is used in industry. Topics include how Master Cam is used to produce CNC programs and how to set-up the machine for different parts. Upon completion, students will be able to use Master Cam and set-up and run the CNC equipment. Prerequisite: MEC 212

**MED-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

**MKT-111 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 MKT 139 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: MKT 139

**MKT-121 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-123 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-139 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-141 Advertising Principles****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

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-220 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 139

**MKT-222 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: MKT 139

**MKT-224 Salesmanship****2 0 3 3**

This course is designed to emphasize the necessity of selling skills in a modern business career. Emphasis is placed on industrial selling, legal aspects of selling, and the techniques involved in various types of sales situations. The selling process is given a thorough step-by-step treatment in order to expose the student to vital concepts that they must be acquainted with. 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-226 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-230 Marketing Leadership****3 0 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-233 Fashion in Retailing** 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

**MKT-235 Services Marketing** 3 0 0 3

This course is designed to define services marketing, demonstrate its importance, note its special characteristics and relate the marketing concept to services marketing. Emphasis is placed on the basic building blocks of services marketing, distinctive aspects of services and application of the services marketing mix. Upon completion, students will be able to explain the difference between goods and services marketing and apply the marketing mix variables to services marketing. Prerequisite: MKT 139

**MKT-238 Commercial Display** 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-244 Physical Distribution** 3 0 0 3

This course deals with the coordination of the physical movement aspects of an organizations' operations so that a flow of raw materials, parts, and finished goods is achieved in such a way that cost is minimized for the level of service desired. Topics include transport, inventory control, warehouse management, order processing, packaging, material handling, location analysis and international distribution. Upon completion, students will understand the component of physical distribution as a part of a business logistics system. Prerequisite: MKT 139

**MKT-248 Special Marketing** 3 0 0 3

This course is designed to introduce and develop an understanding of current marketing trends. Emphasis is placed on direct marketing, non- profit marketing and services marketing. Upon completion, students will be able to recognize specific marketing problems and identify the players in each of these market segments. Prerequisite: MKT 139

**MUS-151 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

**MUS-152 Music Fundamentals** 5 0 0 5

This course was designed as a course in Music Fundamentals for the classroom teacher in elementary school. Topics include music notation, music reading, and primary keyboarding skills. An emphasis is also placed on methods and experiences. Upon completion, students will be able to fully understand the teaching of music to elementary school children. Prerequisites: None

**MUS-153 Music History I**

5 0 0 5

This course is a survey of the development of music from antiquity through the Seventeenth century. Topics include music in Western civilization from the chant of the early church to the poly phonic art of the 16th century. Upon completion, students will be able to recognize early music patterns, eg. Gregorian Chant, chamber music and renaissance music. Prerequisite: MUS 151

**MUS-154 Music History II**

5 0 0 5

This course is designed for the development of music from the Baroque era in the early 18th century to the present day. Topics include stress of performance practices, major composers of Baroque and the rococo, the Viennese classical school and romanticism. Upon completion, students will be able to identify all the classical music and composers of the era along with 20th century concert music. Prerequisite: MUS 153

**MUS-155 Basic Musicianship**

5 0 0 5

This course is a study of the rudimentary aspects of music, which may be of great benefit to elementary school teachers. Topics include the major and minor scales, intervals, and simple chords, and rhythmic drills. Upon completion, students will be able to understand most basic music programs as applied to early childhood study. Prerequisites: None

**MUS-156 Keyboarding Literature**

5 0 0 5

This course is a study of keyboard pieces from various musical eras. Correct identification of eras and styles is important. Topics include most classical music and modern day compositions to include musical structure and type of instruments used. Upon completion students will be able to be familiar with the different types of music from the keyboard in different eras. Prerequisites: None

**NUR-101 Nursing Child/Adult I**

6 4 3 9

This course introduces process threads of the ADN curriculum: life-span functional health patterns, wellness-illness continuum, nursing process and roles of the ADN. Topics include basis concepts of pharmacology, asepsis, safety, nutrition, ethical-legal aspects and pathophysiology. Upon completion students will be able to apply select components of the nursing process to the care of the assigned clients. Prerequisite: Prior approval to ADN Program

**NUR-102 Nursing Child/Adult II**

6 4 3 9

This course re-emphasizes process threads of the ADN curriculum: life-span functional health patterns, wellness-illness continuum, nursing process and roles of the ADN. Emphasis is placed on patterns of and alterations in immunologic, integumentary, and musculoskeletal functioning. Upon completion, students will be able to apply the nursing process to the care of select clients. Prerequisites: NUR 101, BIO 160X, BIO 160Y, and PSY 101

**NUR-103 Nursing Child/Adult III**

6 0 9 9

This course focuses on application of the nursing process in the care of clients of all age levels with alterations in selected functional health patterns. Emphasis is placed on patterns of and alterations in gastro- intestinal, endocrine, reproductive functions and neoplasia. Upon completion, students will be able to apply the nursing process to the care of select clients. Prerequisites: NUR 102, BIO 161X, BIO 161Y, and PSY 252

This course focuses on application of the nursing process to the care of the childbearing family. Emphasis is placed on patterns of and alterations in reproductive functioning and role relationships. Upon completion, students will be able to apply the nursing process to the care of the childbearing family. Prerequisites: NUR 103, BIO 162X and BIO 162Y

**NUR-1101 Nursing Skills I****5 4 9 10**

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. Prerequisite: Prior approval to PNE Program

**NUR-1102 Nursing Skills II****2 4 0 4**

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: NUR 1101, BIO 160X, and BIO 160Y

**NUR-1103 Medical & Surg Nursing I****7 0 12 11**

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: NUR 1101, BIO 160X, and BIO 160Y

**NUR-1110 Nursing Transition****3 0 0 3**

This course is designed to assist the Licensed Practical Nurse in the transition to the role of the Associate Degree Nurse. Topics include philosophy and conceptual framework of the ADN Program, the nursing process, and scope of practice of the RN. Upon completion, students will be able to describe the roles of the ADN: provider and manager of care and member of the discipline. Prerequisites: BIO 160 - 162X and Y, CAS 101, PSY 101, PSY 252, SOC 101, NLN Mobility Profile I and approval for advanced placement into ADN

**NUR-1111 Maternal - Child Nursing****9 0 12 13**

Maternal-child nursing includes concepts related to the care of the child-bearing woman and her family and provides an introduction to pediatric nursing and basic principles of growth and development. Topics include conception, pregnancy, labor and delivery, the puerperium, care of the newborn, health problems and nursing care of children. Upon completion, students will be able to provide family-centered maternity care during pregnancy parturition, and after the birth of the baby as well as apply understanding of growth and development, maturational and childhood health problems in helping children achieve optimal health status. Prerequisite: NUR 1103

**NUR-1113 Medical & Surg Nursing II****7 2 12 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. Prerequisite: NUR 1111



**NUR-1114 Vocational Development****2 0 0 2**

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. Prerequisite: NUR 1111

**NUR-205 Nursing Child/Adult V****6 0 12 10**

This course focuses on application of the nursing process in the care of clients of all age levels with alterations in selected functional health patterns. Emphasis is placed on patterns of and alterations in mental health functioning. Upon completion, students will be able to apply the nursing process to the care of select clients. Prerequisite: NUR 104

**NUR-206 Nursing Child/Adult VI****6 0 12 10**

This course focuses on application of the nursing process in the care of clients of all age levels with alterations in selected functional health patterns. Emphasis is placed on patterns of and alterations in neurological and neurosensory functioning, urinary functioning and male reproductive functioning. Upon completion, students will be able to apply the nursing process to the care of select clients. Prerequisite: NUR 104

**NUR-207 Nursing Child/Adult VII****6 0 12 10**

This course focuses on application of the nursing process in the care of clients of all age levels with alterations in selected functional health patterns. Emphasis is placed on patterns of and alterations in cardiovascular, respiratory, and multisystem functioning. Upon completion, students will be able to apply the nursing process to the care of select clients. Prerequisites: NUR 205 and NUR 206

**NUR-208 Professional Development****2 0 0 2**

This course focuses on the role of the nurse as a manager of care and member of the discipline. Topics include management of groups of patients, employment expectations and strategies, and contemporary nursing issues. Upon completion, students will be able to manage the care of a group of clients and supervise the care given by less credentialed personnel. Prerequisites: NUR 205 and NUR 206

**NUR-3023 Nursing Assistant I****2 2 6 5**

This course introduces personal hygiene and basic skills for nursing care of adults. Emphasis is placed on needs of the elderly; patient's rights; nutrition; elimination; safety; communication; documentation; human body functioning; and the role of the nursing assistant. Upon satisfactory completion, the student will be eligible to apply for listing as a Nurse Aide I by the North Carolina Board of Nursing. Prerequisite: Prior approval to Nursing Assistant Program

**NUR-3024 Nursing Assistant II****3 4 9 8**

This course is designed to prepare graduates to perform more complex skills for patients or residents regardless of setting. Emphasis is placed on infection control; elimination procedures; respiratory procedures; fluid management; and the role of the Nursing Assistant II. Upon satisfactory completion, the student will be eligible to apply for listing as a Nurse aide II by the North Carolina Board of Nursing. Prerequisites: NUR 3023 or a Board of Nursing approved Nursing Assistant I course

This course is designed to prepare students to provide basic health and personal care to patients in the home. Topics include growth and development; nutrition; medications; safety; home emergencies; family dynamics; and community resources. Upon completion, students will be able to provide home care under the supervision of a licensed nurse. Prerequisite: Prior approval to Nursing Assistant Program

**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 161 X & Y, and 110 X & Y, and DEN 214

**NUT-106 Essentials of Nutrition**

4 0 0 4

This course includes principles of nutrition using the four basic food groups and the application of the principles to the planning of nutritionally adequate diets. Topics include four basic food groups, nutrients, balanced menus, food habits, and current problems/issues in the study of nutrition. Upon completion, students will be able to construct balanced menus using the four basic food groups and will be aware of issues in the study of nutrition. Prerequisites: None

**ORI-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

**OSC-101 Keyboarding Skills I**

0 0 3 1

This course introduces the touch system of keyboarding on the microcomputer. Topics include keyboard introduction. Upon completion, students will be able to demonstrate the ability to keyboard using the touch method on the microcomputer. Prerequisites: None

**OSC-102 Keyboarding Skills II**

0 0 3 1

This course is designed to develop correct keyboarding techniques on the microcomputer for business, accounting, or paralegal students who have acquired the basic touch method of keyboarding. Emphasis is placed on developing basic word processing skills through letters, memoranda, tables, and reports. Upon completion, students will be able to keyboard mailable business correspondence on the microcomputer. Prerequisite: OSC 101 or Equivalent

**OSC-103 Keyboarding III**

2 0 3 3

This course will continue to develop accuracy and speed in keyboarding on the computer. Topics include keyboarding error-free tables, manuscripts, and business correspondence. Upon completion, students will be able to keyboard two error-free documents within 30 minutes and keyboard 40 wpm with a maximum of 5 errors. Prerequisite: OSC 105

**OSC-104 Keyboarding IV**

2 0 3 3

This course continues the development of technique improvement and office production typing. Emphasis is placed on production input modes covering arranged, unarranged, handwritten, rough draft, and incomplete copy. Upon completion, students will be able to produce mailable copy measured by office standards, and keyboard 45 wpm with a maximum of 5 errors. Prerequisite: OSC 103

**OSC-105 Keyboard Skillbuilding**

1 0 3 2

This course provides a complete accuracy- and speed-building program using a scientific, individualized, diagnostic and prescriptive approach. Emphasis is placed on diagnostic tests to identify the students accuracy and speed deficiencies followed with corrective drills. Upon completion, students will be able to rhythmically keyboard with greater accuracy and speed, to increase proofreading skills, and to demonstrate improved typing techniques resulting in increased accuracy and speed measured by five-minute times writings. Prerequisite: OSC 101

**OSC-106 Adv Keyboarding Skills**

1 0 3 2

This course continues the development of the accuracy- and speed-building keyboard program using an individualized, diagnostic approach. Emphasis is placed on speed development with a continuing concern for accuracy standards. Upon completion, students will be able to keyboard with greater speed and accuracy as measured by five-minute timed writings and skill-development paragraphs. Prerequisite: OSC 104

**OSC-110 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. Topics include microcomputer systems, applications and systems software, and hardware components as well as hands-on experience in word processing, electronic spreadsheets and graphics, and database management. Upon completion, students will be able to demonstrate a general knowledge of microcomputers and their applications. Prerequisite: OSC 101

**OSC-112 Records Management**

5 0 0 5

This course includes a study of the entire records management cycle which stresses the fundamentals of indexing and filing. Emphasis is placed on alphabetic, numeric, geographic, and subject filing through the use of a practice set. Upon completion, students will be able to file correspondence and non-correspondence materials efficiently and perform the retrieval, retention, transfer, and disposal procedures. Prerequisite: OSC 101

**OSC-118 Word Processing on Micro**

0 0 3 1

This course is designed to develop an understanding of the basic capabilities of word processing and provide hands-on experience in performing word processing functions on the microcomputer. Emphasis is placed on text-editing features in addition to the creation and formatting of letters, reports, and simple tables. Upon completion, students will be able to utilize the merge function to generate and assemble documents. Prerequisite: OSC 101

**OSC-120 Shorthand**

5 0 0 5

This course introduces Gregg Shorthand theory by reading textbook material, writing outlines, and transcribing from textbook material, homework notes and classwork dictation notes. Emphasis is placed on phonetics, penmanship, brief forms, phrases, principles of joining, developing reading skills, and writing/transcribing from dictation. Upon completion, students will be able to read at 100 wpm, take dictation at 40 wpm for 2 minutes, and transcribe with 95 percent accuracy. Prerequisites: None

**OSC-120A Shorthand**

3 0 0 3

This course introduces Gregg Shorthand theory through reading textbook outlines, writing outlines, and transcribing from textbook materials, homework notes and classwork notes. Emphasis is placed on phonetics, penmanship, word families, brief forms, phrases, and the principles of joining. Upon completion, students will be able to read textbook shorthand outlines, write and transcribe theory outlines, and transcribe with 90 percent accuracy. Prerequisites: None

**OSC-120B Shorthand**

2 0 0 2

This course is a continuation of OSC 120A and includes the study of theory by reading and writing textbook outlines and transcribing from dictation. Emphasis is placed on improving reading speed, writing and transcribing shorthand outlines, and writing and transcribing from dictation. Upon completion, students will be able to read at 100 wpm, take dictation at 40 wpm for 2 minutes, and transcribe with 95 percent accuracy. Prerequisite: OSC 120A

**OSC-127 Dict & Transcription I**

3 2 0 4

This course provides a review of shorthand theory and introduces the student to writing shorthand from dictation of new-matter material. Emphasis is placed on improving penmanship, increasing speed in writing from dictation, and transcribing accurately from shorthand notes. Upon completion, students will be able to transcribe material dictated at 50 wpm with 95 percent accuracy and transcribe mailable copy dictated at 40-50 wpm. Prerequisites: OSC 104, OSC 120, and BUS 141

**OSC-132 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 in the business office. Emphasis is placed on business and professional vocabularies. Upon completion, students will be able to utilize a broad vocabulary for daily usage and future employment skills. Prerequisites: None

**OSC-134 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 effectively use postal, shipping, and telephone services and will understand the office environment. Prerequisites: OSC 105 and OSC 118

**OSC-136 Machine Transcription I**

1 0 6 3

This course introduces the student to dictation/transcription equipment and teaches the student to keyboard from machine dictation applying the "mailable-copy concept." Emphasis is placed on efficient operation of transcribing equipment, formatting and keyboarding documents from dictation, and producing mailable documents. Upon completion, students will be able to operate the transcription equipment efficiently and transcribe mailable documents within a reasonable time frame. Prerequisites: OSC 105 and OSC 118; Corequisite: BUS 141

**OSC-201 Info Processing Applic I**

4 0 3 5

This course offers hands-on instruction in the manipulation of the electronic typewriter and information processing equipment. Software packages include introduction to Display Write and WordPerfect and a continuation of instruction using WordStar on the microcomputer. Upon completion, students will be able to manipulate information processing systems to perform office tasks. Prerequisites: OSC 104 and OSC 118

**OSC-203 Info Processing Applic II****4 0 3 5**

This course is designed to provide hands-on instruction in desktop publishing using word processing software to generate a variety of documents. Topics include the creation and manipulation of graphic lines, graphic boxes, and graphic images integrated with text. Upon completion, students will be able to create brochures, newsletters, and forms. Prerequisite: OSC 201

**OSC-205 Info Processing Appl III****4 0 3 5**

This course provides instruction and hands-on experience on information processing equipment for general office and administrative office students. Emphasis is placed on keyboarding letters, manuscripts, business forms, tabulations, and legal documents in a simulated office approach. Upon completion, students will be able to produce mailable copy on the microcomputer and distribute information electronically. Prerequisite: OSC 203

**OSC-210 Bus Comm for Word Process****5 0 0 5**

This course is designed to develop skills in the technique of writing effective communication for Administrative Office and General Office students. Emphasis is placed on correctly writing inquiry, sales, credit, collection, adjustment, complaint, order, acknowledgment, remittance, and 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: OSC 104, BUS 141, ENG 101, and ENG 102

**OSC-215 Office Management****3 2 0 4**

This course provides an overview of Administrative Office Management. Topics include the basic concepts of office management, recruiting, supervising, training, job analysis, as well as managing and controlling administrative services. Emphasis will be placed on the systems approach. Upon completion, students will be able to analyze case studies and apply the concepts to simulated office situations. Prerequisite: OSC 201

**OSC-218 Advanced Word Processing****1 0 3 2**

This course is designed to develop an understanding of the advanced capabilities of word processing. Emphasis is placed on special advanced features of word processing including file management, graphics, footnoted documents, macros, and sorting. Upon completion, the student will be able to perform advanced word processing applications. Prerequisite: OSC 118

**OSC-232 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. Prerequisites: None

**OSC-234 Office Practice Seminar****3 0 0 3**

This course is designed to develop job-seeking skills and to further involve students in projects and duties that will be encountered on the job. Topics include financial and legal duties encountered in the office, planning itineraries, meetings, and workshops, and handling travel arrangements. Upon completion, students will be able to perform administrative and decision-making duties needed for job enhancement. Prerequisites: OSC 201 and OSC 203

This course develops the skill of direct transcription from oral dictation to mailable typewritten form. Emphasis is placed on word processing decisions in editing, punctuation, spelling, and formatting. Upon completion, students will be able to produce mailable copy from dictated material. Prerequisites: BUS 141, OSC 104, and OSC 136

**PED-151 Beginning Tennis 0 0 3 1**

This course is designed to teach the student the fundamentals of tennis, to include basic strokes, rules, scoring and planning strategy. Emphasis is placed on forehand, backhand, strokes, serves, return shots, strategies, scoring and rules. Upon completion, students will be able to demonstrate elementary skills for ground strokes, serves, volleys, game rules and strategy. Prerequisites: None.

**PED-152 Fitness For Life 2 4 0 4**

This course is designed to enable students to create and implement a physical fitness program and achieve specific lifestyle changes. Topics include wellness concepts, health-related fitness components, nutrition, weight control, injury prevention and treatment. Upon completion, students will be able to design, evaluate, and implement a comprehensive physical fitness program while maintaining nutritional requirements and preventing or minimizing injury. Prerequisites: None.

**PED-153 Special Phy. Ed. I 1 0 3 2**

This course is designed for students with physical disabilities or verified health problems that require adaptive activities. Emphasis is placed on designing a specific set of activities that will enable the disabled student to participate to their capability. Upon completion, students will be able to demonstrate learned skills and rules (if applicable) of the adaptive physical activity. Prerequisites: None.

**PED-154 Special Phy. Ed. II 1 0 3 2**

This course is designed to incorporate knowledge and learned skills from PED 153 and to explore more possible activities. Emphasis is placed on widening the scope of activities and to increase awareness of further physical activities suited to their specific disability. Upon completion, students will be able to demonstrate learned skills and discuss a variety of possible activities to be explored. Prerequisites: PED 153.

**PED-155 Beginning Swimming (Coed) 1 0 3 2**

This course is designed to instruct the fundamentals of swimming at the beginner level of the Red Cross Program. Emphasis is placed on water safety, water acclimation, controlled breathing, floating and the front crawl stroke. Upon completion, students will be able to demonstrate the basic beginner skills of the Red Cross Program as well as pass a written exam. Prerequisites: None.

**PED-156 Volleyball 0 0 3 1**

This course is designed to teach basic rules and fundamentals of volleyball to include volleys, sets, spikes, and game strategy. Emphasis is placed on correct hand placement during basic strokes and game rules and strategy. Upon completion, students will be able to demonstrate skills for serving, volleying, setting, and spiking and be able to play a game and keep score. Prerequisites: None.

**PED-157 Badminton 0 0 3 1**

This course is designed to instruct students in the basic components of badminton to include rules and strategy. Emphasis is placed on execution of basic shots/strokes, positioning and scoring. Upon completion, students will be able to demonstrate correct serve, smash drops, blocks, scoring and rules for single and double play. Prerequisites: None.

**PED-158 Health Education****2 0 0 2**

This course is an introduction to basic concepts of personal health. Topics include personal and community health, sexuality, population planning, mental health, nutrition, fitness and health care delivery systems. Upon completion, students will be able to understand general concepts of personal and community health.

**PED-159 Folk Dance****0 0 3 1**

This course is designed to teach the student fundamental folk dance movements along with cultural traditions from a variety of countries. Emphasis is placed on history and traditions of the folk dance as well as movements and the dances themselves. Upon completion, students will be able to demonstrate folk dances as well as be knowledgeable of origins and cultural tradition of the dances. Prerequisites: None

**PED-161 Flex and Strength Trng****0 0 3 1**

This course is designed to instruct students in flexibility and strength exercises and to develop a basic understanding behind these exercises. Emphasis is placed on different techniques used in achieving flexibility and strength fitness. Upon completion, students will be able to identify and perform a variety of flexibility and strength exercises. Prerequisites: None

**PED-162 Cardiovascular Training****0 0 3 1**

This course is designed to introduce students to aerobic workouts to accomplish cardiovascular fitness. Emphasis is placed on knowledge of cardiovascular system, define target heart rates, diseases that are cardiovascular in nature and the effects aerobic exercise has on controlling disease. Upon completion, students will be able to establish their own aerobic fitness plan, monitor their own heart rates, determine target heart rates, and demonstrate aerobic exercise.

**PED-166 Camping and Outdoor Ed****1 0 3 2**

This course is designed to instruct the student on proper techniques of establishing a campsite and gain knowledge of the outdoor environment. Emphasis is placed on the history of the objectives of federal and state involvement with outdoor recreation and on shelters, fires, and other survival necessities. Upon completion, students will be able to demonstrate erecting a tent, use of backpack, building a fire, naming primary flora, and safety procedures.

**PED-168 Canoeing - Basic****0 0 3 1**

This course introduces the student to the proper techniques and safety procedures in canoeing. Emphasis is placed on safety, self rescue techniques, terminology and strokes. Upon completion, students will be able to demonstrate self rescue, name parts of a canoe, and to perform the following strokes: bow, sculling, reverse sculling, sweep, reverse sweep and J. Prerequisite: Demonstrate beginners swimmers skills.

**PED-170 Compass Course Training****0 0 3 1**

This course is designed to instruct students in the various types of orienteering and proper techniques. Emphasis is placed on defining various types of orienteering and being able to demonstrate knowledge and techniques. Upon completion, students will be able to draw topographic map symbols, negotiate a cross country orienteering course 3-5 km long in a specified time.

**PED-172 Beginning Golf**

0 0 3 1

This course is designed to instruct students in the proper methods, procedures and techniques in golf. Emphasis is placed on golf etiquette, rules scoring, club choice and swing techniques. Upon completion, students will be able to demonstrate the grip, stance, body posture, use of putter, nine iron and five iron.

**PED-174 Bowling**

0 0 3 1

This course will provide students with the correct methods and procedures to bowl. Emphasis is placed on bowling rules, scoring and proper techniques in rolling the ball follow through in rolling the ball and proper scoring techniques.

**PED-178 Self Defense - Level I**

0 0 3 1

This course introduces the student to basic self defense techniques integral to Tae Kwon Do and necessary to advance to yellow belt. Topics include basic stances, kicking, blocking, and punching techniques, hip throws, wrist holds, and releases. Upon completion, the student will be able to demonstrate a working knowledge of basic martial arts techniques and two Tae Kwon Do forms. Prerequisites: None

**PED-251 Intermediate Tennis**

0 0 3 1

This course will instruct students beyond the beginner techniques into more skilled areas of tennis. Topics include game strategy, lobs, service returns, smashes, spins, and ball placement. Upon completion, students will be able to demonstrate learned intermediate skills in game situations. Prerequisites: None

**PED-278 Self Defense - Level II**

0 0 3 1

This course is a continuation of the self defense techniques integral to Tae Kwon Do and necessary to advance to orange belt. Topics include basic stances using additional blocks, additional kicks, parrying, redirecting, stick hands, wrist hold, releases, rolls and sparring techniques. Upon completion, the student will be able to demonstrate a working knowledge of Level II martial arts techniques and two additional Tae Kwon Do forms. Prerequisite: PED 178

**PHI-151 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-153 Philosophy of Religion**

5 0 0 5

This course, is an analysis of some of the main concepts, arguments and issues in the philosophy of religion. Topics include religious language, arguments for Gods existence, the problem of evil, miracles and religions experiences. Upon completion, students will be able to more fully appreciate the institution of religion and how it helps man to be socially responsible. Prerequisites: PHI 151.

**PHI-154 Introduction of Ethics**

5 0 0 5

This course of (moral philosophy) will emphasize the tools of ethical decision making with application to both classical and contemporary issues. Topics include, abortion, euthanasia, war, capital punishment, power and knowledge, problems of evil and theory of justice. Upon completion, students will be able to more fully understand different approaches to the problems of moral belief and practices. 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, cardiovascular, 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, anti-epileptic 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 0 3 4**

This course is a study of pharmaceutical dosage forms and considerations in their compounding. Topics include routes of drug administration, dosage form design, good manufacturing practices, and injections, sterile fluids, and products of biotechnology. Lab exercises are designed to develop skills necessary for preparation of intravenous admixtures both large volume parenterals and intermittent admixtures. Upon completion, students will be able to describe characteristics of pharmaceutical dosage forms covered and perform steps involved in preparation of intravenous admixtures.

**PHM-105 Pharmaceutical Prep II****3 0 3 4**

This course is a study of pharmaceutical dosage forms and considerations in their compounding. Topics include tablets and capsules, solutions, syrups, suspensions, and elixirs, aerosols, transdermal delivery systems, topical preparations, ophthalmics, otics, and other preparations. Lab exercises are designed to perfect skill in compounding techniques. Upon completion, students will be able to describe characteristics of dosage forms covered and prepare solutions, capsules, and ointments.

**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-1085 Surgical Pharmacology****1 0 0 1**

This course covers basic information on pharmacology needed to give effective assistance to the team in the operating room. Topics include weights and measures, pharmacologic agents and anesthesia. Upon completion, students will be able to use a drug information reference, classify various drugs according to type, care for and handle drugs at the sterile field. Prerequisites: All first quarter courses.

**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

**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

**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, aliquots and ratio and proportion problems. 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

**PHM-112 Hospital Clinical I****0 0 15 5**

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-113 Hospital Clinical II****0 0 15 5**

This course is a continuation of PHM 112 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 the computer properly, prepare intravenous admixtures, and dispense medications to inpatients and outpatients. Prerequisites: PHM 112

**PHM-133 Emergency 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: Departmental approval

This course is a continuation of PHM 133 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 133

**PHM-148 Respiratory Pharmacology****3 0 0 3**

This course includes effects, mechanism of action, routes and methods of administration, distribution, metabolism, and excretion of drugs pertinent to respiratory care. Topics include general pharmacology, microbiology, mucokinetics, sympathomimetics, phosphodiesterase inhibitors, corticosteroids, antibiotics, respiratory stimulants and depressants, and diagnostic agents. Upon completion, students will be able to use references, compute dosages, interpret and evaluate prescriptions, describe or prepare the administration of respiratory drugs. Prerequisite: RSP 105

**PHM-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

**PHO-107 Photography I****3 0 3 4**

This course introduces the photographic process through the basics of black-and-white photography. Topics include camera operation, light, metering, films, papers, chemicals, developing and printing controls, and finishing procedures; student must furnish camera. Upon completion, students will be able to utilize the aesthetic as well as the technical aspects of photography as a visual language for self-expression. Prerequisites: None

**PHO-115 Intro To Photography I****1 2 0 2**

This course provides a beginner's introduction to black-and-white photography. Topics include using camera controls, equipment and materials, darkroom procedures, developing film, and printing techniques. Upon completion, students will be able to understand photography basics and apply them. Prerequisites: None

**PHO-116 Intro To Photography II****1 2 0 2**

This course continues the beginner's introduction to black-and-white photography. Emphasis is placed on refining skills in black-and-white photography. Upon completion, students will be able to understand photography basics and apply them. Prerequisite: PHO 115

**PHO-117 Photography II****2 4 0 4**

This course introduces Photo/Graphics, the manipulation of traditional techniques which explore the design potential of photography to yield new and unusual images. Emphasis is placed on processes such as high contrast, multiple printing, posterization, solarization, hand coloring, collage, and presentation methods. Upon completion, students will be able to use these techniques as tools with which to generate imaginative images for visual communication. Prerequisite: PHO 107

This course is designed to further refine black-and-white skills, introduce color and color processes, and provide an understanding of basic studio procedures. Topics include studio organization and equipment, lighting, portraiture, product photography, special effects, and copying procedures. Upon completion, students will be able to discuss the professional photographer's problems and the graphic designer's role in contributing to the photographic solution. Prerequisite: PHO 117

**PHS-151 Physical Science I****5 2 0 6**

This course is designed for non-science majors and will investigate the basic principles of physical science. Emphasis is placed on basic concepts of chemistry and physics by making observations and performing laboratory exercises. Upon completion, students will be able to better understand the physical world around them because of the scientific principles they observe and experience. Prerequisites: None.

**PHS-152 Physical Science II****5 2 0 6**

This course is a continuation of PHS 151. Emphasis is placed on the concepts of astronomy, earth science, and environmental science by making observations and performing laboratory exercises. Upon completion, students will be able to better understand the physical world around them because of the scientific principles they observe and experience. Prerequisites: PHS 151.

**PHS-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: PHS 91Y and MAT 91

**PHS-91Y PHS-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 PHS 91X. Prerequisites: None; Corequisites: PHS 91X and MAT 91

**PHS-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: PHS 92Y and MAT 92

**PHS-92Y PHS-92 Lab****0 2 0 1**

This course is designed to develop a better understanding of the mathematical concepts presented in PHS 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 PHS 92X. Prerequisites: None; Corequisite: PHS 92X and MAT 92

**PHS-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: PHS 93Y and MAT 93

**PHS-93Y PHS-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 PHS 93X. Prerequisites: None; Corequisites: PHS 93X and MAT 93

**PHS-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: PHS 94Y and MAT 95

**PHS-94Y PHS-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 PHS 94X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHS 94X concepts. Upon completion, students will be able to apply mathematical concepts introduced in PHS 94X and MAT 95 as a result of the concrete examples observed. Prerequisite: MAT 94; Corequisites: PHS 94X and MAT 95

**PHS-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: PHS 95Y and MAT 96

**PHS-95Y PHS-95 Lab****0 2 0 1**

This course is a laboratory course that uses selected experiments and observations to support the instructional materials in PHS 95X. Emphasis is placed on the scientific approach using selected experiments on PHS 95X concepts for observation and calculation. Upon completion, students will be able to apply the concepts introduced in PHS 95X and MAT 96 as a result of the concrete examples observed. Prerequisite: MAT 95; Corequisites: PHS 95X and MAT 96

**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

**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

**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 statistics, 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

**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

**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

**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 103X. 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, Trigonometry

**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. Prerequisites: PHY 102X and PHY 102Y

**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. Prerequisites: PHY 102X and PHY 102Y

**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

**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

**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

**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

**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

**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

**PHY-110X Topical Physics****4 0 0 4**

This course is designed to cover fundamental physics concepts for the health sciences. Topics include velocity, work, machines, properties of matter, electricity and wave motion. Upon completion, students will be able to better apply these concepts to their chosen field of study. Prerequisite: Algebra

**PHY-110Y PHY-110 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 110X. Emphasis is placed on the scientific method as the student performs experiments and makes observations of specific PHY 110X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 110X because of the concrete examples they observe. Prerequisite: Algebra

**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 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 Technical 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 how these concepts apply to the technology of their chosen vocations. Prerequisite: MAT 112

**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 112

**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 112

**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 112

**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 112

**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 adaptation 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 112

**PHY-151X 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 151Y

**PHY-151Y PHY-151 Lab****0 2 0 1**

This course is an introductory laboratory course that uses selected experiments and observations that will support material in PHY 151X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHY 151X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 151X because of the concrete examples they observe. Prerequisites: College Algebra; Corequisites: PHY 151X



**PHY-152X General Physics II**

5 0 0 5

This course is a continuation of PHY 151X 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. Prerequisite: College Algebra and PHY 151X; Corequisite: PHY 152Y

**PHY-152Y PHY-152 Lab**

0 2 0 1

This course is an introductory laboratory course that uses selected experiments and observations that will support material in PHY 152X. Emphasis is placed on the scientific method as the students perform experiments and make observations of specific PHY 152X concepts. Upon completion, students will be able to apply the concepts introduced in PHY 152X because of the concrete examples they observe. Prerequisite: College Algebra; Corequisite: PHY 152X

**PHY-180 Elementary Physics I**

5 2 0 6

This course is designed for non-science majors and discusses in a descriptive fashion the nature of matter, motion, work and energy. Emphasis is placed on motion, circular motion, energy, work, power, heat, temperature, sound, laboratory experiments and observations. Upon completion, students will be able to associate discussed concepts with practical applications encountered in daily living. Prerequisites: None.

**PHY-181 Elementary Physics II**

5 2 0 6

This course is designed for non-science majors and is a continuation of Elementary Physics I. Emphasis is placed on electricity and magnetism, light, modern physics, relativity, astro physics, laboratory experiments and observation. Upon completion, students will be able to associate discussed concepts with practical applications encountered in daily living. Prerequisites: None

**PHY-251X College Physics I**

5 0 0 5

This course introduces students to mechanics, wave motion, and thermodynamics using elementary calculus techniques. Emphasis is placed on linear motion, circular motion, work, power, wave motion, and thermodynamics. Upon completion, students will be able to apply learned problem solving techniques to practical applications in the workplace. Prerequisites: MAT 271 or equiv. Corequisites: PHY 251Y.

**PHY-251Y PHY-251 Lab**

0 2 0 1

This course is designed to give students some practical experience with laboratory apparatus that supports College Physics PHY-251X. Emphasis is placed on scientific procedures in the performance of experiments and the recording of data used to verify the concepts presented in PHY-251X. Upon completion, students will be able to associate laboratory experiences with concepts introduced in PHY-251X. Prerequisites: None; Corequisite: PHY 251X

**PHY-252X College Physics II**

5 0 0 5

This course is a continuation of College Physics I. Concepts covered include electricity and magnetism, classical optics, and some modern physics. Emphasis is placed on electrostatics, magnetism, Light waves, light quanta, the atom and special theory of relativity. Upon completion, students will be able to apply learned problem solving techniques to practical application in the workplace. Prerequisites: MAT 271 and PHY 251. Corequisites: PHY 252Y.

This course is designed to give students some practical experience with laboratory apparatus that supports College Physics PHY-252X. Emphasis is placed on scientific procedures in the performance of experiments and the recording of data used to verify the concepts presented in PHY-252X. Upon completion, students will be able to associate laboratory experiences with concepts introduced in PHY-252X. Prerequisites: None; Corequisite: PHY 252X

**PLA-1160 Intro to Plastic Molding** 2 2 6 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 used in industrial situations. Prerequisite: Machine Shop

**PLA-1161 Mold Making I** 2 2 6 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 used in industrial settings. Prerequisite: PLA 1160

**PLA-1162 Mold Making II** 2 0 6 4

This course covers 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: PLA 1161

**PLA-1163 Mold Making III** 1 0 9 4

This course is a continuation of PLA 1162 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: PLA 1162

**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-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: None

**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: None

**PLU-1113 Plu. Maint.: Residential** 2 0 6 4

This course covers the maintenance and repair of plumbing lines and fixtures in residential applications. Emphasis is placed on identifying and diagnosing problems relating to water, drain, and vent lines, and plumbing fixtures. Upon completion, the student will be able to identify and diagnose needed repairs to residential plumbing systems. Prerequisites: None

**PLU-1114 Plu. Maint.: Commercial** 2 0 6 4

This course covers the maintenance and repair of plumbing lines and fixtures in commercial applications. Emphasis is placed on identifying and diagnosing problems relating to water, drain, and vent lines, and plumbing fixtures. Upon completion, the student will be able to identify and diagnose needed repairs to commercial plumbing systems. Prerequisites: None

**PLU-1115 Steam & Water Boilers** 3 0 9 6

This course introduces the student to the basic fundamentals of installing, operating, and servicing steam and water boilers. Topics include boiler room safety, boiler applications, proper installation, and maintenance. Upon completion, the student will be able to select, install, operate and maintain steam and water boilers. Prerequisites: None

**PLU-1116 Plu Regs: Residential** 4 0 0 4

This course covers plumbing codes and regulations relating to residential structures. Emphasis is placed on North Carolina state regulations and the minimum requirements for plumbing materials and design. Upon completion, the student will be able to design plumbing systems for residential structures in accordance with state requirements. Prerequisites: None

**PLU-1117 Plu Regs: Small Commercial** 4 0 0 4

This course covers plumbing codes and regulations relating to small commercial structures. Emphasis is placed on North Carolina state regulations and the minimum requirements for plumbing materials and design. Upon completion, the student will be able to design plumbing systems for small commercial structures in accordance with state requirements. Prerequisites: None

**PLU-1118 Plu Regs: Large Commercial** 4 0 0 4

This course covers plumbing codes and regulations relating to large commercial structures. Emphasis is placed on North Carolina state regulations and the minimum requirements for plumbing materials and design. Upon completion, the student will be able to design plumbing systems for large commercial structures in accordance with state requirements. Prerequisites: None

**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: None

**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: None

**PME-201 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

**POL-102 Intrastate Government****3 0 0 3**

This course examines all governments below the national level to include city, county, regional and state governments. Emphasis is placed on the differences observed between states and other non-national governments. Levels of politics within government are also explained. Upon completion, students will be able to understand all aspects of political decision making at the non-national level.

**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-151 Intro To Political Science****3 0 0 3**

This course is a study of the basic political concepts used by government today and will introduce the field of political science to new students. Topics include democracy, totalitarianism and authoritarianism. Political ideologies, legitimacy sovereignty and constitutions. Upon completion, students will be able to understand generally who rules America and what makes democracy possible, to include understanding public opinion polls. Prerequisites: None.

**POL-152 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-153 State & 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 governmental 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-251 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 gauge the importance of American foreign relations and better understand the international setting for political decision making. Prerequisite: POL 152

This course will develop the interplay of political forces in the international community with an emphasis on wartime policy. Topics include international diplomacy, peace treaties, decision making and the international realignment of nations. Upon completion, students will be able to better develop a comprehensive set of attitudes toward the U.S. in its relationship with other nations. Prerequisites: POL 151

**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**

3 0 0 3

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-107 Postal Serv Labor Relat**

3 0 0 3

This course covers the history of labor relations in the Postal Service, the current state of labor relations in the Postal Service and the contractual obligations of both parties to the National APWU/NALC contract. Upon completion, the student will have a working knowledge of the National Contract, and of the pertinent parts of same to the topic of labor relations. The employee will also study the principles of labor negotiation and of arbitration as a way of resolving contract disputes. 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 integrate in the total postal operation. Prerequisites: None

**POS-208 Postal Problem Analysis 3 0 0 3**

This course covers the area of USPS Human Resources and builds on the foundation laid in POS 201 and 207. It is organized in the form of roundtable discussion, role playing and in depth individual research. It covers topics such as Merit Systems Protection Board Hearings, ELM 650 procedures, financial demands and other advanced employee labor areas. Upon completion, the student will have a broader understanding of applying the procedures found in the Employee and Labor Relations Manual to practical postal situations.

**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-110 Occupational Psychology 3 0 0 3**

This course is a study of human occupational behavior in a home or workplace setting. Emphasis is placed on one's self-esteem and its effect on intergroup relationships at the workplace. Upon completion, students will be able to better understand the psychology of the workplace and better appreciate different occupational life styles. Prerequisites: None

**PSY-1101 Psych of Formal/Informal Org 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-151 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-152 Human Learning & Memory**

5 0 0 5

This course is an introduction to human learning information processing with emphasis on duration and capacity of short term memory. Topics include theories of human learning, verbal learning, motor learning, memory processes, retention and forgetting. Upon completion, students will be able to fully understand the learning processes for both long and short term memory. Prerequisite: PSY 151

**PSY-153 Psychology of Pers Adj**

5 0 0 5

This course will provide a method for meeting lifes goals through a psychological adjustment, developed by each of the students. Topics include dealing with the psychological problems of stress, depression, anxiety and other everyday problems. Upon completion, students will be able to solve minor adjustment problems by and through the incorporation of these difficulties in their everyday life. Prerequisite: PSY 151

**PSY-154 Educational Psychology**

5 0 0 5

This course is a comprehensive introductory survey of the field of educational psychology, incorporating the principles and techniques of human learning. Topics include developing an understanding of the principles, practices and research used in studying the learning process. Upon completion, students will be able to concern themselves fully with the principles and research used in the learning process. Prerequisite: PSY 151

**PSY-155 Social Psychology**

5 0 0 5

This course examines human behavior as a function of social influences with emphasis on personal attraction, aggression, altruism and conformity. Topics include basic psychological factors such as perception and motivation which both shape and reflect social influences. Upon completion, students will be able to understand the dynamics of their place in the social world by understanding psychological motivators. Prerequisites: PSY 151

**PSY-202 Changes in Human Develop.**

3 0 0 3

This course is designed to generally highlight the study of the four major changes in human development over an individual lifespan. Emphasis is placed on the psychological development as well as the biological, social, and cultural aspects of changes in growth. Upon completion, students will be able to discuss and understand the biopsychological changes in human development throughout the lifespan. Prerequisite: PSY 101

**PSY-204 Behavior Disorders**

3 0 0 3

This course is a study of the principles leading to maladaptive behavior in which individuals develop inappropriate behavioral performance. Topics include various deviations of maladaptive behavior along with student familiarization of proper textbook terminology. Upon completion, students will be able to better select and adopt proper and normal methods of behavior along with understanding adjustment mechanisms. Prerequisite: PSY 101 or equivalent

**PSY-251 Stress 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 Human Growth & Develop** 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. Prerequisite: PSY 151 or equiv.

**PSY-253 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 151

**PSY-254 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 151

**PSY-255 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. Prerequisite: PSY 151

**PTH-101 Intro to Physical Therapy** 2 0 6 4

This course provides an introduction to physical therapy, role of the physical therapist assistant, health care system, basic patient care, transfer skills, and medical terminology. Topics include legal regulations and ethical principles, history, universal precautions, bandaging, vital signs, body mechanics and transfers. Upon completion, students will be able to explain the current health care system, physical therapist assistant's role, demonstrate patient care and transfer skills, and use medical terms. Prerequisite: Consent of Department Chairperson

**PTH-102 Physical Therapy Proc I** 2 0 9 5

This course covers superficial heat procedures, ultrasound, massage, wound care, burns and initial clinical rotation. Emphasis is placed on physiological effects, indications and contraindications, skill techniques and an understanding of wound/burn causes and treatment. Upon completion, students will be able to apply superficial heat modalities, ultrasound, wound/burn treatment and massage safely and correctly in lab and clinic. Prerequisites: PTH 101, PTH 112 and PHY 110

**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-112 Topical Anatomy for PTA****2 0 3 3**

This course provides the student with a working knowledge of the anatomy of various selected human systems. Topics include laboratory and didactic activities emphasizing the skeletal, articular, muscular, nervous and circulatory systems. Upon completion, students will be able to list and describe the components of these systems as applied in physical therapy. Prerequisite: Consent of Department Chairperson

**PTH-114 Kinesiology/Ther Exercise****3 0 6 5**

This course covers basic muscle physiology, kinesiological and exercise concepts, components of normal gait and gait dysfunction. Topics include muscle strength, endurance, flexibility, related exercise programs and sequencing, gait training with assistive devices. Upon completion, students will be able to apply kinesiology principles, demonstrate skill and teach gait and therapeutic exercise for non neurological conditions safely and appropriately. Prerequisites: PTH 112 and BIO 161

**PTH-201 Pathology for the PTA****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 160 and BIO 161 and Consent of Department Chairperson

**PTH-203 Physical Therapy Proc III****2 0 3 3**

This course provides a study of applied anatomy and kinesiology and application to musculoskeletal dysfunction and injury. Topics include peripheral soft tissue and joint function and dysfunction, measurement of joint motion with a goniometer. Upon completion, students will know the different muscle strengths, be able to apply the goniometer to determine joint motion, and discuss soft tissue and joint pathologies and treatment programs. Prerequisite: PTH 112 and PTH 114

**PTH-204 Physical Therapy Proc IV****3 0 9 6**

This course, a continuation of PTH 203, covers spinal musculoskeletal dysfunction, cardiopulmonary rehab, normal development, cerebral palsy, problem oriented documentation and part-time clinic rotation. Topics include posture, body mechanics, spinal dysfunction and treatment programs, use of orthotics and traction, and treatment of cerebral palsy. Upon completion, the student will be able to safely and correctly document and apply treatment techniques for spinal dysfunction and pulmonary hygiene in the lab and clinic. Prerequisite: PTH 203

**PTH-205 Physical Therapy Proc V****3 0 12 7**

This course, a continuation of PTH 204, emphasizes adult rehab techniques for spinal cord, amputee and CNS dysfunction and part-time clinical rotation. Topics include neurology review, gait training and pathologic gait, ADL and functional training, environmental access, prosthetics and orthotics. Upon completion, students will be able to demonstrate safe and correct application of selected rehab techniques in the lab and clinic. Prerequisite: PTH 204

**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. Prerequisite: Consent of Department Chairperson

This course is designed to introduce students to health care in the United States today, including historical perspectives and future trends. Topics include, health agencies and their functions, selected health issues and physical therapy participation. Upon completion, students will be able to discuss U.S. health care, appropriate community services, components of a physical therapy service and report on a community agency. Prerequisites: PTH 204, PTH 210 and Consent of Department Chairperson

**PTH-218 Clinical Education**

This course is designed to place students in two different full-time 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 205

**PTH-220 Physical Therapy Seminar**

This course consists of reports and discussions, and guest lectures about the latest physical therapy techniques, equipment and allied health specialties. Topics include reports on extra departmental experiences, case studies and literature reviews. Upon completion, students will be able to discuss specialized physical therapy techniques or equipment, related health fields, and display competent writing skills. Prerequisite: PTH 205 and Consent of Department Chairperson

**RAD-101 Radiologic Technology I**

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

**RAD-102 Radiologic Technology II**

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. Prerequisites: RAD 101, RAD 111, and BIO 160

**RAD-103 Radiologic Technology III**

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. Prerequisites: RAD 102, BIO 160 and BIO 161

**RAD-104 Radiologic Technology IV**

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. Prerequisite: RAD 103

**RAD-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

**RAD-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: RAD 111

**RAD-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: RAD 112

**RAD-114 Clinical Education IV****1 0 24 9**

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 fluoroscopic examinations of the gastro-intestinal tract including previous examinations. Upon completion, students will be able to perform examinations for clinical competency, especially fluoroscopic studies and cranial examinations. Prerequisite: RAD 113

**RAD-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: RAD 104

**RAD-206 Radiologic Technology VI****5 0 0 5**

This course is an overview of the preceding RAD courses with an introduction to radionuclides. Topics include principles of nuclear medicine, quality assurance, cross-sectional anatomy, 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. Prerequisite: RAD 207

**RAD-207 Pathology for RAD****4 0 0 4**

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: RAD 205

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: RAD 114

**RAD-216 Clinical Education VI****1 0 30 11**

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: RAD 215

**RAD-217 Clinical Education VII****1 0 30 11**

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, M.r.I., Cardiac Cath., 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: RAD 216

**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 & Crafts****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 Adaptive Populations****5 0 0 5**

This course introduces students to a variety of special populations and conditions that they may encounter in therapeutic recreation environments. Topics include mental retardation, mental illness, communication disorders, learning disabilities, as well as many specific physical and muscular conditions. Upon completion, students will be able to define and identify characteristics of special conditions and locate corresponding treatment locations within the community. Prerequisites: None

**REC-114 Intramural Management****1 0 3 2**

This course is designed to give students the opportunity to acquire an understanding of what is involved in managing intramural programs. Students will learn how to promote and track involvement within the intramural structure. Students will be exposed to both team and individual activities frequently a part of an intramural program. Students classroom experiences and lab simulations will be supplemented with opportunities to be involved with various aspects of the campus intramural program. Prerequisite: REC 125

**REC-119 Team Sports & Officiating**

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-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-125 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-136 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-138 Golf and Tennis**

2 0 3 3

This course is designed to teach the student the history, rules, techniques and strategies involved in the two sports. Emphasis is placed on individual skills, strategies and rules to play the game. Upon completion, the students will be able to play an entire game using correct procedures, methods and techniques. Prerequisite: None

**REC-146 Pathways to Wellness**

2 2 0 3

This course introduces the concept of total wellness by making lifestyle changes so that spiritual, mental, physical and emotional well being are attained. Emphasis is placed on providing students with current health information and then helping them set health goals and objectives to attain total well being. Prerequisites: None

**REC-148 Badminton and Volleyball**

2 0 3 3

This course is designed to instruct the students in the basic rules and fundamentals in badminton and volleyball. Emphasis is placed on skill techniques, strategy and selection of equipment. Upon completion students will be able to play and entire game using correct procedures, methods and techniques. Prerequisites: None

**REC-158 Recreation - Drama**

2 0 3 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-168 Athletic Injuries**

2 0 3 3

This course provides the student with ample information and experience to support prompt, sensible decisions when confronted with athletic injuries. Topics include injury identification and management, symptoms, actions to take and avoid, and modifications to promote healing. Upon completion, students will be able to treat most sports injuries properly, consult a physician when necessary and resume activities safely. 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 be 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 Basic 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 Camp Management**

2 0 3 3

This course is designed to provide the student with the skills and knowledge needed to work effectively in the various types of camping. Opportunities will be provided for students to acquire and use skills with camping equipment and techniques. Field trips will be used to allow students to examine facilities used for resident camps. The needs and characteristics of various age groups will be examined. Each student will also be given the opportunity to acquire and utilize in class a variety of games and stories suitable for campfire activities. Each student is required to attend an overnight camping trip where lessons learned in class can be put to practical use. Prerequisites: None

**REC-209 Maint & Facility Mgt**

3 2 0 4

This course is designed to provide hands-on learning of maintaining equipment and managing a recreation facility. Topics include facility scheduling and design of indoor and outdoor recreation facilities and maintenance of equipment. Upon completion, students will be able to design an outdoor and indoor recreation facility and schedule usage and personnel hours to include maintenance of equipment. Prerequisites: None

**REC-210 Outdoor Education****1 2 0 2**

This course is designed to familiarize the recreation student with the natural resources in the immediate area. Emphasis is placed on recognizing local assets through 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 about the community resource investigated. Each student will also be required to write a classroom presentation on the assigned topic. 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 Program Planning****5 0 0 5**

This course is designed to instruct students in the organizing and implementation of recreation programs. Topics include establishing schedules and budgets, learning group dynamics and problem solving techniques and leadership roles. Upon completion, students will be able to construct schedules for facilities and personnel, prepare budgets and cost analysis and to demonstrate and state leadership characteristics through problem solving techniques. Prerequisites: None

**REC-222 Public Relations in Rec****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 utilized. Prerequisites: None

**REC-223 Commercial Rec & Tourism****3 0 0 3**

This course is designed to inform students of the job opportunities and the workings of recreation for profit agencies. Emphasis is placed on private entrepreneurship of commercial recreation endeavors and the effect on our economy. Upon completion, students will be able to state procedures necessary to begin and maintain a successful recreation enterprise and to know and state the economic impact of the tourist industry. Prerequisites: None

**REC-224 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-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

This course is designed to instruct students in the basic components of planning programs for older adults. Emphasis is placed on needs and capabilities of older adults, programming techniques and leadership skills. Upon completion, students will be able to initiate, direct and coordinate facilities, personnel and carry out activities for older adults. Prerequisites: None

**REC-238 Therapeutic Activities**

3 2 0 4

This course is designed to orient students to various adaptations, modifications, therapies and techniques used in Therapeutic Recreation. Emphasis is placed on practical learning of adaptations, equipment and coordinating therapies associated with therapeutic recreation. Upon completion, students will be able to demonstrate proper innovative adaptations, techniques and goal setting designed for special populations. Prerequisites: None

**REC-240 Volunteer Services - Rec**

1 0 3 2

This course will provide students with an overview of volunteer possibilities and opportunities for actual participation as volunteers. Emphasis is placed on volunteer characteristics and locations where volunteers are used and actual volunteering activities. Upon completion, students will be able to state the importance of volunteering and be able to demonstrate capabilities of volunteering in actual locations throughout Cumberland County. Prerequisites: None

**RED-80 Applied Reading Skills**

3 2 0 4

This course develops students' applied reading skills. Emphasis is placed on awareness of effective time management, study methods, note- and test-taking, outlining, library utilization, and mnemonics. Upon completion, students will be able to apply this awareness in mastering college academics. Prerequisites: None

**RED-94 Prescriptive Reading**

3 2 0 4

This course is designed to remedy reading deficiencies by developing students' literal and critical reading skills. Emphasis is placed on improving vocabulary, comprehension, and reading rate. Upon completion, students will be able to read materials efficiently at a minimum of the 7.5 grade level. Prerequisites: None

**RED-95 Vocabulary & Reading I**

3 2 0 4

This course provides for reading and vocabulary development and is devoted 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 utilize independent reading habits that promote success at the 9.0 grade level. Prerequisites: None

**RED-96 Vocabulary & Reading II**

3 2 0 4

This course is a remedial reading and vocabulary course devoted primarily to developing good reading skills and habits. Emphasis is placed on the principles of rhetoric through the reading of selected essays. Upon completion, students will be able to read efficiently at a minimum of the 11.0 grade level. Prerequisites: None

**REL-151 Old Testament Survey**

5 0 0 5

This course is a survey of the Old Testament beginning with the pentateuch and continuing through the former, major, and minor prophets. Topics include the Pentateuch (covenant and law), historical books, major and minor prophets. Upon completion, students will be able to understand the Old Testament as a historical record of God's dealings with his chosen people. Prerequisites: None



This course is a systematic survey of the twenty-seven New Testament books from the Gospels to revelation. Topics include the Synoptic Gospels and the Pauline Epistles with emphasis on lectures, reading the text, and class discussions. Upon completion, students will be able to understand and appreciate the New Testament historically and its relationship with the world today. Prerequisites: None

**RLS-101 Real Estate Mathematics****3 0 0 3**

This course reviews basic math concepts required of Real Estate salespersons. Topics include computations such as profit, loss, commissions, appraisal, area and volume, interest, discount points, prorations, and capitalization. Upon completion, students will be able to solve math problems pertaining to real estate. Prerequisites: None; Corequisite: RLS 103

**RLS-103 Real Estate Fundamentals****4 2 0 5**

This course addresses the fundamentals and principles of real estate for the person seeking to become a licensed real estate salesperson or broker. Topics include real estate laws, rules and regulations, financing, ownership, brokerage, and property valuation. Upon completion, students will be prepared to sit for the North Carolina real estate salesman's examination. Prerequisites: None Corequisite: RLS 101

**RLS-201 Real Estate Law****3 0 0 3**

This course is an advanced level instructional course in real property ownership and interests. Topics include NCRE Licensing Law and rules and regulations, land use control, law of the agency, contracts, landlord and tenant law, mortgages/deeds of trust, and real estate closing activities. Upon completion, students will be able to apply their understanding of real estate law to real estate situations. Prerequisite: RLS 103 or real estate license

**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, governmental influences, and mortgage qualification procedures. Upon completion, students will be able to apply their understanding of finance to real estate problems more effectively. Prerequisite: RLS 103 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 accounting. Topics include management, personnel, operations, records and bookkeeping systems, and financial operations. Upon completion, students will be able to plan, establish, operate and manage a real estate brokerage firm. Prerequisite: RLS 103 Or real estate license

**RSP-105 Resp Ther Theory/Equip****4 2 0 5**

This course introduces the student to the respiratory care profession. Topics include medical terminology, medical ethics and legal issues, patient assessment, cardiopulmonary anatomy and physiology, and oxygen administration. Upon completion, students will be able to display mastery of concepts and procedures through demonstration and written evaluations. Prerequisite: Admission to the Respiratory Therapy program

**RSP-106 Resp Ther Theory/Equip II****3 2 6 6**

This course introduces basic therapeutic modalities and equipment for bronchial hygiene therapy, and provides clinical/hospital exposure. Topics include tracheobronchial procedures, humidity and aerosol therapy and hyperinflation techniques. Upon completion, students will be able to demonstrate mastery of concepts and procedures through clinical evaluation and written examinations. Prerequisite: RSP 105

**RSP-107 Resp Ther Theory/Equip III****3 2 0 4**

This course provides an in-depth study of airway care and maintenance. Topics include life-saving techniques for airway maintenance and the use of emergency equipment. Upon completion, students will be able to describe indications for and demonstrate appropriate use of advanced life support procedures, including intubation and manual ventilation. Prerequisite: RSP 106

**RSP-111 Clinical Practice I****1 0 15 6**

This course provides clinical experience for introductory oxygen therapy, implementation of aerosol and hyperinflation modalities, and chest physiotherapy. Topics include performance of procedures and acquiring clinical competency in basic modalities of respiratory care. Upon completion, students will be able to demonstrate proficiency in all areas of basic oxygen therapy, humidity and aerosol administration, chest physiotherapy and hyperinflation techniques. Prerequisite: RPS 106

**RSP-112 Clinical Practice II****1 0 6 3**

This course provides clinical exposure to basic airway care; blood gas sampling and analysis; bedside spirometry and respiratory mechanics; and implementation and management of mechanical ventilation. Emphasis is placed on the student being able to observe and participate in these skills at various clinical rotations. Upon completion of this course, the student will be able to assist in the care of patients in these areas. Prerequisite: RSP 111

**RSP-131 Clinical Applications I****4 0 0 4**

This course is a study in respiratory function and cardiopulmonary abnormalities. Topics include blood gas analyses, and the relationship between structure and function in the normal and diseased lung. Upon completion, students will be able to interpret clinical findings and recommend therapeutic interventions. Prerequisites: RSP 106, BIO 161X, BIO 161Y, and CHM 101

**RSP-132 Clinical Applications II****4 4 0 6**

This course covers advanced life support and mechanical ventilation. Emphasis is placed on the indications, effects, and techniques of mechanical ventilation. Upon completion, students will be able to set up, monitor, and adjust ventilators. Prerequisite: RSP 131

**RSP-213 Clinical Practice III****1 0 15 6**

This course establishes continuity between didactic information and clinical experience through exposure in intensive care units. Topics include collation and interpretation of patient data and implementation of advanced modes of mechanical ventilation, including neonatal and pediatric application. Upon completion, students will be able to provide total advanced cardiopulmonary assessment and demonstrate proficiency in its application. Prerequisite: RSP 112

**RSP-214 Clinical Practice IV****1 0 15 6**

This course includes study and clinical practice of the principles underlying clinical evaluation of the cardiopulmonary system. Topics include positive pressure ventilation of the adult and pediatric patients, cardiopulmonary rehabilitation, pulmonary function testing, and home health care. Upon completion, students will be able to demonstrate proficiency in arterial sampling and analysis, interpretation of respiratory mechanics, and application and manipulation of mechanical ventilators. Prerequisite: RSP 213

**RSP-215 Clinical Practice V****2 0 21 9**

This course provides the student with clinical involvement in the critical care areas and Respiratory Care Departmental supervision and management. Emphasis is placed on patient assessment, collection and interpretation of data, and implementation of an organized problem solving process. Upon completion, students will be able to apply acquired skills to all realms of respiratory care therapeutics and modalities. Prerequisite: RSP 214

**RSP-233 Clinical Application III****3 2 0 4**

This course includes ventilator weaning techniques, ECG interpretation, and airway pressure therapy. Emphasis is placed on treatment of dysrhythmia, alternative methods of discontinuance of mechanical ventilation, and CPAP/BiPAP therapy. Upon completion, students will be able to utilize ventilator weaning modes, describe the treatment for cardiac dysfunction, and provide CPAP/BiPAP therapy. Prerequisite: RSP 132

**RSP-234 Clinical Application IV****3 2 0 4**

This course covers rehabilitation/home care and assisting physicians with special procedures. Emphasis is placed on assisting with bedside surgical procedures, stress testing, smoking cessation, exercise programs, and alternatives to hospital care. Upon completion, students will be able to support the physician during invasive procedures and develop therapeutic goals for non-hospitalized patients. Prerequisite: RSP 233

**RSP-235 Respiratory Review****2 2 0 3**

This course provides preparation for employment and credentialing exams. Emphasis is placed on a review of the content areas on the national examinations, computer simulations, and employment opportunities. Upon completion, students will be able to pass mock credentialing exams, and obtain employment in the respiratory care profession. Prerequisite: RSP 234

**RSP-236 Neonatal/Peds Resp Care****3 2 0 4**

This course provides an in-depth study of the disease processes and treatment of the neonatal 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 perform respiratory care procedures for the pediatric patient. Prerequisites: All fourth quarter courses

**RSP-237 Cardiopulmonary Evaluat****4 0 0 4**

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, and hemodynamic evaluation. Upon completion, students will be able to collect and combine appropriate information to accurately assess and evaluate the cardiopulmonary status. Prerequisite: RSP 112

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 resuscitation, identify and bandage wounds, and treat for shock, choking, burns, and other emergencies. Prerequisites: None

**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 Family Relationships**

3 0 0 3

This course will incorporate the study of the family as an institution and how this institution is affected by the variables of love and kinship. Topics include the origin of the family, the childbearing function of the family, and the instability of the family. Upon completion, students will be able to further understand the social problems associated with the nuclear and extended families. Prerequisites: None

**SOC-151 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-152 Marriage & 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-153 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 mental health, chemical dependency, crime, deviance, inequality, and environmental crisis. Prerequisite: None

**SOC-154 Sociology of Education**

5 0 0 5

This course is an examination of education as a social institution developing concerns about its worth and importance in society. Topics include, the school as a social system, social factors influencing learning, social programs and status attainment. Upon completion, students will be able to recognize the social benefit of an education and their need for life long learning. Prerequisites: SOC 151

**SOC-155 Sociology of Religion****3 0 0 3**

This course is a study of the nature of religion as an institution and its historic and present day effects on humankind. Topics include the religiously defined beliefs of Durkheim, Hegel, Weber, McKenzie, Wright and Fuller, distinguishing between magic, science and religion. Upon completion, students will be able to discuss the present day effects of religion in general and not just a specific denomination. Prerequisite: SOC 151

**SOC-251 Social Culture****5 0 0 5**

This course introduces the students to social culture using a multi-disciplinary 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-252 Sociology of Gerontology****3 0 0 3**

This course introduces the student to the sociological study of human aging along with the psychological and socio-economic problems connected with aging. Emphasis is placed on the psychological, biological, and sociological processes of aging. The complete quality of life will be considered. Upon completion, students will be able to better formulate a proper plan in dealing with the aged at home or in an institutional setting. Prerequisites: SOC 151

**SOC-253 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

**SPA-151 Elementary Spanish I****5 0 0 5**

This course introduces the beginning student to the basic elements of grammar, phonetics, every-day vocabulary and common expressions needed to develop language skills. Topics include basic oral communication, reading and writing, drills and repetition of grammatical structures and laboratory exercises. Upon completion, students will be able to express basic needs, recognize and be understood with simple identifications, and use this level vocabulary. Prerequisites: None

**SPA-152 Elementary Spanish II****5 0 0 5**

This course continues the goals of the first level, introducing more verb tenses, vocabulary, formats and structures with commonly used expressions. Topics include the development of basic skills of reading, writing and oral competency, with drills, practices and laboratory work. Upon completion, students will be able to understand and convey basic thoughts and to participate in structured conversations. Prerequisites: SPA 151 or equiv

**SPA-251 Intermediate Spanish I****5 0 0 5**

This course is a more detailed study of grammar, designed to improve understanding, speaking, reading, writing at a level of moderate difficulty. Topics include selected readings, dialogues, common idioms, and expressions with attention to communicative use of advanced structures. Upon completion, students will be able to speak and understand at a simple conversational level, and read and write compositions using regular and irregular verbs. Prerequisites: SPA 152 or equiv

**SPA-252 Intermediate Spanish II****5 0 0 5**

This course introduces grammatical structures with more advanced verb tenses and vocabulary widely found in common native daily conversation. Topics include controlled dialogues, short composition and essays, translations, and comments and interpretation of audio and video materials. Upon completion, students will be able to increase their mastery in oral-aural ability, and to engage in conversations at near native level. Prerequisites: SPA 251 or equiv

**SPA-260 Spanish Business Language****5 0 0 5**

This course offers a comprehensive study of the language, vocabulary and special terminology used in today's business practices and procedures. Topics include oral and written understanding of commercial correspondence, as well as observations on formalities and customs. Upon completion, students will be able to communicate and deal effectively with the most generally used practices and terminology by the Spanish speaking peoples. Prerequisites: SPA 252 or equiv.

**SPA-262 Spanish Civilization****5 0 0 5**

This course is taught in English, it does not fulfill a language requirement and pre-supposes some knowledge of European history. Topics include civilization of Spain, its culture and that of the Hispanic world, from early to present times. Upon completion, students will be able to understand, know and enjoy arts, music, readings of translated literature, and many audio-video materials on Hispanic folklore. Prerequisites: None

**SRV-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 practices of plane surveying to determine boundaries, areas, and volumes of land measurements. Prerequisite: MAT 113

**SRV-102 Surveying II****2 0 6 4**

This course is a continuation of SRV 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: SRV 101

**SRV-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: SRV 101

**SRV-201 Topo and Photogrammetry****3 0 3 4**

This course provides understanding of various techniques used in preparing topographic maps. Topics include interpretation and use of aerial photographs, production of photo maps, photogrammetric calculations and ground control. Upon completion, students will be able to prepare a topographic map. Prerequisite: SRV 102

**SRV-204 Surveying IV****2 0 6 4**

This course is a continuation of SRV 103 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: SRV 103

**SRV-210 Const. & Site Surveying****3 0 3 4**

This course covers basic site and construction surveying. Topics include grid topos, lot and building corners, location of batterboards, building location and plot plans. Upon completion, students will be able to layout a site for construction and locate a building upon it. Prerequisites: SRV 101, SRV 103

**SRV-224 Surveying Law****3 0 3 4**

This course provides an overview of law as related to the practice of surveying. Topics include surveyor's responsibilities, deed descriptions, title searches, eminent domain, adverse possession, and riparian rights. Upon completion, students will be able to identify and apply the basic legal aspects associated with the practice of land surveying. Prerequisite: None

**SUR-1091 Intro to Surgical Tech.****11 4 0 13**

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 and legal responsibilities, prevention and control of infection, duties of the scrub and circulating technologists. Upon completion, students will be able to assist the scrub and circulating technologists in the performance of their duties as a team member in the operating room. Prerequisites: All first quarter courses

**SUR-1093 Surgical Procedures I****6 2 0 7**

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

**SUR-1094 Clinical 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

**SUR-1095 Clinical Practice II****0 0 15 5**

This course is a continuation of SUR 1094, with emphasis on basic skills and planned experiences in the operating room and delivery rooms. Emphasis is placed on applying skills to thoracic, plastic, reconstructive, orthopedic, and neurological procedures, as well as delivery room procedures. Upon completion, students will be able to perform scrub technologists duties in the operating room, prepare the delivery rooms and scrub on cesarean sections. Prerequisites: All second quarter courses

**SUR-1097 Surgical Procedures II**

6 2 0 7

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

**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

**SUR-1101 Clinical Practice III**

0 0 18 6

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

**SUR-1102 Seminar III**

2 0 0 2

This course provides comprehensive testing and review to locate didactic weaknesses in preparation for the national certification exam. Topics include a review in anatomy and physiology, microbiology, surgical pharmacology, introduction to surgical procedures, 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

**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

**WLD-1120 Oxy-Fuel & Basic 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-Fuel & Basic 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-Fuel & Basic 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 Shield Metal 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 weld plates in all positions. Prerequisite: WLD 1120 or WLD 1120B

**WLD-1121A Shield Metal 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 1120 or WLD 1120B

**WLD-1121B Shield Metal 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 weld plates in the overhead and vertical positions. Prerequisite: WLD 1121A

**WLD-1123 Gas Shielded Arc Welding****2 0 6 4**

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 1120 and 1121; or WLD 106 or WLD 1180

**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. Prerequisite: WLD 1123

**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. Prerequisite: WLD 1123

**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-1126 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 1123 and WLD 1124

**WLD-1127 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 WLD 1124

**WLD-1128 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 WLD 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





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- George Jeffreys . . . . . Electrical Installation  
 A.A.S., Fayetteville Technical Community College
- Melanie Jenkins . . . . . Biology  
 B.S., Salem College  
 M.A.T., Fayetteville State University
- Doty B. Johnson . . . . . Commercial Art & Advertising Design  
 B.A., Purdue University  
 M.S., Illinois Institute of Technology
- Barbara Hill-Jones . . . . . Accounting  
 B.S., North Carolina A & T State University  
 M.B.A., University of Miami
- Dickey V. Jones . . . . . Administrative Office Technology  
 B.S.S.A., UNC - Greensboro  
 M.Ed., UNC - Greensboro
- Larry T. Jones . . . . . Mathematics  
 B.S. Campbell University  
 M.A., East Carolina University

Dwain L. Joyce . . . . . General Office  
 B.S., Campbell University  
 M.Ed., UNC - Greensboro

William Kirchman . . . . . Business Administration  
 B.S., Virginia Polytechnic Institute  
 M.A., Webster University

Gail Kniffen . . . . . Early Childhood Associate  
 B.S., Campbell University  
 M.Ed., UNC - Chapel Hill

Barbara Kuykendall . . . . . English  
 B.A., Western Carolina University  
 M.Ed., Campbell University

Deena Lachman . . . . . Respiratory Care Technology  
 A.A.S., Triton College  
 A.A.S., Glendale Community College

Michael G. Landon . . . . . Funeral Service Education  
 B.S., Lock Haven State College  
 M.A., Fayetteville State University

Linda Rose Lee . . . . . Administrative Office Technology  
 A.B., Meredith College  
 M.A., Appalachian State University

Gerald Lininger . . . . . Business Administration  
 A.A.S., Fayetteville Technical Community College  
 B.S., The Citadel  
 M.B.A., Campbell University

Peppi Masa . . . . . Basic Law Enforcement  
 A.A.S., Fayetteville Technical Community College

Carol Malcom . . . . . Biology  
 B.S., North Georgia College  
 M.Ed., Clemson University

Janice Mallory . . . . . Paralegal Technology  
 A.B., University of Georgia  
 J.D., University of Georgia

Jeffrey Martin . . . . . Biology  
 M.S., UNC - Charlotte

- Cynthia Mauldin . . . . . Foodservice Management  
A.A.S., Fayetteville Technical Community College
- Franklin McDonald . . . . . Automotive Technology/Automotive Service Technology  
Diploma, Fayetteville Technical Community College  
A.A.S., Fayetteville Technical Community College
- Jo McEwan . . . . . English  
B.A., Fayetteville State University  
M.A., University of North Carolina at Chapel Hill
- Deborah B. McGrath . . . . . Dental Assisting  
Diploma, Fayetteville Technical Community College  
B.S., Pembroke State University
- Kathleen McLaurin . . . . . Emergency Medical Science  
RN Diploma, St. Louis Municipal School of Nursing  
A.A.S., Fayetteville Technical Community College
- Michael D. McLaurin . . . . . Mathematics  
B.S., UNC - Chapel Hill  
M.A.T., Duke University
- Steve E. Medlin . . . . . Business Administration  
B.S., UNC - Chapel Hill  
M.B.A., East Carolina University
- David Miller . . . . . English  
B.S., United States Military Academy  
M.A., University of Pennsylvania  
M.B.A., Fairleigh Dickinson University
- Merle S. Modlin . . . . . Associate Degree Nursing  
B.S.N., East Carolina University
- Loretta M. Monk . . . . . Mathematics  
B.S., Fayetteville State University  
M.M., Utah State University
- Sandra Monroe . . . . . Practical Nursing Education  
Diploma, U.S. Army  
B.S.N., Hampton Institute
- Janet Murphy . . . . . Associate Degree Nursing  
B.S.N., East Carolina University  
M.S.N., East Carolina University

- Carolyn W. Nails . . . . . General Office  
 B.S., N.C. Central University  
 M.B.A., N.C. Central University
- Krishna Nair . . . . . Electronics Engineering Technology  
 B.S., University of Kerala  
 M.S., University of Rhode Island  
 Ph.D., University of Rhode Island
- James D. New . . . . . Criminal Justice  
 B.S., Campbell University
- Renu K. Nijhawan . . . . . Business Computer Programming  
 A.A.S., Fayetteville Technical Community College  
 B.A., Fayetteville State University  
 I.Sc., Raghu Nath College
- Gloria Noeldner . . . . . French  
 B.A., Campbell University  
 M.A., Appalachian State University
- Leslie Nordhaugen . . . . . Physics  
 B.S., Pembroke State University  
 M.Ed., Campbell University
- Warren R. O'Brien . . . . . Accounting  
 B.A., Elon College  
 M.B.A., Monmouth College
- Charles M. Oldham . . . . . Business Administration  
 B.S., East Carolina University  
 M.B.A., East Carolina University
- Pamolu E. Oldham . . . . . English  
 B.A., Sweetbriar College  
 M.F.A., Columbia University
- Ronald D. Orban . . . . . Mathematics  
 B.A., Pfeiffer College  
 M.S., Stephen F. Austin State University
- Carolyn Parish . . . . . Criminal Justice/Protective Services  
 B.A., Meredith College  
 M.S., New Mexico State University

- Vicki Pate . . . . . Sociology  
 B.A., Auburn University  
 M.S., North Carolina State University
- John Philligan . . . . . Electrical Installation  
 A.A.S., Fayetteville Technical Community College
- Weldon Phillips . . . . . Mathematics  
 B.S., University of Mississippi  
 M.A., Central Michigan University
- William K. Pierce . . . . . Criminal Justice  
 B.A., UNC - Charlotte
- Janet Pinneo . . . . . Respiratory Care Technology  
 A.A., American River College  
 B.A., University of California
- Karen Poppele . . . . . English  
 B.A., Trinity University  
 M.S., Texas A & M University  
 M.A., University of Florida
- Janice Powell . . . . . Foodservice Management  
 B.S., East Carolina University  
 M.Ed., UNC - Greensboro
- Martha Purvis . . . . . Paralegal Technology  
 A.A.S., St. Mary's Junior College  
 B.A., UNC - Chapel Hill  
 J.D., Wake Forest University
- Marsha M. Ralph . . . . . Mathematics  
 B.A., UNC - Chapel Hill  
 M.Ed., Campbell University
- Robert J. Ralph . . . . . Mathematics  
 B.S., University of Akron  
 M.S., University of Akron
- Steve Reynolds . . . . . English  
 A.A., San Joaquin Delta College  
 B.S., University of San Francisco  
 M.A., California State University of Stanislaus

- Susan P. Ritter ..... Mathematics  
 B.S., UNC - Greensboro  
 M.A., UNC - Greensboro
- James Robinson ..... Sociology  
 B.A., North Carolina A & T State University  
 M.S., University of Georgia
- Gladys Rosser ..... English  
 B.S., Fayetteville State University  
 M.S., North Carolina A & T State University
- Tina I. Royal ..... Recreation Associate  
 B.S., North Carolina State University  
 M.Ed., Fayetteville State University
- Eugene H. Shannon ..... Chemistry  
 B.S., Western Carolina University  
 M.S.P.H., UNC - Chapel Hill
- David Sholter ..... Commercial Art & Advertising Design  
 A.A.S., Fayetteville Technical Community College  
 B.A., Fayetteville State University
- Keith F. Smith ..... Biology  
 B.S., Campbell University  
 M.A.Ed., East Carolina University
- Lonnie G. Smith ..... English  
 B.S., Appalachian State University  
 M.A., Appalachian State University
- Stephen Smith ..... Banking and Finance  
 B.S., Marian College  
 M.P.S., Western Kentucky University
- James Speed ..... English  
 B.S., Jackson State University  
 M.A.T., Jackson State University
- Charles Stone ..... Machining Technology  
 A.A.S., Fayetteville Technical Community College
- Beverly Strickland ..... Criminal Justice  
 A.A.S., Emman College  
 B.S., Campbell University  
 M.A., Webster University

- Larry Sullivan . . . . . Paralegal  
 A.B., West Virginia University  
 J.D., West Virginia University College of Law
- Margene E. Sunderland . . . . . Business Administration  
 A.B., College of Notre Dame  
 M.A., Central Michigan University
- Lettie Sutton . . . . . Radiologic Technology  
 A.A.S., Fayetteville Technical Community College  
 B.A.S., Methodist College
- Ann Taylor . . . . . Paralegal  
 B.A., Campbell University  
 J.D., Campbell University
- Kenneth W. Thomson . . . . . Business Administration  
 A.A.S., Fayetteville Technical Community College  
 B.S., Airforce Institute of Technology  
 M.S., Airforce Institute of Technology  
 M.B.A., Oklahoma City University
- Cheryl Thomas . . . . . Paralegal  
 B.S., Appalachian State University  
 J.D., Walter F. George School of Law
- Catherine Tilghman . . . . . Mathematics  
 B.S., Mars Hill College  
 M.A., Wake Forest University  
 M.A., Pembroke University
- Robert J. Timbers . . . . . Dental Hygiene  
 A.A.S., Fayetteville Technical Community College  
 B.S., Southern Illinois University  
 M.Ed., North Carolina State University
- Donna M. Turner . . . . . Administrative Office Technology  
 B.S., East Carolina University  
 M.Ed, East Carolina University
- Daniel Underwood . . . . . Industrial Mechanics  
 A.A.S., Fayetteville Technical Community College
- Sandra T. Vernon . . . . . Marketing & Retailing  
 B.S., East Carolina University  
 M.A., East Carolina University

- Gloria B. Walker . . . . . Business Administration  
 B.S., Hampton University  
 M.B.A., Winthrop College
- John B. Warner . . . . . Insurance  
 B.S., UNC - Chapel Hill  
 M.A., Georgia State University
- Phillip Warren . . . . . Physical Therapist Assistant  
 B.S., Barton College  
 M.P.T., Baylor University  
 M.P.H., UNC - Chapel Hill
- Jesse B. Waters . . . . . Physics  
 A.B., East Carolina University  
 M.S., College of William & Mary
- Kathy Weeks . . . . . Nursing  
 B.S.N., Western Carolina University  
 M.S.N., University of N.C. at Greensboro
- Robert E. West . . . . . Mathematics  
 B.S., Pembroke State University  
 M.Ed., Campbell University
- Deborah Whaley . . . . . Early Childhood Education  
 B.S., Methodist College  
 M.A.Ed., Fayetteville State University
- Floyd D. Whitehead . . . . . Psychology  
 B.S., U.S. Military Academy  
 M.Ed., Tufts University  
 Ed.D., Duke University
- Donald Wilkinson . . . . . Cabinetmaking  
 Master Cabinetmaker
- Daphne M. Williams . . . . . English  
 B.A., East Carolina University  
 M.A., Appalachian State University
- Hosea Williams . . . . . Automotive Body Repair  
 A.A.S., Robeson Technical Institute
- Ronald Wilson . . . . . Architectural Technology  
 B.A., N.C. State University  
 B.A., UNC - Charlotte



- Christine W. Womble . . . . . English  
 B.S., Fayetteville State University  
 M.A.E., East Carolina University  
 M.A.E., Pembroke State University
- Danny H. Wood . . . . . Machining Technology/Tool & Die Making  
 A.A.S., Fayetteville Technical Community College
- Cara Wyckoff . . . . . Mathematics  
 A.B., UNC - Chapel Hill  
 M.A.Ed., Pembroke State University
- Valerie Wynn-Hall . . . . . Dental Hygiene  
 B.S., UNC - Chapel Hill  
 M.P.H., UNC - Chapel Hill  
 D.D.S., UNC - Chapel Hill
- Jane Young . . . . . Administrative Office Technology  
 B.A., Marshall University
- Samuel Zahran . . . . . English  
 B.A., N.C. State University  
 M.A., N.C. State University

**ADJUNCT FACULTY**

- Karron Altman . . . . . Nursing Assistant  
B.S.N., Atlantic Christian College
- Emile Archambault . . . . . Criminal Justice  
A.A.S., Fayetteville Technical Community College  
B.S., Rutgers University  
M.A., Leigh University
- Frank D. Arnold . . . . . Industrial Mechanics  
A.A.S., Fayetteville Technical Community College  
B.A., University of Maryland
- Bruce T. Barrett, Jr. . . . . Horticulture Business Technology  
A.A.S., Fayetteville Technical Community College  
B.S., Campbell University
- Thomas Blanton . . . . . Commercial Art & Advertising Design  
A.B., UNC - Chapel Hill  
M.A., Appalachian State University
- Jane Bond . . . . . Associate Degree Nursing  
B.S.N., Texas Woman's University
- Roger Boyd . . . . . Business Administration  
B.S., Western College  
M.A., Webster University
- Ross Brown . . . . . Marketing & Retailing  
B.A., Campbell University  
M.B.A., Campbell University
- James Burgio . . . . . Business Administration  
B.A., Campbell University  
M.S., University of Utah
- Cynthia Burns . . . . . Business Administration  
B.A., North Carolina State University  
M.A., North Carolina State University
- Tindara Certo . . . . . Business Administration  
B.A., Fordham University  
M.S., UNC - Chapel Hill

- Gerald Croll . . . . . Civil Engineering Technology  
 B.S., University of Toledo
- Winnie Cronrath . . . . . Mathematics  
 B.S., North Carolina State University  
 M.Ed., Campbell University
- Linda Curtin . . . . . Business Computer Programming  
 A.A.S., Fayetteville Technical Community College  
 B.A., Monmouth College
- Krista Cushing . . . . . Associate Degree Nursing  
 B.S.N., Emanuel College
- Sharron Dowless . . . . . Associate Degree Nursing  
 B.S., East Carolina University
- Flora Dunham . . . . . Accounting  
 B.S., Indiana State University
- Renee Ellis . . . . . Practical Nursing Education  
 B.S.N., Hampton University
- John Fux . . . . . Business Administration  
 B.A., Methodist College  
 M.B.A., Campbell University
- David Goodyear . . . . . Banking & Finance  
 B.S., Pembroke State University
- Rebecca Halford . . . . . Business Administration  
 B.S., Fayetteville State University  
 M.P.A., UNC - Chapel Hill
- Marvin D. Hammond . . . . . Drafting - Mechanical  
 A.A.S., Fayetteville Technical Community College
- William Hancock . . . . . Drafting - Mechanical  
 B.S., Columbia Bible College  
 M.A.Ed., East Tennessee State University
- Donald H. Hannah . . . . . A/C, Heating & Refrigeration  
 A.A.S., Fayetteville Technical Community College

- Ada Harris . . . . . Business Administration  
 B.S., Fayetteville State University  
 M.B.A., Webster University
- Elizabeth Hartfield . . . . . Civil Engineering Technology  
 B.S., Columbus State University
- Augusta Haynes . . . . . Mathematics  
 B.A., Claflin University  
 M.A., Hampton Institute
- Socorro H. Hinek . . . . . Commercial Art & Advertising Design  
 B.A., California State University  
 M.A., California State University
- Don Jackson . . . . . Automotive Body Repair  
 B.B.A., Campbell University
- Ray Krenek . . . . . Mathematics  
 B.S., East Carolina University  
 M.A.Ed., Fayetteville State University
- Susan McAlpin . . . . . Dental Hygiene  
 B.S., UNC - Chapel Hill
- Carl Mitchell . . . . . Business Administration  
 B.S., Methodist College  
 M.A., Webster University
- Joseph Motte . . . . . Mathematics  
 B.A., Fayetteville State University  
 M.A., Fayetteville State University
- Victoria Ogus . . . . . Marketing & Retailing  
 B.S., Virginia Tech  
 M.B.A., College of William & Mary
- Lawrence Nicholson . . . . . Accounting  
 B.S., Florida State University  
 M.B.A., Stetson University
- William C. Rabb . . . . . Commercial Art & Advertising Design  
 B.A., University of Mississippi  
 M.A., University of Georgia

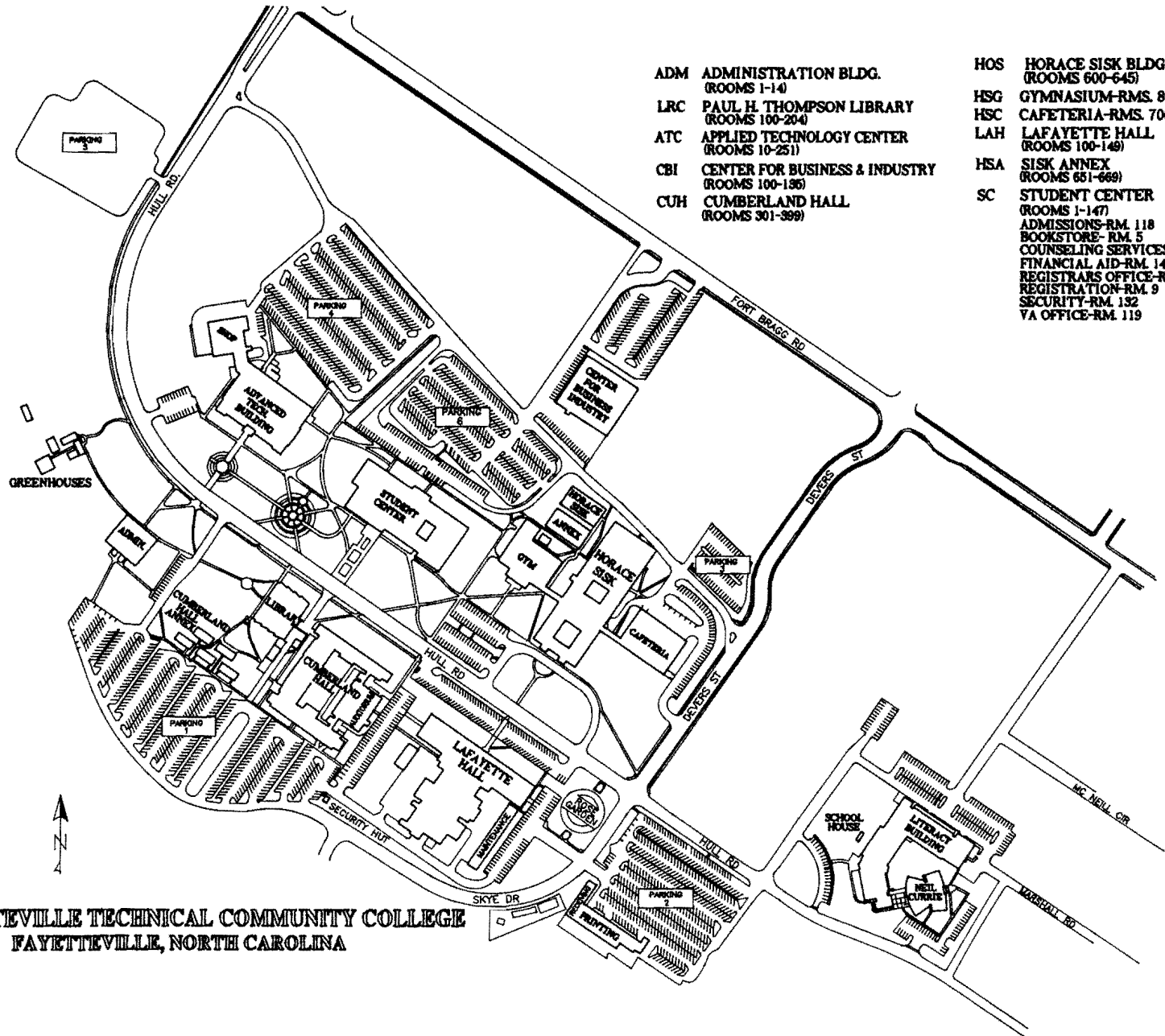
- Jeffrey B. Reitzel . . . . . Civil Engineering Technology  
 B.S., North Carolina State University
- Patsy Sandel . . . . . Business Administration  
 B.A., Campbell University  
 M.A., Webster University
- Linda Sanders . . . . . Business Administration  
 B.S., Fayetteville State University  
 M.B.A., Fayetteville State University  
 M.Ed., Campbell University
- Joanne Schoen . . . . . Associate Degree Nursing  
 B.S.N., University of Tampa
- Danny Stamps . . . . . Biology  
 M.P.H., UNC - Chapel Hill  
 O.D., Southern College of Optometry
- Charles Steven . . . . . Mathematics  
 B.S., Fayetteville State University  
 M.A., N.C. Central University
- Meredith Stiehl . . . . . Business Administration  
 B.A., Campbell University
- Robert Stiehl . . . . . Business Administration  
 B.A., North Carolina State University  
 J.D., Campbell University School of Law
- Ernest Thornton . . . . . Electrical Installation  
 A.A.S., Fayetteville Technical Community College
- John Trogdon . . . . . Criminal Justice  
 B.A., Fayetteville State University  
 M.S., University of South Carolina
- Zarnita Truesdale-Legette . . . . . Dental Hygiene  
 B.S., UNC - Chapel Hill
- Catherine White . . . . . Business Computer Programming  
 B.S., Michigan State University
- Kirby White . . . . . Marketing & Retailing  
 B.S., Georgia Tech  
 M.S., Eastern New Mexico University

*Philosophy of the N.C. Community College System*

*The only valid philosophy for North Carolina is the philosophy of total education; a belief in the incomparable worth of all human beings, whose claims upon the state are equal before the law and equal before the bar of public opinion; whose talents (however great or however limited or however different from the traditional) the state needs and must develop to the fullest possible degree. That is why the doors to the institutions in North Carolina's system of community colleges must never be closed to anyone of suitable age who can learn what they teach. We must take the people where they are and carry them as far as they can grow within the assigned function of the system. If they cannot read, then we will simply teach them to read and make them proud of their achievement. If they did not finish high school, but have a mind to do it, then we will offer them a high school education at a time and in a place convenient to them and at a price within their reach. If their talent is technical or vocational, then we will simply offer them instruction, whatever the field, however complex or however simple, that will provide them with the knowledge and the skill they can sell in the marketplaces of our state, and thereby contribute to its scientific and industrial growth. If their needs are in the great tradition of liberal education, then we will simply provide them instruction, extending through two years of standard college work, which will enable them to go on to the university or to senior college and on into life in numbers unheard of in North Carolina. If their needs are for cultural achievement, intellectual growth or civic understanding, then we will simply make available to them the wisdom of the ages and the enlightenment of our times and help them to maturity.*

*Dr. Dallas Herring  
June 1964*

*William Dallas Herring became a member of the State Board of Education in 1955 and was elected chairman in 1957. Dr. Herring also served on the Carlyle Commission whose final report established the basis for the Community College System. Dr. Herring served as the first chairman of the State Board of Community Colleges. He was also a member of the State Board of Higher Education and was generally recognized as the outstanding lay leader for education in the state. Governor Terry Sanford subsequently referred to Dr. Herring as the "prime mover behind the Industrial Education Center/community college movement."*



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