



CENTRAL PIEDMONT

**COMMUNITY
COLLEGE**

1976-78

General Catalog

Volume VIII, MAY, 1976



Central Piedmont Community College

Post Office Box 4009

Charlotte, North Carolina 28204

Street Address

Elizabeth Avenue at North Kings Drive

Charlotte, North Carolina

The Doors Are Open . . .

Central Piedmont Community College is committed to the concept that, given enough time, most students can accomplish any learning task. The college strives to help each student realize his potential as a worthwhile and productive member of society.

Office Hours

Administrative Offices are open from 8:00 A.M. to 5:00 P.M. Monday through Friday
The Office of Student Services is open from 8:00 A.M. to 10:30 P.M., Monday through Thursday,
from 8:00 A.M. to 6:00 P.M. on Friday and from 8:00 A.M. to 2:00 P.M. on Saturday.

The College telephone number is 373-6535

NOTE: Not all of the courses listed are offered every quarter.

When will your courses be offered?

Contact 373-6535 Central Piedmont Community College

COLLEGE ORGANIZATION

BOARD OF TRUSTEES

Edgar A. Terrell, Jr., Chairman
J. Emmett Sebrell, Vice Chairman
Dr. Richard H. Hagemeyer, Secretary

Appointed by The Governor

Expiration of Term

Robert W. Bradshaw, Jr.	June 30, 1981
Alan T. Dickson	June 30, 1979
Mrs. Hila Richards Stratton	June 30, 1983
Albert F. Sloan	June 30, 1977

Appointed by The Mecklenburg County Board of Commissioners

Expiration of Term

Frank W. Dowd, Jr.	June 30, 1983
Ms. Lynda Ferreri	June 30, 1981
J. Emmett Sebrell	June 30, 1979
Robert L. Taylor	June 30, 1977

Appointed by The Charlotte-Mecklenburg Board of Education

Expiration of Term

Emil J. Kratt	June 30, 1977
George Morgan	June 30, 1981
Rev. Coleman Kerry	June 30, 1983
Edgar A. Terrell, Jr.	June 30, 1979

ADMINISTRATION

Richard H. Hagemeyer, President

N. Gayle Simmons, Executive Vice President

E. Worth Campbell, Jr.,
Vice President, Learning Resources

William A. McIntosh,
Vice President, Edu. Planning & Evaluation

Erik C. Esselstyn,
Vice President, Student Services

Carl E. Squires,
Vice President, Career Programs

Betty J. Funderburke,
Director of Personnel

Vaud A. Travis, Jr.,
Vice President, Business Programs & The Arts

David L. Hunter,
Vice President, General Studies

Robert Gilman Hoelzel,
Comptroller

Otto A. Lockee,
Vice President, Continuing Education

J. C. Robertson,
Manager, Plant Operations and Purchasing

LIBRARY
CENTRAL PIEDMONT COMMUNITY COLLEGE

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GENERAL INFORMATION

I. THE COLLEGE

PHILOSOPHY AND OBJECTIVES

The doors of Central Piedmont Community College are open and accessible to all adults seeking to further their education. The College recognizes its responsibility to the community by providing general services to the surrounding area; by helping each student recognize his potential as a worthwhile and productive member of society; by providing opportunities for each student to develop his physical, intellectual, and esthetic capacities according to his desire to pursue an education; and by assisting each student to attain goals consistent with his needs, interests, and abilities.

The College seeks to implement its philosophy by:

- (1) Providing the first two years of work in the liberal arts and pre-professional fields for those students who wish to transfer to four-year colleges.
- (2) Providing occupationally-oriented curricula for those students who wish to enter employment as manufacturing and engineering technicians.
- (3) Providing occupationally-oriented curricula for those students who wish to be employed in business and commerce.
- (4) Providing occupationally-oriented curricula for those students who wish to enter employment in health related fields.
- (5) Providing occupationally-oriented curricula for those students who wish to enter employment in public service areas.
- (6) Providing occupationally-oriented curricula for those students who wish to enter employment in the skilled trades.
- (7) Providing a program of general education for the social, cultural and personal development of those individuals wishing to continue their education beyond high school.
- (8) Providing single or combination courses needed by adults in the community to update their occupational capabilities to meet the challenges of a changing technological society.
- (9) Providing courses for the individuals whose education stopped short of high school graduation and for those who wish instruction in home and family education and leisure time activities.
- (10) Providing counseling and guidance services to all students.
- (11) Providing community educational services for organizations and individuals--including speakers, concerts, resource personnel or materials, special institutes or programs and reading lists are requested.

The College is aware that the implementation of these objectives in an open door admission environment will bring to its campus students who differ greatly in age, motivation, and purpose as well as educational and personal background. The challenge of educating these students cannot be met with traditional methods of instruction alone. In recognition of this fact the following policy statement has been adopted by the Trustees of the College:

"Central Piedmont Community College is committed to the concept that, given enough time, most students can accomplish any learning task. This is based on the concept that students basically differ in their rates of learning rather than their ability to learn.

This commitment carries with it a resolve that the College must have as a major objective the provision of ample opportunities for students to learn at varying rates. It also implies a belief in the concept of individualized control of the rates of learning."

The Trustees and staff of the College are dedicated to the task of creating the environment for learning which is defined in the above statements of philosophy, objectives and policy.

HISTORY

In 1963 the North Carolina General Assembly authorized a system of comprehensive community colleges to be established throughout the state in areas of documented need. Central Piedmont Community College was established as a part of this statewide system in July 1963. The first programs offered by the College involved curricula in a career education. The first liberal arts curricula for college transfer were offered in September 1964. Full accreditation was received from the Southern Association of Colleges and Schools in 1969.

Because of its emphasis on individualized instruction and the large number of innovative programs created by its faculty, Central Piedmont Community College was invited and in 1969 became a member of the "League For Innovation in the Community College," an organization of 16 of the leading community colleges in the United States. These pioneering institutions continuously exchange information on projects, techniques and new materials.

The College has grown from its initial enrollment of nearly 2000 in Fall Quarter of 1963 to a Fall Quarter 1975 enrollment of over 24,000. Recognition of this growth, coupled with an awareness of the prospect for continued development, led the voters of Mecklenburg County to approve in January 1966 a bond issue of \$3 million to assist in financing the first phase of a master plan for campus development. This phase, which included purchases of land, construction of new buildings and renovation of existing buildings was completed in December 1969. Funds for the second phase were approved by the voters of Mecklenburg County in May 1970; with the fall 1974 completion of the Career Education Building, the third major campus construction project was realized with this funding.

LOCATION

The campus, situated at Elizabeth Avenue and Kings Drive in downtown Charlotte, is ideally located near the center of the population which it serves and is convenient to public transportation and expressway systems serving the greater Charlotte area.

INSTRUCTIONAL FACILITIES

The institution is supported by state, federal and local funds and thus is able to provide superior instruction and optimum use of excellent equipment and laboratories at a minimum cost to the student. Present facilities include the following:

CAMPUS AND BUILDINGS

The campus includes parking areas and a learning resources center, classrooms and well-equipped, modern laboratories and specialized shop areas.

HAGEMEYER LEARNING RESOURCES CENTER

The heart of instruction on the campus is the Hagemeyer Learning Resources Center. In it are tapes, slides, films, programmed materials, books, periodicals and an information retrieval system. New audio and visual materials and equipment are added when appropriate, to provide a wide range of information to students and faculty. Facilities and staff are available for local production of instructional media.

The Advancement Studies Program, which is housed in the Hagemeyer Learning Resources Center, provides developmental programs for students whose educational backgrounds have not prepared them for the curricula they have chosen, supplementary programs that are coordinated with many of the regular college classes and a variety of other programs for those who wish to broaden their knowledge.

In the Communications Center, located on the second floor, are taught the communication skills: writing, speaking and reading. The Center is organized as an open classroom to accommodate the learning style and learning rate of each student.

The Library, which is housed on the third and fourth floors of the Hagemeyer Learning Resources Center, has a collection of print and non-print materials particularly adapted to the objectives and curriculum of the College. Total resources of the Library include valuable reference books, bound and unbound periodicals, pamphlets, microforms and audio-visual materials, in addition to the general book collection and a growing collection of mini-courses for independent study. Microform and microfiche readers, copying machines, and dial-access equipment are included in services provided by the Library. An AV Center on third floor contains AV materials of all types, equipment for viewing or listening, and browsing opportunities for those interested. An open shelf arrangement is used to stimulate interest and to provide easy access to the collection. There are frequent displays on subjects of general and special interest. Resources of other libraries in the Charlotte area and statewide are available to faculty and students through inter-library loans. The Library is staffed by trained librarians, aided by clerical personnel and student assistants. Students are urged to become familiar with the regulations which have been established for the interest of all who use the Library. These procedures appear in the Student Handbook and the Student Library bulletin.

Also located in the Hagemeyer Learning Resources Center is the dial access information retrieval system. This system is capable of making a wide variety of audio and visual materials immediately available to individuals or groups. Program sources can include not only material previously recorded on film or tape but also live programs.

The Hagemeyer Learning Resources Center also includes the J.N. Pease Auditorium and Conference Room.

STUDIOS, LABORATORIES AND SHOPS

Ample opportunity for students to make practical application of their classwork is an inherent part of many programs offered at the College. The campus complex contains numerous laboratories, shops and specialized areas. Each of these areas is furnished with the best equipment available.

ACCREDITATION

Central Piedmont Community College is approved by the North Carolina State Board of Education. It is a member of the American Association of Community and Junior Colleges, the North Carolina Association of Junior Colleges, and is an accredited member of the Southern Association of Colleges and Schools.

II. ACADEMIC INFORMATION

PROGRAMS OF INSTRUCTION

The College offers a wide variety of learning opportunities to all who seek instruction or training. These opportunities for learning are organized into six general instructional programs.

1. The Diploma Program: This program offers curricula designed to meet the ever-increasing need of our complex society for skilled craftsmen. A graduate from a diploma curriculum should enter employment with a high degree of manipulative skill. The graduate also gains knowledge of basic mathematics, science and communication. The following curricula are available: Automotive Body Repair, Dental Assisting, Air Conditioning and Refrigeration, Early Childhood Aide, Machinist, Medical Office Assisting, Nurse Aide, Practical Nursing, Welding, Computer Operations, Automotive Mechanics, Ornamental Horticulture, Diesel Engine Mechanics, Graphics Arts, Motorcycle Mechanics.
2. The Associate In Arts Degree Program: The purpose of this program is to provide curricula in the liberal arts and the pre-professional areas which will enable the student to enter as a junior at the four-year institution of his choice. While the liberal arts suggested elsewhere in this catalog will satisfy the requirements of most senior institutions, it is the student's responsibility to identify as early as possible the institution to which he will transfer and to ascertain the specific requirements of that institution for the freshman and sophomore years. Each student's curriculum should be planned by the student and a counselor or faculty adviser with a specific four-year institution in mind.
3. The Associate In Applied Science Degree Program: This program offers business, health-related and public service curriculum as well as curricula in engineering technologies. These curricula are designed to enable the graduate to enter an occupation with a marketable skill, a high level of competency and the ability to communicate intelligently. The curricula provide not only highly specialized courses to develop technical skill but also general education courses to enable the student to be an effective member of society. The following curricula are included in the program: Accounting, Business Administration (options: Business Management, Real Estate, Transportation Management, Banking and Finance, Credit and Financial Management, Postal Service Management), Environmental Systems Technology, Chemical Technology, Commercial Art (options: Advertising Design, Television and Visual Graphics, Interior Design, Visual Merchandising), Civil Engineering Technology, Architectural Engineering Technology, Dental Hygiene, Business Data Processing, Mechanical Engineering Technology (options: Drafting and Design Technology, Manufacturing Technology), Electrical-Electronics Engineering Technology, Associate Degree Nursing, Secretarial (options: General Office, Executive, Legal, Medical), Human Services, Physical Therapy Assisting, Medical Record Technology, Respiratory Therapy, Fire Science Technology, Law Enforcement, Security, Food Service Technology, Hotel-Restaurant Management, Paralegal program.
4. The Associate In General Education Degree Program: The degree of Associate in General Education is designed for persons who want two years of college work for its own sake. These persons are not interested in any career-oriented curriculum in its entirety and they do not intend to transfer to another college.

Candidates for this degree may present credit courses taken in the Associate in Arts Program, The Associate in Applied Science Program, diploma programs, credit courses in the Advancement Studies Department or any combination of these. The A.G.E. student may enroll in any program for any course which he can meet prerequisites.

To graduate with the A.G.E. degree, candidates must take a total of 96 hours of which a minimum of 32 hours has not credited toward a previously earned degree or diploma.

A counselor in Student Services assists the student in planning his program.

5. The Continuing Education Program: The Continuing Education Program strives to meet the needs of the adult out-of-school population of the area by: Providing general education opportunities to those who desire pre-high school courses, high school completion courses, cultural and enrichment courses, and hobby or general interest courses.

Providing extension courses to those who desire vocational training, retraining, or upgrading.

No college credit is granted for these courses; however a certificate is awarded upon completion of many of them. Most, but not all, of these classes meet off-campus to fill a specific need at a specific time. Almost any educational need of the community not being met by a regular curriculum class can be met by the Continuing Education Program. Information about courses now being offered may be obtained from the Continuing Education Division.

6. Advancement Studies: Advancement Studies is a service program to all curricula. The program offers courses in mathematics, reading, chemistry, grammar and writing for any student who wishes to develop skills in any of these areas. All Advancement Studies courses are designed so that a student may begin at whatever level he is currently achieving and advance as rapidly as he chooses to whatever objective he sets for himself. Special services include English for foreign students, referrals from other instructors based on student needs and special programs for other departments.

7. Charlotte Area Educational Consortium: In addition to the classes listed in the quarterly schedule, other classes not available at Central Piedmont Community College are offered at the 10 other consortium colleges. Information is available through the office of the Vice-President, Business Programs and The Arts, 311-A Terrell Administration Building, telephone 373-6768.
8. Project Discover: Project Discover was conceived as an additional service of the Learning Resources Division to the faculty and students at Central Piedmont, and to all residents of the area which we serve.

Central to the Project are the "mini-courses", which are individualized, self-instructional learning modules which deal with a wide variety of subjects and skills. The 105 mini-courses now available were designed to fulfill the educational needs for those persons who wish to learn a certain part of a subject or skill without having to take an entire course; those whose schedules did not permit their coming to class at a definite time and place; those who wish to supplement their learning in a given subject or skill; those who just wanted to learn something new in order to broaden their skills and knowledge and thus enrich their lives; and those who needed a certain skill to obtain employment or advance in their present jobs.

Any person who takes a "mini-course" may come and study at any time the study area is open, and he may study as long as he or she wishes. There is no charge for any of the courses, and registration is utterly simple. To register for any of the courses, or to obtain any information concerning them, a person need only go to the circulation desk of the library and request the desired course.

The "mini-courses" represent a unique opportunity for any person on campus or in the community to add richness and meaning to his life through learning.

Schedules for most mini-courses may be arranged to suit individual student needs any time between 8:00 a.m. and 9:30 p.m. Monday through Thursday, and 8:00 a.m. until 5:00 p.m. on Friday.

For further information call 373-6640.

There is no charge for these courses.

Shop Safety	Credit and You
Rotary Engine	Why Do We Buy What We Buy?
Understanding Simple Machines	Managing Family Finances
Understanding Simple Engines	Become a Better Buyer
Basic Principles of Fuel and Carburetion	Mitosis and Meiosis
Basic Principles of Electricity for Mechanics	Photosynthesis
Automotive Fuel Systems	Job Interview
Carter Carburetors and Fuel Systems Principles	Employment Application
Rochester Carburetors and Fuel System Principles	Put Your Best Foot Forward
Ford Ignition System	So You Want To Go To Work
Chevrolet Ignition System	Tools and Fasteners
Plymouth and Dodge Standard Ignition System	Measuring Tools
Alternators: How to Test and Service	Adjusting Ignition Timing
Cranking Motors: How to Test and Make	How to Replace Front Brake Shoes
Minor Repairs	Understanding Banking
Direct Current Automotive Generators	16 mm Projector Operation
Electronic Calculator	Science of Personal Success
Spirit Duplication	Self-Discovery for the Manager
Stencil Duplication	Drucker on Management
Basic Operation: Ten-Key Adding Machine	Graphs and Graphing
Cash Register Operation	Dodge Electronic Ignition System
Preparation for the FCC Radio/Telephone Exam	Replacing Rear Brake Shoes on Chevrolets
*How to Use Tools	Basic Theme Writing
How to Wire a Lamp	Basic Paragraph Writing
Preparation for High School Equivalency Exam	Narcotics and Dangerous Drugs
Basic Biochemistry	How and Why Carburetors Operate
DNA: The Key to Life	"Ready or Not?" (Retirement Planning)
The Microscope and the Cell	Statistics
Introduction to Chess	NC History
Slide Rule for Beginners	NC Geography
Algebra Review	Individualized Algebra
Trigonometry Review	Auto Air Conditioning Service
Introduction to Vectors	How to Repair Leaky Faucets and
Vector Resolution	Commodos
How to Borrow Wisely	Writing Business Letters
How to Save Money	Writing a Resume and Letter of
How to Handle a Checking Account	Application
Credit Cards and Their Use	Basic Applied Mathematics
Budgeting Payday to Payday	VD: Syphilis and Gonorrhea
Long Range Financial Planning	Alcoholism: Disease and Solution
How to Get a Loan	Preventing Pregnancy

How to Buy a Car
Buying Insurance
Clothes Make the Man
Metric System
Basic Nutrition
Basic First Aid
Personal Health
Prevention of Communicable Disease
Furnishing a Home
*How to Make a Tie

Driver Education
Soldering
More on the Table for Less
Your Shelter and What It Costs
Real Estate Review
Energy: Crisis and Resolution
*Taps and Dies
*Pipe Cutting and Threading
*Basic Machining
*How to Use a Framing Square

*This course is available only at Charlotte Rehabilitation Hospital. Any student wishing to take it must call 333-6634, extension 188, and request it. The personnel there will give information on scheduling, parking, and location of the course. The course will not be available for use after 4:30 p.m.

9. DOLLY (Dial Our Listening Library Yourself) is a dial-in phone system which offers audio tape programs to anyone who wants to listen. DOLLY offers entertainment, information, and academic programs to our listeners with no cost to them. Twenty to thirty programs are run on DOLLY each week, and the weekly schedule is run in local newspapers. Every effort is made to assure a variety of programs which will be of interest. In addition, anyone who wants to know what is happening in Charlotte each week need only call DOLLY and ask for tape number DOL-O.

DOLLY's number is 373-1873. You may call DOLLY Monday through Thursday from 8:00 a.m. until 10:00 p.m., Friday from 8:00 a.m. until 5:00 p.m., and Saturday from 8:00 a.m. until 1:00 p.m..

ADMISSION REQUIREMENTS

Central Piedmont Community College, following an "open door" policy, does not impose restrictive standards for admission to the College. Admission to Central Piedmont Community College is open to all qualified students without regard to race, creed, color or sex. Admission to the College however, does not necessarily imply immediate admission to the curriculum desired by the student. Before the student is admitted to any curriculum, in most cases, a series of placement tests is scheduled and a counseling interview is arranged. This process aids the student in evaluating his potential for success in the curriculum of his choice. When scores on tests and other evidence indicate that a person is not ready academically or committed to a particular program, the individual will be assisted in analyzing his own feelings regarding his potential for success, correcting academic deficiencies, and setting career objectives.

All degree curricula and health career diploma programs require high school graduation or the equivalent. The high school graduation requirement is considered to have been met by graduation from high school, possession of a State High School Equivalency Certificate or possession of an Adult High School Diploma.

Admission to a diploma curriculum normally require high school graduation or the equivalent, however, exceptions will be made on an individual basis upon demonstration of an aptitude for the particular curriculum as determined by tests, counseling interviews and personal interest.

Requirements for admission to the various Adult Continuing Education courses depend on the course involved. Specific information may be obtained about particular courses by contacting the Adult Continuing Education Office.

Central Piedmont Community College will accept credits from other accredited colleges, technical institutes and industrial education centers. Only courses applicable to the desired program at Central Piedmont Community College in which grades of "C" or better have been made will be accepted for credit. The counselors will evaluate the transcript and determine the courses which are transferrable.

ADMISSION PROCEDURES

Applicants wishing to enroll in any curriculum offered by the College should:

1. Obtain an application from Information Desk, second floor, Terrel Administration Building.
2. Submit the properly completed application to the Information Desk.
3. Request that transcripts of all high school, pre-college and college work be sent to the College.
4. Take the appropriate pre-enrollment test battery if deemed necessary.
5. Have an interview with a counselor and/or departmental adviser during which the applicant's test scores and previous scholastic record will be evaluated and interests and feelings about success will be appraised. The applicant, also, will be advised regarding eligibility to enroll in the desired curriculum. A first quarter schedule will be suggested.

6. Register for the suggested schedule during the appropriate registration period. Please have your Social Security number available before starting registration.

While most new students will be seeking enrollment in a curriculum and should follow the steps listed above, the College recognizes that many adults in the community will wish to register for one or more courses as special credit students. In order to encourage this type of interest the College will allow a qualified person to be admitted to the College and enroll for courses without taking a pre-enrollment test battery provided the person does not wish to enter a degree or diploma curriculum.

REGISTRATION

The College year consists of four quarters. Students are encouraged to register as early as possible to avoid the inevitable delays of late registration and to increase the probability of obtaining the schedule of classes which best meets their needs.

LATE REGISTRATION

All registration and addition of class(es) is closed after the class(es) has met one time. A student may register or add late prior to the first meeting of the class(es) for which he is registering or adding, providing:

1. The class is not cancelled or closed;
2. The student was pre-advised or otherwise fully admissible to the courses for which he registers or adds.

CLASS ATTENDANCE

Absences are a serious deterrent to good scholarship; it is impossible to receive instruction, obtain knowledge or gain skill when absent. As all students are adults with many responsibilities, an occasional absence from class might be absolutely necessary; however, such absences in no way lessen the student's responsibility for meeting the requirements of the class. There is always a direct relationship between the number of class absences and the final grade. It is the student's responsibility to contact the instructor for any missed assignments. Explanation for missing a class will not be demanded, but as a matter of courtesy, the reason for an absence should be given to the instructor.

WITHDRAWAL FROM CLASSES

A student who for any reason cannot complete a course may officially withdraw through the Registration Center. This withdrawal must take place prior to the last week of the quarter.

COURSE LOAD

A degree or diploma student who is registered for the equivalent of at least twelve quarter hours of credit is considered a full-time student. Students in College Transfer and business programs normally may take a maximum of 18 credit hours each quarter. Students desiring to take in excess of 18 credit hours must obtain special permission from the curriculum Vice-President or his representative.

LETTER GRADES

The following letter grades are used at Central Piedmont Community College:

- A: The student has met the maximum obtainable objectives established for the course as set up by the instructor and the department involved.
- B: The student has met objectives far above standard course work as set up by the instructor and the department involved.
- C: The student has met the minimum objectives of the course as set up by the instructor and the department involved.
- IM: Incomplete (Makeup) The student, in the opinion of the instructor, has made substantial progress toward, but has not met, the minimum objectives established for the course. Removal of the IM may be accomplished by the completion of the remaining objectives in a manner and time decided upon by the student, instructor, and department head involved. IM will not count as credit hours attempted. A student need not re-enroll to remove an IM.
- IR: Incomplete (Repeat) The student has not, in the opinion of the instructor, made substantial, if any, progress toward the minimum objectives established for the course and is likely to benefit by repeating the course. IR will not count as credit hours attempted. The student must re-enroll to remove an IR.
- S: Satisfactory
- X: Credit by Examination

COURSE WAIVER

A student may be permitted to waive a course which is ordinarily required if he obtains the approval of the curriculum department head and Vice-President, as well as the Vice-President of Student Services. No credit hours shall be granted. No substitute course is required unless failure to do so would place the student's total hours below that required for graduation.

COURSE SUBSTITUTION

Course substitutions are permitted upon the recommendation of the curriculum department head and with the approval of the Vice-President of the student's curriculum and Vice-President of Student Services. In many instances, concurrence of the head of the department offering the substituting course is advisable.

QUALITY POINT AVERAGE

A student's quality point average is the equivalent of his numerical average for all course work completed. As the student progresses toward graduation and/or transfer, his quality point average of 2.0 is equivalent to an average grade of "C" on all courses attempted. The student should refer to the Student Handbook for instructions pertaining to the calculation of his quality point average.

GRADUATION

Central Piedmont Community College awards three degrees: The Associate in Arts Degree upon completion of two-year curriculum of liberal arts course; the Associate in Applied Science Degree upon completion of two-year curriculum of study designed to prepare the student for a career; and the Associate in General Education Degree upon completion of any combination of courses carrying a total of 96 hours of credit. A diploma is granted upon completion of a program of vocational career study. The requirements for a degree are as follows:

1. Completion of a minimum of 96 hours in an approved liberal arts curriculum, 96 hours of general education, or the specified requirements in a career education curriculum.
2. A minimum of 32 quarter hours earned in residence at Central Piedmont Community College, 16 of which must be the final credit hours earned prior to graduation.
3. A cumulative quality point average of 2.0.

STUDENT RECORDS AND TRANSCRIPTS

The College maintains the position that a student's record is his own property; therefore, this information is released only when the student presents a signed request to the Registrar. A student may have copies of his transcript sent to any institution or individual he chooses. He may also secure copies for his own use. The first two copies are free. After that, \$1.00 per copy is charged.

III. FINANCIAL INFORMATION

TUITION AND FEES

Since the College receives financial support through local, state and federal sources, tuition is very low. Tuition charges are set by the North Carolina State Board of Education and are subject to change without notice. For in-state students registered for credit courses, tuition and fees are as follows:

FEES

Student Publication and Activity Fee--\$.75 per quarter.

TUITION

ASSOCIATE IN ARTS
ASSOCIATE IN APPLIED SCIENCE
ASSOCIATE IN GENERAL EDUCATION
DIPLOMA CURRICULA

Students enrolled for 12 quarter hours or more--\$33.00 per quarter.
Students enrolled for fewer than 12 hours--\$2.75 per quarter.
Fees charged for non-credit classes in the Continuing Education Program depend on the nature of the class. Self Supporting Fee of .50 per contact hour. The student publication and activity fee (\$.75) must be paid at registration.

Out-of-state students will pay tuition each quarter as described below:
Academic years 1976-1978:

Students enrolled in 12 quarter hours or more--\$162.50 per quarter.
Students enrolled in fewer than 12 quarter hours--\$13.50 per quarter hour.

RESIDENCE STATUS

A legal resident of North Carolina is one who has his domicile in this state. It is important that each applicant for admission and each enrolled student know his residence status for tuition payment and understand the regulations governing residence status. Copies of the "Student Residence Manual" are available in the Registrar's office. The following regulations cover most factual situations.

1. A person eighteen years of age or older is not deemed eligible for the lower tuition rate unless he has maintained his legal residence in North Carolina for at least the twelve months next preceding the date of his first enrollment in an institution of higher education in this state.
2. The legal residence of a person under eighteen years of age at the time of his first enrollment in an institution of higher education in this state is that of his parents, surviving parent or legal guardian. In cases where parents are divorced or legally separated the legal residence of the father will control unless custody of the minor has been awarded by court order to the mother or to a legal guardian other than a parent. No claim of residence in North Carolina based upon residence of a guardian in North Carolina will be considered if either parent is still living unless the action of the court appointing the guardian antedates the student's first enrollment in a North Carolina institution of higher education by at least twelve months.
3. The residence status of any student is determined as of the time of his first enrollment in an institution of higher education in North Carolina and may not thereafter be changed except: (A) in the case of a nonresident minor student at the time of his enrollment whose parents have subsequently established legal residence in North Carolina; (B) in the case of a resident who abandons his legal residence in North Carolina; and (C) in the case of a nonresident student at the time of his first enrollment who has established legal residency in North Carolina and has maintained that status for the preceding twelve months.
4. Military personnel attached to military post or reservations in North Carolina are not considered eligible for the lower tuition rate unless they have maintained a legal residence in the state for at least the twelve months next preceding the date of first enrollment in an institution of higher education in this state.
5. Aliens lawfully admitted to the United States for permanent residence who have established a legal residence in North Carolina according to above paragraphs numbered 1, 2 or 4 are eligible for the lower tuition rate.
6. Ownership of property in or payment of taxes to the state of North Carolina apart from legal ownership will not qualify one for the lower tuition rate. Please Note: Any student or prospective student in doubt concerning his residence status must bear the responsibility for securing a ruling by stating his case in writing to the office of the Registrar.

REFUND POLICY

Two-thirds of the tuition paid by a student will be refunded if the student withdraws from the College within ten calendar days after the first day of classes as published in the College calendar. If a student voluntarily withdraws from a class while remaining enrolled in the College, he will receive no refund for courses dropped. If a class is cancelled by the College, that portion of a student's tuition which was paid for the cancelled class will be refunded in full.

The activity-publication fee is not refundable. Tuition refunds of \$5.00 or less will not be made except for classes cancelled by the College.

CALENDAR 1976

SPRING QUARTER 1976

Regular Registration Monday, February 23 thru
Friday, February 27
Monday, March 1 thru
Friday, March 12
Late Registration Monday, March 29 thru
Tuesday, March 30
Classes Begin Thursday, April 1
Easter Break Friday, April 16 thru
Monday, April 19
Classes End Saturday, June 19

FALL QUARTER 1976

Regular Registration Wednesday, August 18 thru
Tuesday, August 31
Wednesday, September 1 thru
Friday, September 3
Tuesday, September 7 thru
Wednesday, September 8
Late Registration Monday, September 27 thru
Tuesday, September 28
Classes Begin Friday, October 1
Thanksgiving Break Thursday, November 25 thru
Saturday, November 27
Classes End Monday, December 20

SPRING QUARTER 1977

Regular Registration Wednesday, February 23 thru
Monday, February 28
Tuesday, March 1 thru
Tuesday, March 15
Late Registration Monday, March 28 thru
Tuesday, March 29
Classes Begin Friday, April 1
Easter Break Friday, April 8 thru
Monday, April 11
Classes End Monday, June 20

FALL QUARTER 1977

Regular Registration Wednesday, August 17 thru
Wednesday, August 31
Thursday, September 1 thru
Friday, September 2
Tuesday, September 6 thru
Wednesday, September 7
Late Registration Tuesday, September 27 thru
Wednesday, September 28
Classes Begin Monday, October 3
Thanksgiving Break Thursday, November 24 thru
Saturday, November 26
Classes End Tuesday, December 20

SPRING QUARTER 1978

Regular Registration Wednesday, February 22 thru
Tuesday, February 28
Wednesday, March 1 thru
Tuesday, March 14
Late Registration Tuesday, March 28 thru
Wednesday, March 29
Classes Begin Monday, April 3
Classes End Saturday, June 17

SUMMER QUARTER 1976

Regular Registration Monday, May 24 thru
Monday, May 31
Tuesday, June 1 thru
Friday, June 11
Late Registration Tuesday, July 6 thru
Wednesday, July 7
Classes Begin Friday, July 9
Labor Day Holiday Monday, September 6
Classes End Friday, September 10

WINTER QUARTER 1977

Regular Registration Thursday, November 18 thru
Wednesday, November 24, 1976
Monday, November 29 thru
Tuesday, November 30, 1976
Wednesday, December 1 thru
Friday, December 10, 1976
Late Registration Tuesday, January 4 thru
Wednesday, January 5
Classes Begin Monday, January 10
Classes End Saturday, March 26

SUMMER QUARTER 1977

Regular Registration Wednesday, May 25 thru
Tuesday, May 31
Wednesday, June 1 thru
Tuesday, June 14
Late Registration Tuesday, July 5 thru
Wednesday, July 6
Classes Begin Friday, July 8
Labor Day Holiday Monday, September 5
Classes End Friday, September 9

WINTER QUARTER 1978

Regular Registration Thursday, November 17 thru
Wednesday, November 23, 1977
Monday, November 28 thru
Wednesday, November 30, 1977
Thursday, December 1 thru
Friday, December 9, 1977
Late Registration Tuesday, January 3 thru
Wednesday, January 4
Classes Begin Friday, January 6
Classes End Thursday, March 23
Easter Break Friday, March 24 thru
Monday, March 27

SUMMER QUARTER 1978

Regular Registration Wednesday, May 24 thru
Wednesday, May 31
Thursday, June 1 thru
Tuesday, June 13
Late Registration Wednesday, July 5 thru
Thursday, July 6
Classes Begin Monday, July 10
Labor Day Holiday Monday, September 4
Classes End Monday, September 11

FALL QUARTER 1978

Regular Registration Wednesday, August 16 thru
Thursday, August 31
Friday, September 1
Tuesday, September 5 thru
Wednesday, September 6
Late Registration Tuesday, September 26 thru
Wednesday, September 27
Classes Begin Monday, October 2
Thanksgiving Break Thursday, November 23 thru
Saturday, November 25
Classes End Tuesday, December 19

IV. STUDENT SERVICES

The College is aware that academic life creates new challenges for students. To aid the student in meeting these challenges and to provide opportunities for the maximum development of each student, the College supports a number of services and activities to supplement the academic program. The variety of programs available in Student Services is geared to meet specific needs of the students and community. Moreover, acknowledging that providing opportunities for the development of individual potential is a cooperative endeavor, the Student Services division strives to establish and maintain relationships among student, faculty, and administration.

COUNSELING

Educational, vocational and personal counseling are available to students at Central Piedmont Community College. The Office of Student Services provides admission counseling to help the student decide whether the program for which he has applied is realistic and whether it will satisfy his educational needs and vocational goals. For the student who is undecided as to his career objectives, as well as for the student who is in the process of changing his career, the Career Development Center is available through Counseling Services. The Center offers counseling regarding career planning and information concerning job availability and training requirements.

There are opportunities for students to participate in groups where ideas and opinions regarding social, economic and personal issues are discussed openly. The counseling staff in cooperation with the instructional staff provides opportunities for students in individual classes to become acquainted on interpersonal basis.

Counselors are available to provide personal counseling for students who request this service. Counselors also make referrals to appropriate community agencies when a need exists that can be better met by another service agency.

Members of the Student Services staff are available throughout the community on a consultant basis.

The primary objective of the counseling program is to help the student reach his or her educational or vocational goal. In the process of achieving this goal, the counseling program strives to facilitate the development of the total person. This includes social and personal growth as well as acquisition of academic and occupational skills.

STUDENT ACTIVITIES

STUDENT CENTER

The Student Center (OC 222A) and Lounge (OC 220), located in Old Central, are provided for students to relax while not attending class. The Student Center has a TV set, table tennis tables, a pool table and card tables. The Lounge is a quiet room to be used for students who wish to study or read.

The hours for both areas are 8:00 a.m. to 9:00 p.m. Monday through Thursday, and 8:00 a.m. to 4:00 p.m. Friday.

CENTRAL FORUM

The dining facility is operated by a commercial food service company and offers plate lunches, short orders and a deli. It is open Monday through Thursday 7:00 a.m. to 6:00 p.m., and Friday 7:00 a.m. to 3:00 p.m.

STUDENT GOVERNMENT ASSOCIATION

The Student Government Association, of which every registered Central Piedmont Community College student is a member, consists of an Executive Council (President, Vice-President, Secretary and Treasurer), and a Legislative Council. Members are elected to Councils for two quarters, with elections held for Executive Council in the Fall and Spring, and for Legislative Council in the Winter and Summer. This organization provides students in all areas of the college a voice in student affairs as well as the opportunity to engage in the democratic process.

INTRAMURAL SPORTS

Several sports including tennis, golf, soccer, and basketball make up the intramural program. From the intramural basketball league is chosen an All-Star team which plays area colleges.

Central Piedmont Community College has a Club Football Team, 1974 champions of the North Carolina Club Football Association.

STUDENT PUBLICATIONS

Central Piedmont Community College has utilized various means, including a newsletter, newspaper and TV news center, to keep students informed of campus activities. Beginning with the Winter Quarter 1976 a newspaper will serve as the vehicle for student information. Interested students should contact the Director of Student Activities in OC 240.

The Student Handbook, published bi-annually, contains items of information helpful to the student in his life on campus.

STUDENT ORGANIZATIONS

The College encourages participation by students in all areas of campus life and affairs. Student organizations are chartered by the Student Government Association and are aided in the planning and financing of their activities by the Legislative Council's Activities Committee. These organizations include service organizations, special interest groups, athletic clubs, honors societies and professional organizations. A complete list of such organizations is included in the Student Handbook.

SOCIAL & CULTURAL EVENTS

The College produces and sponsors a number of social and cultural events during the year. Included in these activities are dances, concerts, lectures, fashion shows, music and drama productions.

FINANCIAL AID

Students attending at least half time (6 credit hours) who demonstrate need may receive assistance from the following sources:

- 1) Scholarships
- 2) Loans
- 3) The College Work-Study Program
- 4) Basic Educational Opportunity Grants
- 5) Supplementary Educational Opportunity Grants
- 6) Nursing Student Assistance Programs
- 7) Law Enforcement Education Programs
- 8) North Carolina Student Incentive Grant Programs

In addition, there are programs of special interest to veterans and disabled persons.

HOW TO APPLY

To be considered for financial assistance through Central Piedmont Community College, a student must submit a College financial aid application and a Student's Financial Statement from the College Scholarship Service. Demonstrated financial need and academic promise are determining factors in awarding financial aid. College financial aid applications are available at the Financial Aid Office. Student's Financial Statement forms may be obtained from high school guidance counselors or from the Office of Student Financial Aid at the College. Students submitting SFS forms should designate Central Piedmont Community College as one of the recipients. Applications should be filed as early as possible to allow time for processing.

To students with demonstrated financial need, the College attempts to award assistance best suited to the student's situation and qualifications. All students applying for assistance will be given consideration regardless of race, creed, color, or national origin provided they are citizens of the United States. Note: You must re-apply each academic year.

SCHOLARSHIPS

The total value of a scholarship awarded to a student is payable in amounts prorated to each quarter of the College year. The initial award is made for one quarter; upon evidence of satisfactory performance by the recipient, the award is renewable for a maximum of three succeeding quarters. An award for a second year may be made upon re-application to the Office of Financial Aid. Students who are now attending a school in the Charlotte-Mecklenburg system should seek the assistance of their counselor in obtaining a scholarship.

A complete list of the nearly forty specific individual scholarships is available from the Student Financial Aid Office in the Terrell Administration Building.

EMERGENCY SHORT-TERM LOANS

A revolving loan fund was established in 1964 at Central Piedmont Community College for the benefit of students not receiving aid, who need small emergency loans and who state that this is a temporary condition. These loans are made, interest free, for a maximum period of thirty days. Donors to this fund include local businesses, civic organizations and individuals.

NATIONAL DIRECT STUDENT LOAN PROGRAM

Central Piedmont Community College is participating in the National Direct Student Loan Program. This program makes funds available to students who are taking at least a half-time schedule in one of the Diploma or Degree Programs and who need a loan to meet educational expenses.

The National Defense Student Loan Program makes provisions for students to borrow up to \$2500 during their first two years of college. Three per cent interest per year is charged on the unpaid balance, beginning nine months after the borrower ceases to pursue a course of study at an institution of higher learning.

THE COLLEGE FOUNDATION, INC. ' LOAN FUNDS

The College Foundation, Inc., Raleigh, North Carolina, administers several loan funds including the Federal Insured Student Loan. Legal residents of North Carolina who are full time students at an institution of higher education may borrow up to \$2500 per year for educational expenses. The Federal Government will pay the 7% interest on the loan while the student is in school and before repayment begins for students who qualify for federal interest benefits. The minimum repayment is \$30.00 per month, plus interest, and the loan must be repaid within 10 years. Application forms may be obtained from the Student Aid Office.

THE PROSPECTIVE TEACHERS SCHOLARSHIP LOAN FUND

Prospective teachers may borrow up to \$600 per year for educational expenses through the scholarship loan program, which is administered by the Department of Public Instruction in Raleigh. A student may have up to \$600 of the total loan cancelled for each school year spent teaching in a North Carolina school. For complete details regarding the program, interested applicants should contact the Prospective Teachers Scholarship Loan Fund. State Department of Public Instruction, Raleigh, North Carolina. Application forms are also available at the Student Aid Office.

THE COLLEGE WORK-STUDY PROGRAM

One form of financial aid available to students to earn money for college expenses consists of employment at the College under the Federal College Work-Study Program. A schedule is arranged so that students works around their classes.

BASIC EDUCATIONAL OPPORTUNITY GRANT

The Basic Educational Opportunity Grant is a federal aid program providing funds for qualified students for qualified students enrolling at least half time in an eligible postsecondary institution. The grant cannot exceed the need of the student nor can it exceed the student's adjusted share under current federal allotments. The maximum grant at Central Piedmont Community College is approximately \$800.

SUPPLEMENTARY EDUCATIONAL OPPORTUNITY GRANTS

The Supplementary Educational Opportunity Grants Program was established by the Higher Education Act of 1965. It is designed specifically for Diploma or Degree students from low income families, with particular attention given to those families whose incomes allow little if any contribution toward college expenses. The SEOG Program is federally funded, and the amount must be equally matched with other aid, such as scholarships, National Direct Student Loans, College Work-Study Program earnings, or basic grants.

NURSING STUDENT ASSISTANCE PROGRAM

The Nursing Student Loan and Nursing Scholarship Programs assist students who need financial assistance to pursue a course of study leading to an associate degree in nursing. The goal is to increase the opportunities for youth seeking careers in nursing by providing scholarships and long-term, low-interest (3%) loans to students who are in need of such assistance. The maximum Nursing Student loan available to an individual borrower in a 12-month period is \$2,500. A borrower may cancel a portion of the loan by full-time employment as a professional nurse.

LAW ENFORCEMENT EDUCATION PROGRAMS

These awards provide a program of student loans and/or grants to state and local public law enforcement personnel. Loans and Grants can not exceed the cost of tuition, fees and books.

NORTH CAROLINA STUDENT INCENTIVE GRANT PROGRAM

Legal residents of North Carolina accepted for enrollment or enrolled full time, in good standing, in an undergraduate program of study in an eligible college, university, technical or vocational school in North Carolina may apply for Student Incentive Grants to help pay their educational expenses. Students must demonstrate "substantial financial need" as determined through the need analysis system of either the College Scholarship Service or American College Testing Program. The amount of each grant will be based on the individual student's demonstrated financial need in relation to resources and cost of education but may not exceed \$1,500.00 per academic year.

The college provides educational opportunities for veterans, disabled veterans and eligible dependents of deceased or disabled veterans, those missing in action, and prisoners of war on both the college and high school levels. For additional information regarding these benefits which are administered by the Veterans Administration, persons should contact one of the following offices: the County Veterans Service Office, the District Office of the North Carolina Department of Veterans Affairs, the college Office of Student Services (Veteran Affairs), or the Veterans Administration Regional Office, Winston-Salem, N.C.

The College also assists recipients of North Carolina Veterans Commission Scholarships. Students seeking these scholarships should contact the state office, district office, or the Office of Student Services.

SOCIAL SECURITY ADMINISTRATION AND OTHER GOVERNMENT AGENCY BENEFITS PROGRAMS

The college provides advisement and certification services for students (high school and college levels) who are eligible for Social Security, Vocational Rehabilitation, or other governmental agency benefits. Students seeking assistance under these programs should contact the respective agency or the college Office of Student Services.

SUPPORTIVE SERVICES FOR THE EXCEPTIONAL

The College is aware that the implementation of the "open door" policy will bring to its campus students whose physical and mental abilities are relatively impaired. The College assures that there are equal opportunities and accessibility to these individuals regardless of their disabilities.

A comprehensive program of support services is available for the visually impaired, hearing impaired, physically or motor impaired, emotionally disturbed, and mental retarded. These supportive services facilitate the total integration of all exceptional students into the regular College program and services.

Physical accessibility is made possible through specially assigned parking spaces and removal of architectural barriers. Services for the visually impaired consist of orientation to the campus, braille, taping, reader services, and job-seeking skills. In addition, Central Piedmont Community College operates the only post-secondary program for the hearing impaired in the state of North Carolina. Established in 1974 through a Vocational Rehabilitation Expansion grant, the program provides (1) interpreting, notetaking, and tutorial services and (2) academic, social, and personal counseling through a specially trained counselor.

The majority of exceptional students are sponsored by the North Carolina Division of Vocational Rehabilitation and the North Carolina Division of Services for the Blind. Those interested in enrolling at Central Piedmont Community College and who require the above services may contact the office of Special Services and/or the local, district, or state offices of the above agencies.

PLACEMENT SERVICES

Assistance in obtaining part-time and full-time employment is given by the College Placement Service which is located on the third floor of the Hagemeyer Learning Resources Center. A list of current employment opportunities is maintained at all times. Graduate positions are listed by the Placement Office and notices forwarded to appropriate department chairmen to be posted on the department bulletin boards. Information concerning these jobs can be obtained from the office of the College Placement Officer.

BOOKSTORE

It is the student's responsibility to obtain the required textbooks and supplies prior to the first meeting of a class. The College maintains a bookstore from which the student may purchase the necessary books and supplies. The bookstore will buy used books from students when possible.

PARKING

The campus includes paved and well-lighted parking areas. Students may use these parking lots except for those reserved for faculty. Access to student lots is controlled by "free-in pay out" gates which operate automatically. This type of procedure requires the student to insert coins in the appropriate receptacle on leaving a parking lot. The gate will then raise to enable the individual to leave.

As an additional protection to students, their cars must be registered each year at the fall quarter (and whenever a student first registers). He is given a Central Piedmont Community College sticker that is to be affixed to the rear bumper.

LOST AND FOUND

The Office of Student Services operates a lost and found service. Any articles found should be turned into the information desk on the second floor of the Terrell Administration Building.

HOUSING

The College does not provide living accommodations for students; however, a card file listing of available rooms and apartments is maintained in the Office of Student Services. Many of these accommodations are within walking distance of the College or are conveniently located to bus service. One nearby college has opened dormitories to female students of Central Piedmont Community College. Room and board or room only plans are available. In all cases the student is responsible for making arrangements for housing. Please, inquire at the Information Desk.

FOREIGN STUDENTS

Any foreign national (non-immigrant status) who is seeking admittance under an F-1 student visa should contact the Foreign Student Advisor in OC 240 for admission requirements. The advisor will aid foreign students in such matters as extension of stay and transferring for the purpose of continuing their education.

Foreign nationals on permanent visa (I-151) are admitted in the same manner as native Americans. Foreigners holding B-2 visitors visas may enroll as special credit or extension students. Other nationals may enroll as their particular visas permit.

STUDENT CONDUCT

College students are considered to be mature individuals. Their conduct both in and out of college, is expected to be that of any respectable adult in a public place. Under these circumstances it is expected that the student will at all times remember that he is living in a democratic situation and that the reputation of the institution rests on his shoulders. Common courtesy and cooperation make the above suffice for a long list of rules.

However, students should note that the possession, consumption, or distribution on campus of alcohol or illicit drugs are specifically prohibited and regulated by state statute and violations will be prosecuted by civil authorities.

Failure to meet standards of conduct acceptable to the College may result in disciplinary suspension. Central Piedmont Community College guarantees to each student the privilege of exercising the rights of citizenship under the Constitution of the United States. If suspension is considered, a hearing with the Vice-President for Student Services or his representative is held so that the charges may be carefully described and examined. The student may be represented by legal counsel at this meeting. He may also appeal a decision made at this hearing.

A student who is dismissed must apply to the Vice-President for Student Services before readmission can be approved.



PROGRAMS OFFERED

The following alphabetical list of programs offers a wide range of subjects for the student. These programs are listed by the main title with sub-titles when options are offered. The suggested courses making up the program are listed in quarter sequences to show the class hours (CLS), laboratory hours (LAB), clinic hours (CLN), and quarter hours credit (QTR-HRS-CR.). The course titles are abbreviated but full titles are given in section of catalog entitled "Course Designation, Titles and Descriptions."

ACCOUNTING

Accounting is often called the "language of business." It is the language employed to communicate financial information. The accounting profession is important to the complete spectrum of economic enterprise, ranging from governmental units to small private businesses. Accounting is required in all forms of business operation including sole proprietorships, partnerships and corporations. Positions are available to accountants in general accounting, auditing, payroll accounting, credit and other specialized areas.

DESCRIPTION OF CURRICULUM

The Accounting curriculum is designed to provide sound academic training in the accumulation and maintenance of accounting data. The student learns to perform such duties as: maintaining journals and ledgers, preparing financial statements, making special reports and analyses, preparing cost data and summarizing tax information. The Associate in Applied Science Degree in Accounting will be awarded upon successful completion of this curriculum. Students interested in transferring to a senior institution should enroll in the mathematics and Communications options listed in the footnotes.

Suggested Sequence of Required Courses For Accounting

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	LAB	HRS		HR/WK	LAB	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	BUS 2304 Business Law I	3	0	3
ACC 1604 Principles of Accounting I	5	2	6	ACC 1605 Principles of Accounting II	5	2	6
COM 1314 Intro. to Communications**	3	0	3	FIN 3315 Business Mathematics II*	3	0	3
FIN 3314 Business Mathematics I*	3	0	3	COM 3305 Communications II**	3	0	3
	14	4	16		14	2	15
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
BUS 2305 Business Law II	3	0	3	ACC 2627 Intermediate Accounting II	5	2	6
ACC 2626 Intermediate Accounting I	5	2	6	ECO 2305 Economics II (or Electives)	3	0	3
ECO 2304 Economics I	3	0	3	SPH 1300 Oral Communication	3	0	3
COM 3306 Communications III**	3	0	3	FIN 4334 Business Finance I	3	0	3
Electives***	3	0	3	EDP 3300 Intro. to Computer Concepts	3	0	3
	17	2	18		17	2	18
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
FIN 4335 Business Finance II	3	0	3	ACC 4444 Cost Accounting	3	2	4
ACC 4447 Advanced Accounting	3	2	4	ACC 4404 Auditing	3	2	4
ACC 4434 Income Taxes	3	2	4	EDP 4314 Systems & Procedures	3	0	3
SEC 4305 Business Communication	3	0	3	BUS 3300 Applied Psychology	3	0	3
EDP 2306 Computer Programming I (Bus.)	2	2	3	Elective	3	0	3
	14	6	17		15	4	17

*MAT 1504, 1505 or MAT 1514, may be taken if student has met placement test requirements.

**COM 1314, 1305, 1306 may be taken if student has met placement test requirements.

***SEC 3404 Typing required of students in third quarter if they have not had one year of high school typing.

ADVANCEMENT STUDIES

The Advancement Studies Program is based on the philosophy that each student has unique educational needs and goals. Once these goals are identified, they can best be accomplished by allowing each student to progress at his own pace in an open, caring atmosphere. This atmosphere is marked by its acceptance of the student as a unique individual who has specific needs.

Each course in the Advancement Studies Program has stated objectives, with a system designed to help each individual accomplish those objectives. A student may advance at his/her own pace from one objective to the next through individual modules of instruction, individualized multi-sensory programs and instructors who coordinate each learning segment.

The Advancement Studies Program may be conceived as a developmental studies program for students who have never reached mastery level in mathematics, reading, chemistry, and writing skills. Or the pro-

gram may be thought of as a new opportunity to the student who decided later to refine some of his skills, or to change his life style through learning. At the same time the program operates as a service program to the entire college by offering courses with fundamental skills as well as courses with more advanced skills depending upon the requests and desires of students and other departments. Advancement Studies recognizes that learning is a life long process and new skills may be learned at any life stage.

Credit is granted for accomplishment of terminal objectives. These credits will receive grade points that add to the student's cumulative grade point average. The credits earned in the Advancement Studies Department meet the requirements for the degree Associate in General Education. Credits for Advancement Studies may or may not transfer to another institution depending on the course and the receiving institution.

The Advancement Studies Program in conjunction with the Office of Student Services also provides counseling services that combine the efforts of counselors with instructors to offer advice and assistance in curriculum choice, occupational out-look and discovering one's own human potential.

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS			HR/WK	HRS	
	CLS	LAB	CR.		CLS	LAB	CR.
CHM 9500 Introduction to Chemistry	0	10	5	MAT 9502 Algebra I	0	10	5
ENG 9500 Effective Sentence Writing	0	10	5	MAT 9510 Developmental Algebra	0	5	5
ENG 9501 English for Foreign Students	0	5	5	MAT 9511 Modern Geometry	0	5	5
ENG 9505 Spelling and Vocabulary	0	5	5	NUR 9502 Basic Calculations for Nur.	0	5	5
ENG 9510 Fundamentals of Writing	0	5	5	RDN 9312 Speed Reading	0	3	3
MAT 9500 Arithmetic	0	10	5	RDN 9510 Reading Improvement			5

AIR CONDITIONING & REFRIGERATION

The growing use of air conditioning (heating and cooling) and refrigeration equipment systems throughout the nation provides many job opportunities for the skilled mechanics who install and repair such equipment in office buildings, factories, homes, food stores, restaurants, theaters, hospitals, churches and other establishments.

A great number of these skilled people are employed by business concerns which specialize in the repair and maintenance of commercial, industrial and home air-conditioning (heating and cooling) and refrigeration equipment. Another important element involves conversion and modernization of obsolete installations.

Employers prefer to hire men who have a background of knowledge and skill in the field and give them the opportunity to gain additional experience on the job while earning good wages.

Thousands of men trained to install, maintain and repair air-conditioning and refrigeration equipment are needed to meet the demand in this field.

DESCRIPTION OF CURRICULUM

The air-conditioning and refrigeration curriculum at Central Piedmont Community College is designed to prepare a person for employment in this field. The students not only learn theory but also spend a large amount of time in a laboratory with up-to-date equipment. Necessary courses in mathematics, science and other related areas are included in the program. A graduate from this curriculum is awarded a diploma by the College and a diploma from the Air Conditioning and Refrigeration Institute.

Students satisfactorily completing the four quarter diploma program are eligible to enroll in the Environmental Systems Technology program with advanced standing.

Suggested Sequence of Required Courses for Air Conditioning and Refrigeration

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS.			HR/WK	HRS.	
	CLS	LAB	CR.		CLS	LAB	CR.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
AHR 5411 Refrigeration Theory	4	0	4	AHR 5321 Commercial Refrig. Instal.	2	3	3
AHR 5412 Refrigeration Shop Practice	2	6	4	AHR 5422 Commercial Refrig. Ser.	2	6	4
AHR 5313 Refrigeration Service Prin.	2	3	3	AHR 5323 Oil Burners	2	3	3
AHR 5314 Basic Automatic Controls	2	3	3	AHR 5324 Environ. Con. Blueprint Read	3	0	3
PHY 5304 Shop Science I	2	2	3	PHY 5305 Shop Science II	<u>2</u>	<u>2</u>	<u>3</u>
MAT 5304 Shop Mathematics I	<u>3</u>	<u>0</u>	<u>3</u>		11	14	16
	15	14	20				

THIRD QUARTER

AHR 5331 Air Conditioning--Residential	2	3	3
AHR 5432 Air Conditioning--Commercial	2	6	4
AHR 5333 Liquid Heat--One Pipe Systems	2	3	3
AHR 5334 Liquid Heat--Two Pipe Systems	2	3	3
MAT 5305 Shop Mathematics II	3	0	3
COM 5500 Communication Skills	5	0	5
	16	15	21

FOURTH QUARTER

AHR 5441 Gas Heat	2	6	4
AHR 5342 Electric Heat	2	3	3
AHR 5343 All Weather Systems--Conven.	2	3	3
AHR 5344 All Weather Sys.--Heat Pumps	2	3	3
WLD 5110 Basic Oxyacetylene Welding	0	3	1
HSA 5200 Human Relations	2	0	2
	10	18	16

RECOMMENDED ELECTIVES

AHR 5394 Mechanical Codes I	3	0	3	AHR 5398 Duct Design III--Pat. & Spec.	2	3	3
AHR 5395 Mechanical Codes II	3	0	3	AHR 5390 Individual Study	3	0	3
AHR 5396 Mechanical Codes III	3	0	3	BUS 5200 Shop Management	2	0	2
AHR 5397 Mechanical Codes IV	3	0	3	MAC 5201 Machine Shop Practices	1	3	2
AHR 5594 Duct Design I--Rectangular Duct	3	6	5	WLD 5120 Basic Electric Arc Welding	0	3	1
AHR 5495 Duct Design II--Round Duct	3	3	4	WLD 5140 Basic Gas Metal Arc Welding	0	3	1

NOTE: STUDENTS ARE EXPECTED TO FURNISH TOOLS FOR SELECTED COURSES.

ARCHITECTURAL ENGINEERING TECHNOLOGY

The construction industry is large and varied and provides excellent opportunities for the individual with ability and training. Depending on the organization and the size of the project, the technician may work directly with engineers or architects or he may function as a liaison between them.

Architectural technicians perform many of the planning tasks necessary to communicate the architect's designs to the builder. Graduates will be competent draftsmen who will work directly with registered architects and other qualified technicians within the office in the preparation of complete and accurate working drawings, details and specifications. The technicians will be well informed on the building industry in general, the operation of an architect's office, building codes, methods and materials of construction, and contract documents. Upon gaining sufficient experience they may be involved in estimating, field observation and many other facets of architectural practice. Their advancement to positions of responsibility such as "job captain" or project manager will depend only on their own aspirations and abilities.

DESCRIPTION OF CURRICULUM

The curriculum at Central Piedmont Community College includes both classroom and laboratory experiences with practical application to the industry. Well-qualified instructors and excellent equipment provide the student an opportunity to secure the education he needs for the many excellent positions available in this field. The degree of Associate in Applied Science in Architectural Technology is awarded upon completion of the program.

Suggested Sequence of Required Courses for Architectural Technology

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS.		HR/WK	CLS	HRS.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
CIV 3504 Surveying I	3	6	5	CIV 3514 Statics	4	2	5
ARC 3434 Architectural Drafting I	2	4	4	ARC 3435 Architectural Drafting II	2	4	4
MAT 3504 Technical Mathematics I	5	0	5	PHY 3404 Physics I: Basic Mechanics	3	2	4
COM Communications Elective	3	0	3	MAT 3505 Technical Mathematics II	5	0	5
ARC 3200 Introduction to Architecture	2	0	2		14	8	18
	15	10	19				
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
ARC 3436 Architectural Drafting III	2	4	4	ARC 4437 Architectural Drafting IV	2	4	4
CIV 3324 Plain Concrete	2	3	3	CIV 4527 Steel and Timber Design	4	2	5
CIV 3404 Arch. Eng. Materials & Method	3	3	4	ARC 4300 Architectural Mech. Equip.	2	2	3
CIV 3524 Strength of Materials	4	2	5	PHY 3405 PhysII: Work, Energy, Power	3	2	4
COM Communications Elective	3	0	3	CIV 4300 Codes, Contracts, & Spec.	2	3	3
	14	12	19		13	13	19
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
ARC 4438 Architectural Drafting V	2	4	4	ARC 4439 Architectural Drafting VI	2	4	4
CIV 4534 Reinforced Concrete Design	4	2	5	CIV 4454 Const. Estimates & Costs	2	6	4
PHY 3406 Physics III: Electricity	3	2	4	COM 3306 Communications III	3	0	3
General Education Elective	3	0	3	ARC 4201 Arch.-Struct. Model Const.	2	3	3
	12	8	16		11	13	16

ASSOCIATE DEGREE NURSING

The course of study leading to an Associate Degree in Nursing prepares an individual to serve in general duty nursing positions in hospitals and comparable settings. Students are admitted to the Associate Degree Nursing Program in the Fall and Spring Quarters. Admission is based upon satisfactory scores on specific entrance tests, personal interviews, and evidence of good physical and mental health. Completion of a high school course in chemistry or its equivalent is required. Applicants must submit a completed high school transcript or other evidence of the attainment of the equivalency of a high school education.

DESCRIPTION OF CURRICULUM

The degree Associate in Applied Science in Nursing will be awarded upon successful completion of this curriculum and graduates will be eligible to take the State Board examinations for licensure as Registered Nurses. The educational program consists of the study of nursing theory and practice interwoven with general education subjects such as the basic sciences, social sciences, and English. These classes meet on the College campus, and nurses are in classes with other College students. Nursing experiences with patients are planned in the up-to-date facilities of Charlotte Memorial Hospital and Medical Center and in other community health agencies. Clinical experiences are carefully selected for educational purposes and include the care of patients with medical, surgical and psychiatric problems, and the care of mothers, infants and children.

The Audio-Tutorial method is used for the instruction of nursing theory. This method allows students to learn each week's work at their own pace and at a time that is personally convenient. Individual learning takes place in the Health Audio-Tutorial Laboratory. Group and instructor interaction occur during general and small assembly sessions. Periodic testing on attainment of stated behavioral objectives is done, and the student is expected at the end of each quarter to have mastered satisfactorily the theory and clinical content of the particular course in which that student is enrolled.

Sequence of Required Courses For Associate Degree Nursing

COURSE TITLE	QTR				COURSE TITLE	QTR			
	CLS	LAB	CLN	HRS		CLS	LAB	CLN	HRS
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>				
NUR 3704 Fundamentals of Nursing I	3	4	6	7	NUR 3805 Fundamental of Nurs. II	3	4	9	8
BIO 1504 Anatomy and Physiology I	3	4	0	5	BIO 1505 Anatomy and Physiology II	3	4	0	5
PSY 2504 General Psychology	5	0	0	5	BIO 2304 Human Nutrition	3	0	0	3
	11	8	6	17		9	8	9	16
<u>THIRD QUARTER</u>					<u>FOURTH QUARTER</u>				
NUR 3804 Physical and Mental Health Nursing I	3	4	9	8	NUR 3905 Physical and Mental Health Nursing II	3	4	12	9
BIO 1503 General Bacteriology	3	4	0	5	SOC 2514 Introduction to Sociology	5	0	0	5
PSY 2514 Abnormal Psychology	5	0	0	5	COM 1314 Introduction to Comm.	3	0	0	3
	11	8	9	18		11	4	12	17
<u>FIFTH QUARTER</u>					<u>SIXTH QUARTER</u>				
NUR 4914 Maternal-Neonatal Nursing	3	4	12	9	NUR 4915 Nursing of Children	3	4	12	9
COM 1305 English Composition II	3	0	0	3	COM 1306 English Composition III	3	0	0	3
*Elective	3	0	0	3	*Elective	3	0	0	3
	9	4	12	15		9	4	12	15
<u>SEVENTH QUARTER</u>									
NUR 4906 Phys. & Ment. Heal. Nurs. III	3	4	12	9					
NUR 4304 Trends in Nursing	2	2	0	3					
	5	6	12	12					

*Electives must be approved by Department Chairman.

One elective shall be from the areas of Sociology, Psychology, Anthropology, Economics, Political Science or History. All electives shall be from the College Transfer offerings.

AUTOMOTIVE BODY REPAIR

The field of automotive body repair and painting requires a large number of well-trained people to meet the growing demand for the many skills needed in this area of employment. People with a background of knowledge and skill in this field have excellent opportunities for jobs with good salaries. Many of these craftsmen, after gaining additional experience go on to open their own businesses or become body shop foreman, supervisors or managers.

DESCRIPTION OF CURRICULUM

The curriculum at Central Piedmont Community College provides the opportunity for students to develop the skills necessary for them to be readily employable as auto body repair mechanics. The practical training is as similar to actual on-the-job work experiences as possible. The large shop and excellent equipment are ideal for preparation for entry into an occupation offering many job opportunities. A graduate from this curriculum will receive a diploma from the College.

Suggested Sequence of Required Courses For Automotive Body Repair

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
AUB 5412 Frame and Body Alignment	2	6	4	AUB 5421 Metal Finish & Plas. Fillers	2	6	4
AUB 5214 Door and Fender Alignment	1	3	2	AUB 5223 Fiberglass & Metal. Fillers	1	3	2
AUB 5201 Trim and Glass	1	3	2	AUB 5224 Panel Installation	1	3	2
MAT 5304 Shop Mathematics	3	0	3	AUB 5202 Auto Renewal	1	3	2
COM 5500 Communications Skills	5	0	5	WLD 5130 Auto Body Welding	0	3	1
WLD 5110 Basic Oxyacetylene Welding	0	3	1	HSA 5200 Human Relations	2	0	2
AUB 5100 Seminar	1	0	1	AUB 5101 Seminar	1	0	1
	13	15	18		8	18	14
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
AUB 5431 Paint Equipment & Preparation	2	6	4	AUB 5344 Body Shop Applications	0	9	3
AUB 5233 Lacquer Painting	1	3	2	AUB 5345 Body Shop Applications	0	9	3
AUB 5234 Enamel Painting	1	3	2	AUB 5346 Body Shop Applications	0	9	3
AUB 5235 Special Finishes	1	3	2	AUB 5203 Seminar-Estimating Damage	2	0	2
BUS 5200 Shop Management	2	0	2	Elective	0	3	1
AUT 5114 Auto Air Conditioning	0	3	1		2	30	12
WLD 5120 Basic Electric Arc Welding	0	3	1				
AUB 5102 Seminar	1	0	1				
	8	21	15				

SUGGESTED ELECTIVES

AUB 5347 Body Shop Applications	0	9	3	MAT 5305 Shop Mathematics II	3	0	3
AUB 5390 Individual Study	0	9	3	MAC 5201 Machine Shop	1	3	2
PHY 5304 Shop Science I	2	2	3	PME 5211 Small Engines Repair I	1	3	2
PHY 5305 Shop Science II	2	2	3	WLD 5140 Basic Gas Metal Arc Welding	0	3	1

NOTE: Students, must furnish hand tools, respirator, welding goggles and helmet as required.

AUTOMOTIVE MECHANICS

Modern automobiles are manufactured in a great variety of types and sizes. These vehicles are complicated machines requiring highly skilled, well-trained personnel to properly repair and maintain them for operation at peak efficiency. Automobile mechanics make up the largest service and repair group in the United States. Wages are good and opportunities are excellent for the person who is anxious to learn and willing to work.

DESCRIPTION OF THE CURRICULUM

The curriculum at Central Piedmont Community College is designed to provide a comprehensive study of basic fundamentals and operating functions of the complete automobile through classroom exercises, with disassembly, inspection, repair, replacement, and reassembly procedures given through practical "hands-on" type of instruction in the laboratories. The program includes instruction in tune-up, overhaul, and replacement of parts of gasoline engines; trouble shooting and repair of electrical equipment; overhaul and replacement of parts in conventional and automatic transmissions; repair of rear axles and drivelines; and repair of air conditioning systems. The program also includes selected related courses that will better enable the student to understand the applied physics of the automobile, the communications (speaking and writing) of automobile terms, and the business area of the automobile industry. Upon satisfactory completion of these courses, the student will receive a certificate or diploma as indicated below.

Suggested Sequence of Required Courses For Automotive Mechanics

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	LAB		HR/WK	CLS	LAB
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
AUT 5405 Fuel Systems	2	6	4	AUT 5114 Auto Air Conditioning	1	2	1
AUT 5814 Electrical Systems	4	12	8	AUT 5800 Internal Combustion Engines	4	12	8
OR				OR			
(AUT 5415 Electrical Systems 2-6-4*)				(AUT 5401 Inter. Combust. Eng. I 2-6-4*)			
(AUT 5416 Electrical Systems II 2-6-4*)				(AUT 5402 Inter. Combust. Eng. II 2-6-4*)			
PHY 5304 Shop Science I	2	2	3	MAT 5304 Shop Math I	3	0	3
Elective	3	0	3	PHY 5305 Shop Science II	2	2	3
	11	20	18	Elective	3	0	3
					13	16	18

THIRD QUARTER

AUT 5404 Auto Chassis & Suspension Sys.	2	6	4
AUT 5824 Auto Power Train Systems	4	12	8
OR			
(AUT 5425 Auto Power Train Sys. I 2-6-4*)			
(AUT 5426 Auto Power Train Sys. II 2-6-4*)			
AUT 5204 Orientation to Co-op	2	0	2
WLD 5110 Basic Gas Welding	0	3	1
	8	21	15

FOURTH QUARTER

AUT 5695 Auto Mechanics Co-op	2	20	6
BUS 5200 Shop Management	2	0	2
COM 5500 Communication Skills	5	0	5
HSA 5200 Human Relations	2	0	2
	11	20	15

At the end of three quarters of successful study, the student may receive a Certificate of Accomplishment. To the extent that cooperative education positions are available, the student may through the fourth quarter, complete the program, and receive a diploma.

SUGGESTED ELECTIVES

WLD 5120 Basic Arc Welding	0	3	1
MAC 5201 Machine Shop Practices	1	3	2
MAT 5305 Shop Mathematics II	3	0	3
AUT 5391 Individual Study	3	0	3
WLD 5140 Basic Gas Metal Arc Welding	0	3	1

*FOR EVENING STUDENTS

NOTE: SPECIAL COSTS

When enrolling in AUT courses, the student is required to furnish his own tools. A list of these basic tools can be obtained by contacting one of the Automotive Instructors.

BUSINESS ADMINISTRATION

BANKING AND FINANCE
 BUSINESS MANAGEMENT
 CREDIT AND FINANCIAL MANAGEMENT
 POSTAL SERVICE MANAGEMENT

REAL ESTATE
 SALES AND MARKETING
 TRANSPORTATION MANAGEMENT

The opportunities for employment and advancement in business-related activities are increasing in the Metrolina area and throughout the state of North Carolina. The growth and development in this commercial and industrial activity have been accompanied by intensive competition. Businesses are meeting this challenge by instituting modern techniques in both the technical and human aspects of business operations. The best opportunities for students desiring to obtain initial employment and to progress into the management or decision-making activities of a business firm will be for those who have an understanding of our economic and business environment and have developed both technical and human skills.

DESCRIPTION OF CURRICULUM

The Business Administration curriculum is designed to provide students with this understanding of economic systems and the environment of business and, at the same time, develop both the human and technical skills through the application of appropriate principles.

Graduates of the program will receive the degree Associate in Applied Science in Business Administration. The title of the degree will also reflect the option of special interest which the student has chosen.

The seven options in curriculum content offer the opportunity to emphasize development in specific functions of any business such as Business Management, Sales and Marketing, Credit and Financial Management, or to concentrate on development of both technical and managerial skills in such activities as Real Estate, Transportation, Banking and Finance, or Postal Service Management.

Suggested Sequence of Required Courses For Business Administration-Banking and Finance

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
COM 1314 Introduction to Communication	3	0	3	COM 3305 Communications II**	3	0	3
BUS 1400 Introduction to Business	3	2	4	ACC 1604 Principles of Accounting I	5	2	6
BUS 3300 Applied Psychology	3	0	3	ECO 2304 Economics I (MACRO)	3	0	3
FIN 3314 Business Mathematics I*	3	0	3	SPH 1300 Oral Communications	3	0	3
BAF 3400 Principles of Bank Operations	3	2	4	BUS 2314 Business Management	3	0	3
	15	4	17		17	2	18
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
COM 3306 Communications III**	3	0	3	BUS 2304 Business Law I	3	0	3
ACC 1605 Principles of Accounting II	5	2	6	EDP 3300 Intro. to Computer Concepts	3	0	3
BUS 3343 Money and Banking	3	0	3	BUS 4340 Consumer Credit	3	0	3
ECO 2305 Economics II (MICRO)	3	0	3	BUS 4332 Personnel Management	3	0	3
BAF 3301 Bank Management	3	0	3	Elective***	3	0	3
	17	2	18		15	0	15
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
BUS 2305 Business Law II	3	0	3	FIN 4336 Financial Management	3	0	3
BUS 4341 Commercial Credit	3	0	3	BAF 4302 Federal Reserve System	3	0	3
BAF 4400 Loan Credit Analysis	3	2	4	BAF 4403 International Banking****	3	2	4
BAF 4301 Mgmt. of Commer. Bank Funds	3	0	3	Elective***	3	0	3
Elective***	3	0	3	Elective***	3	0	3
	15	2	16		15	2	16

* MAT 1504, 1505, or MAT 1514, 1515 may be substituted if college transfer is planned.

** COM 1305 and 1306 may be substituted if college transfer is planned.

*** Electives as desired.

****Student may take Bank Investments, Home Mortgage, Trust Functions & Services in lieu of International Banking.

Suggested Sequence of Required Courses For Business Administration-Business Management

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	ACC 1605 Principles of Accounting II	5	2	6
ACC 1604 Principles of Accounting I	5	2	6	COM 3305 Communications II**	3	0	3
COM 1314 Intro. to Communication**	3	0	3	ECO 3301 American Economic History***	3	0	3
FIN 3314 Business Mathematics I *	3	0	3	EDP 3300 Intro. to Computer Concepts	3	0	3
	14	4	16	FIN 3315 Business Mathematics II*	3	0	3
					17	2	18
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
BUS 2304 Business Law I	3	0	3	BUS 2314 Business Management	3	0	3
ECO 3302 Labor Economics***	3	0	3	BUS 2305 Business Law II	3	0	3
EDP 4314 Systems and Procedures	3	0	3	ECO 2304 Economics I (MACRO)	3	0	3
COM 3306 Communications III**	3	0	3	EDP 2306 Computer Programming I(Bus.)	2	2	3
Elective****	3	0	3	SPH 1300 Oral Communications	3	0	3
	15	0	15	BUS 3304 Business Statistics	3	0	3
					17	2	18
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
FIN 4334 Business Finance I	3	0	3	BUS 3300 Applied Psychology	3	0	3
BUS 4321 Consumer Credit(or BUS 4322, Commercial Credit)	3	0	3	FIN 4335 Business Finance II	3	0	3
BUS 4331 Administrative Office Mgmt.	3	0	3	BUS 2306 Business Law III	3	0	3
BUS 4330 Supervision	3	0	3	BUS 4332 Personnel Management	3	0	3
Electives	6	0	6	BUS 4334 Management Seminar	3	0	3
	18	0	18		15	0	15

* MAT 1504, 1505 or MAT 1514, 1515 may be taken if student has met requirements.

** COM 1305 and 1306 may be taken if student has met requirements.

*** Students desiring college transfer credit may take the ECO 2304, 2305, 2306 series starting in the second quarter.

****SEC 3404 Elementary Typewriting I is required of students who have not had one year of typing in high school or equivalent.

Suggested Sequence of Required Courses For Business Administration-Credit and Financial Management

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	LAB		HR/WK	CLS	LAB
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business*	3	2	4	BUS 4341 Commercial Credit*	3	0	3
BUS 3340 Prin. of Risk & Insurance**	3	0	3	ECO 2305 Economics II (MICRO)*	3	0	3
COM 1314 Introduction to Communications	3	0	3	COM 3305 Communications II	3	0	3
ECO 2304 Economics I (MACRO)*	3	0	3	FIN 3315 Business Mathematics II***	3	0	3
FIN 3314 Business Arithmetics I***	3	0	3	Elective	3	0	3
	15	2	16		15	0	15
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
BUS 3343 Money and Banking**	3	0	3	ACC 1605 Prin. of Accounting II*	5	2	6
ACC 1604 Principles of Accounting I*	5	2	6	BUS 2304 Business Law I**	3	0	3
SEC 4305 Business Communications*	3	0	3	BUS 3324 Marketing**	3	0	3
BUS 2314 Business Management**	3	0	3	BUS 4331 Admin. Office Management**	3	0	3
	14	2	15	FIN 4317 Financial Statement Analysis & Interpretation*	3	0	3
					17	2	18
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
BUS 4344 Credit Management Problems**	3	0	3	ECO 2306 Economics III (MAGNA)	3	0	3
SPH 2304 Public Speaking**	3	0	3	FIN 4334 Business Finance I	3	0	3
BUS 2306 Business Law III**	3	0	3	BUS 4332 Personal Management**	3	0	3
BUS 3300 Applied Psychology**	3	0	3	Electives	9	0	9
EDP 2306 Computer Programming I (Bus.)**	2	2	3		18	0	18
	14	2	15				

* Courses so marked are required for the Associate Award of the National Institute of Credit.

** Courses so marked are required in addition to those marked * for the Fellow Award of the National Institute of Credit.

***If student passes proficiency examination, he may take an elective.

Suggested Sequence of Required Courses For Business Administration-Postal Service Management

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	LAB		HR/WK	CLS	LAB
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
COM 1314 Introduction to Communication	3	0	3	COM 3305 Communications II	3	0	3
ECO 3302 Labor Economics	3	0	3	ACC 1604 Principles of Accounting I	5	2	6
PSM 3300 Postal Ser. His. & Organ.	3	0	3	PSM 3401 Postal Service Labor Mgmt.	3	2	4
RDN 9210 Reading Improvement	5	0	5	HED 1204 First-Aid I	2	1	2
FIN 3314 Business Mathematics I	3	0	3	BUS 1400 Introduction to Business	3	2	4
	17	0	17		16	5	19
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
COM 3306 Communications III	3	0	3	SPH 1300 Oral Communications	3	0	3
BUS 2314 Business Management	3	0	3	SOC 1301 Group Interaction	3	0	3
ACC 1605 Principles of Accounting II	5	2	6	PSM 3405 Mail Processing II	2	4	4
PSM 3404 Mail Processing I	2	4	4	PSM 4401 Postal Service Support	2	4	4
ECO 2304 Economics I (MACRO)	3	0	3	BUS 4330 Supervision	3	0	3
	16	6	19		13	8	17
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
PSM 4420 Postal Employee Services	3	2	4	PSM 4430 Postal Delivery & Collection	2	4	4
PSM 4421 Postal Customer Services	2	4	4	PSM 4431 Postal Problems Analysis	2	4	4
BUS 3300 Applied Psychology	3	0	3	SOC 4300 Social & Minority Issues	3	0	3
EDP 3300 Intro. to Computer Concepts	3	0	3	ACC 4434 Income Taxes	3	2	4
Elective*	3	0	3		10	10	15
	14	6	17				

*SEC 3404 Elementary Typewriting I is required of students who have not had one year of typing in high school or equivalent.

Suggested Sequence of Required Courses For Business Administration-Real Estate

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS			HR/WK	HRS	
	CLS	LAB	CR.		CLS	LAB	CR.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	COM 3305 Communications II**	3	0	3
COM 1314 Intro. to Communication	3	0	3	ECO 2304 Economics I (MACRO)***	3	0	3
BUS 3464 Real Estate Brokerage I	4	0	4	BUS 3465 Real Estate Brokerage II	4	0	4
FIN 3314 Business Mathematics I*	3	0	3	ACC 1604 Principles of Accounting I	5	2	6
SPH 1300 Oral Communications	3	0	3		15	2	16
	16	2	17				
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
COM 3306 Communications III	3	0	3	BUS 2305 Business Law II	3	0	3
BUS 2304 Business Law I	3	0	3	BUS 3365 Residential R. E. Appraisal	3	0	3
ECO 2305 Economics II (MICRO)	3	0	3	BUS 3300 Applied Psychology	3	0	3
BUS 3360 Real Estate Property Management	3	0	3	BUS 4365 Real Estate Sales	3	0	3
BUS 3364 Residential R. E. Appraisal I	3	0	3	BUS 4364 Land Use Planning & Zoning	3	0	3
	15	0	15	Elective****	3	0	3
					18	0	18
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
BUS 2314 Business Management	3	0	3	BUS 4331 Administrative Office Mgmt.	3	0	3
BUS 4367 Income R. E. Appraisal I	3	0	3	BUS 4376 Real Estate Law	3	0	3
BUS 4366 Real Estate Finance	3	0	3	Electives	9	0	9
EDP 3300 Intro. to Computer Concepts	3	0	3		15	0	15
Elective	3	0	3				
	15	0	15				
<u>SUGGESTED ELECTIVES</u>				*MAT 1504, 1505 or MAT 1514, 1515 may be taken if student has met requirements.			
ECO 2306 Economics III (MAGNA)	3	0	3	**COM 1305 and 1306 may be taken if student has met requirements.			
BUS 4375 Industrial Real Estate	3	0	3	***Students desiring college transfer credit may take the ECO 2304, 2305, 2306 series starting in the second quarter.			
BUS 4368 Income Real Estate Appraisal II	3	0	3	****SEC 3404 Elementary Typewriting I is required of students who have not had one year of typing in high school or equivalent.			
BUS 4321 Advertising	3	0	3				
BUS 4374 Real Estate Investment	3	0	3				
FIN 3330 Real Estate Arithmetic	3	0	3				

Suggested Sequence of Required Courses For Business Administration-Sales and Marketing

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS			HR/WK	HRS	
	CLS	LAB	CR.		CLS	LAB	CR.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	BUS 2304 Business Law I	3	0	3
COM 1314 Intro. to Communication	3	0	3	BUS 3320 Sales Development	3	0	3
ECO 3301 American Economic History	3	0	3	COM 3305 Communications II**	3	0	3
FIN 3314 Business Mathematics I*	3	0	3	FIN 3315 Business Mathematics II*	3	0	3
BUS 3300 Applied Psychology	3	0	3	ECO 2304 Economics I (MACRO)***	3	0	3
	15	2	16		15	0	15
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
BUS 2305 Business Law II	3	0	3	ACC 1604 Principles of Accounting I	5	2	6
BUS 3324 Marketing	3	0	3	BUS 3304 Business Statistics	3	0	3
ECO 3302 Labor Economics***(or HIS 1321)	3	0	3	BUS 4320 Retailing	3	0	3
EDP 3300 Intro. to Computer Concepts	3	0	3	COM 3306 Communications III**	3	0	3
SPH 1300 Oral Communications	3	0	3	EDP 2306 Computer Program I (Bus.)	2	2	3
Elective****	3	0	3		16	4	18
	18	0	18				
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
ACC 1605 Principles of Accounting II	5	2	6	BUS 4324 Marketing Seminar	3	0	3
FIN 4334 Finance I	3	0	3	FIN 4335 Finance II	3	0	3
BUS 4321 Advertising	3	0	3	BUS 4341 Commercial Credit	3	0	3
BUS 2314 Business Management	3	0	3	EDP 4314 Systems and Procedures	3	0	3
BUS 4340 Consumer Credit	3	0	3	Elective	3	0	3
	17	2	18		15	0	15

* MAT 1504, 1505 or MAT 1514, 1515 may be taken if student has met requirements.

** COM 1305 and 1306 may be taken if student has met requirements.

*** Students desiring college transfer credit may take the ECO 2304, 2305, 2306 series starting in the second quarter.

****SEC 3404 Elementary Typewriting I is required of students who have not had one year of typing in high school or equivalent.

Suggested Sequence of Required Courses For Business Administration-Transportation Management

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	COM 3305 Communications II**	3	0	3
COM 1314 Introduction to Communication	3	0	3	ECO 3301 American Economic History***	3	0	3
FIN 3314 Business Mathematics I*	3	0	3	FIN 3315 Business Mathematics II*	3	0	3
ECO 3303 Economics of Transportation	3	0	3	BUS 3450 Motor Carrier Rates	3	2	4
BUS 3350 Highway Transportation	3	0	3	BUS 4354 Transportation Law I	3	0	3
	15	2	16		15	2	16
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
ACC 1604 Accounting I	5	2	6	ACC 1605 Accounting II	5	2	6
COM 3306 Communications III**	3	0	3	ECO 2304 Economics I (MACRO)***	3	0	3
BUS 3451 Traffic Management	3	2	4	BUS 4350 Railroad Transportation	3	0	3
BUS 4355 Transportation Law II	3	0	3	SPH 1300 Oral Communications	3	0	3
	14	4	16	BUS 2304 Business Law I	3	0	3
					17	2	18
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
BUS 3300 Applied Psychology	3	0	3	EDP 2306 Computer Program I (Bus.)	2	2	3
EDP 3300 Intro. to Computer Concepts	3	0	3	BUS 4356 Highway Transportation Mgmt.	3	0	3
BUS 3304 Business Statistics	3	0	3	BUS 2314 Business Management	3	0	3
EDP 4314 Systems & Procedures	3	0	3	ECO 3302 Labor Economics	3	0	3
BUS 4351 Traffic Claims	3	0	3	Elective****	3	0	3
BUS 2305 Business Law II	3	0	3		14	2	15
	18	0	18				

* MAT 1504, 1505 or MAT 1514, 1515 may be taken if student has met requirements.

** COM 1305 and 1306 may be taken if student has met requirements.

*** Students desiring college transfer credit may take the ECO 2304, 2305, 2306 series starting in the second quarter.

****SEC 3404 Elementary Typewriting I is required of students who have not had one year of typing in high school or equivalent.

BUSINESS DATA PROCESSING

The Computer Science Department offers the degree Associate in Applied Science in Business Data Processing. The Business Data Processing curriculum prepares a graduate to seek work on an entry level basis as a business application programmer or programmer/analysis.

DESCRIPTION OF CURRICULUM

A graduate of the Business Data Processing curriculum has a series of courses in computer concepts, data processing fundamentals, programming, software control systems, electronic data processing applications, fundamentals of systems analysis and design, accounting, English and mathematics. When these courses are linked with several years experience as a business application programmer after graduation, career paths in business programming, systems analyst, and management could be available for a graduate of this program. It's possible that initial employment could involve systems analysis and design as a part of the programmer's responsibilities.

Suggested Course Sequence For Business Data Processing

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
EDP 3300 Intro. to Computer Concepts	3	0	3	EDP 3415 Computer Language II	3	2	4
EDP 3310 Data Processing Fundamentals	2	2	3	ACC 1604 Principles of Accounting I	5	2	6
EDP 3414 Computer Language I	3	2	4	MAT 3505 Technical Mathematics II	5	0	5
MAT 3504 Technical Mathematics I	5	0	5	COM 3305 Communications II	3	0	3
COM 1314 Introduction to Communication	3	0	3		16	4	18
	16	4	18				
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
EDP 4425 Computer Systems I	3	2	4	EDP 4435 Computer Systems II	3	2	4
EDP 4314 Systems and Procedures	3	0	3	EDP 4417 Data Processing Appli. I	3	2	4
EDP 4444 RPG Programming	3	2	4	MAT 2514 Statistics I	5	0	5
ACC 1605 Principles of Accounting II	5	2	6	ACC/BUS Electives	6	0	6
	14	6	17		17	4	19

FIFTH QUARTER

EDP 4418 Data Processing Appli. II	3	2	4
EDP 3404 Assembly Language	3	2	4
COM 3306 Communications III	3	0	3
ACC/BUS Electives	<u>6</u>	<u>0</u>	<u>6</u>
	15	4	17

SIXTH QUARTER

EDP 4524 Application Project	3	4	5
SPH 1300 Oral Communications	3	0	3
ECO 2304 Economics I	3	0	3
EDP 4315 Applied Business Systems	3	0	3
General Elective	<u>3</u>	<u>0</u>	<u>3</u>
	15	4	17

SERVICE COURSES AND ELECTIVES

EDP 1404 Computer Concepts & Fortran Programming	3	2	4	EDP 2514 Statistical & Numerical Programming	4	2	5
EDP 1405 Fortran Programming	3	2	4	EDP 3302 Automation Survey in Medical Facilities	3	0	3
EDP 2306 Computer Programming I (Business)	2	2	3	EDP 3303 Automation Survey in Food Facilities	3	0	3
EDP 2307 Computer Programming II (Business)	2	2	3	EDP 3305 Mini-computers	3	0	3
EDP 2308 Computer Systems & Assembly Language I	2	2	3	EDP 4390 Individual Study	3	0	3
EDP 2309 Computer Systems & Assembly Language II	2	2	3	EDP 4434 Intro. to Operation Research	3	2	4
				EDP 4437 Computer Language Survey	3	2	4

CHEMICAL TECHNOLOGY

The chemical industry of the southeastern United States involves (1) basic research, (2) development of chemical processes through pilot plant investigations, (3) chemical manufacturing, (4) sales and services and (5) laboratory analyses and testing of materials.

Leading products are in the fields of textiles, paper, fertilizer, adhesives, protective coatings, plastics and rubber.

Chemical technicians are much in demand for laboratory testing and pilot plant studies throughout the industry.

DESCRIPTION OF CURRICULUM

The Chemical Technology curriculum is an intensive six-quarter program of theoretical and applied chemistry. It is designed to:

1. Develop the student's knowledge and understanding of the fundamental principles and concepts of chemistry.
2. Develop laboratory manipulative skills and techniques as needed on the job.
3. Familiarize the student with commercial manufacturing process problems and the part that the technicians must play in the prevention and/or solution of these problems.

A total of eleven courses is included to give the student ample training in general, organic, physical and analytical chemistry. Emphasis is placed upon development of laboratory skills. The use of such modern instruments as the colorimeter, infrared spectrophotometer and gas chromatograph is taught in the final two quarters. Graduates in this curriculum receive the degree Associate in Applied Science in Chemical Technology.

A cooperative program is available to those students who wish to blend their academic work with industrial experience.

Suggested Sequence of Required Courses for Chemical Technology

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS.		HR/WK	CLS	HRS.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
CHE 3100 Seminar	1	0	1	PHY 3404 Physics I: Basic Mechanics	3	2	4
MAT 3504 Technical Mathematics I	5	0	5	CHE 3101 Seminar	1	0	1
COM Communications Elective	3	0	3	COM Communications Elective	3	0	3
CHM 1504 General Chemistry I	3	4	5	MAT 3505 Technical Mathematics II	5	0	5
General Education Elective	<u>3</u>	<u>0</u>	<u>3</u>	CHM 1505 General Chemistry II	<u>3</u>	<u>4</u>	<u>5</u>
	15	4	17		15	6	18
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
MAT 3506 Technical Mathematics III	5	0	5	CHE 4455 Textile Color & Test	2	4	4
CHM 1506 General Chem. III & Elem. Anal.	3	4	5	CHM 2604 Quantitative Chemical Anal.	3	6	6
PHY 3405 Physics II: Work, Energy, Power	<u>3</u>	<u>2</u>	<u>4</u>	CHE 3404 Physical Chemistry	2	4	4
	11	6	14	COM 3306 Communications III	<u>3</u>	<u>0</u>	<u>3</u>
					10	14	17

FIFTH QUARTER

PHY 3407 Phys. IV: Light, Sound, & Atom. Phy.	3	2	4
CHM 2614 Organic Chemistry I	4	4	6
CHE 4804 Chromatography	3	8	7
	10	14	17

SIXTH QUARTER

CHE 4200 Independent Lab. Study	0	4	2
CHM 2615 Organic Chemistry II	4	4	6
CHE 4905 Opti. Met. of Indus. Chem. Ana.	3	10	8
	7	18	16

CIVIL ENGINEERING TECHNOLOGY

The construction industry is large and varied and provides excellent opportunities for the individual with ability and training. Depending on the organization and the size of the project, the technician may work directly with engineers or architects or he may function as a liaison between them.

Civil engineering technicians perform many necessary planning and supervisory tasks. An individual after graduating from this program, should qualify for such jobs as instrument man, survey party chief, draftsman, foreman, expeditor, surveyor, layout man, engineering aide, inspector or construction equipment and material salesman. Upon gaining sufficient construction experience, the technician has the opportunity to advance into positions such as field engineer, estimator, job superintendent, project manager or contractor.

DESCRIPTION OF CURRICULUM

The curriculum at Central Piedmont Community College includes both classroom and laboratory experiences with practical application to the industry. Well-qualified instructors and excellent equipment provide the student an opportunity to secure the education he needs for the many excellent positions available in this field. The degree of Associate in Applied Science in Civil Engineering Technology is awarded upon completion of the program.

Suggested Sequence of Required Courses for Civil Engineering Technology

<u>FIRST QUARTER</u>	HR/WK	CLAS	LAB	CR.	QTR HRS.	<u>SECOND QUARTER</u>	HR/WK	CLAS	LAB	CR.	QTR HRS.
CIV 3504 Surveying I	3	6	5		5	CIV 3514 Statics	4	2	5		5
ARC 3434 Architectural Drafting I	2	4	4		4	ARC 3435 Architectural Drafting II	2	4	4		4
MAT 3504 Technical Mathematics I	5	0	5		5	PHY 3404 Physics I: Basic Mechanics	3	2	4		4
COM Communications Elective	3	0	3		3	MAT 3505 Technical Mathematics II	5	0	5		5
CIV 3100 Intro. to Civil Engin. Tech.	0	2	1		1		14	8	18		18
	13	12	18								
<u>THIRD QUARTER</u>						<u>FOURTH QUARTER</u>					
CIV 3505 Surveying II	3	6	5		5	CIV 4506 Surveying III	3	6	5		5
CIV 3324 Plain Concrete	2	3	3		3	CIV 4527 Steel and Timber Design	4	2	5		5
CIV 3404 Arch. Engin. Materials & Meth.	3	3	4		4	PHY 3405 Phys. II: Work, Energy, Power	3	2	4		4
CIV 3524 Strength of Materials	4	2	5		5	CIV 4300 Codes, Contracts & Spec.	2	3	3		3
COM Communications Elective	3	0	3		3		12	13	17		17
	15	14	20								
<u>FIFTH QUARTER</u>						<u>SIXTH QUARTER</u>					
CIV 4304 Construction Planning (CPM)	2	3	3		3	CIV 4324 Foundation Construction	2	3	3		3
CIV 4534 Reinforced Concrete Design	4	2	5		5	CIV 4444 Const. of Roads & Pavements	3	3	4		4
PHY 3406 Physics III: Electricity	3	2	4		4	CIV 4454 Construction Estimates & Cost	2	6	4		4
ARC 4300 Architectural Mech. Equipment	2	2	3		3	CIV 4404 Structural Drafting & Design	2	4	4		4
COM 3306 Communications III	3	0	3		3	General Education Elective	3	0	3		3
	14	9	18				12	16	18		18

COMMERCIAL ART

ADVERTISING DESIGN OPTION
TELEVISION AND VISUAL GRAPHICS OPTION

INTERIOR DESIGN OPTION
VISUAL MERCHANDISING OPTION

Most of the artwork which we see in newspapers, magazines, on billboards and on television is the work of specialists most often referred to as "commercial artists." These artists may work in the art department of some commercial enterprise, a studio or agency which does work for a variety of businesses or they may choose to "free-lance" or perform their services for their clients on self-determined contracts and schedules. The Art Department offers courses to prepare artists for careers in the areas of Advertising Design, Visual Merchandising, Television/Visual Graphics, and Interior Design.

DESCRIPTION OF CURRICULUM

Using a variety of teaching-learning techniques, the Commercial Art Program at Central Piedmont Community College equips students with the knowledge and skills necessary for employment as Commercial Artists. The curriculum is organized so that entering students spend their first three quarters in a foundation program which emphasizes basics (such as drawing and design) common to all the options of the Program. Following successful completion of the foundation courses the student selects one of four options for specialization the remaining three quarters. The Advertising Design Option emphasizes two-dimensional artwork for reproduction by various printing techniques such as are found in magazines, newspapers, brochures, etc. The Visual Merchandising Option emphasizes the three-dimensional art of product displays, retail store windows etc., and the choice, arrangement, and production of original artwork for use in a variety of merchandising activities. The Television/Visual Graphics Option emphasizes the origination of artwork for projection by means of video or photographic equipment, such as in-service training programs, educational programs, sales presentations, etc. The Interior Design Option emphasizes the choice and arrangement of elements for the interiors of both home and commercial buildings.

Suggested Sequence of Required Courses For Commercial Art Foundation Program

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
VCO 3300 Introduction to the Visual Arts	3	0	3	VCO 3315 Drawing II	2	2	3
VCO 3314 Drawing I	2	2	3	VCO 3325 Visual Design II	2	2	3
VCO 3324 Visual Design I	2	2	3	VCO 3304 Photography I	2	2	3
VCO 4100 Seminar	1	0	1	VCO 4101 Seminar	1	0	1
FIN 3314 Business Mathematics I	3	0	3	DFT 3404 Technical Drafting I*	2	4	4
COM Communications Elective	3	0	3	COM Communications Elective	3	0	3
	14	4	16		12	10	17

<u>THIRD QUARTER</u>			
VCO 3305 Photography III	2	2	3
VCO 3326 Visual Design III	2	2	3
VCO 3316 Drawing III	2	2	3
ADV 4300 Advertising Principles	3	0	3
BUS 3320 Sales Development	3	0	3
General Education Elective	3	0	3
	15	6	18

ADVERTISING DESIGN OPTION

<u>FOURTH QUARTER</u>				<u>FIFTH QUARTER</u>			
VCO 4304 Typography and Lettering I	2	2	3	VCO 4324 Copywriting I	3	0	3
ADV 4304 Advertising Studio I	2	2	3	VCO 4305 Typography and Lettering II	2	2	3
VCO 4414 Advertising Production I	3	2	4	ADV 4305 Advertising Studio II	2	2	3
VCO 3306 Photography III	2	2	3	VCO 4415 Advertising Production II	3	2	4
General Education Elective	3	0	3	VCO 3301 Illustration	2	2	3
	12	8	16	General Education Elective	3	0	3
					15	8	19

<u>SIXTH QUARTER</u>			
VCO 4325 Copywriting II	3	0	3
ADV 4306 Advertising Studio III	2	2	3
VCO 4416 Advertising Production III	3	2	4
ADV 4204 Advertising Thesis	0	4	2
ADV 4214 Professional Prac. & Proce.	1	2	2
General Education Elective	3	0	3
	12	10	17

*Interior Design students should substitute ARC 3434 Architectural Drafting I.

INTERIOR DESIGN OPTION

<u>FOURTH QUARTER</u>				<u>FIFTH QUARTER</u>			
EDN 4300 Survey of Interior Design	3	0	3	ARC 3200 Introduction to Architecture	2	0	2
ARC 3435 Architectural Drafting II	2	4	4	EDN 4315 Survey of Painting, Sculp. & Interior Design II	3	0	3
EDN 4414 Applied Problems Studio I	2	4	4	EDN 4415 Applied Problems Studio II	2	4	4
EDN 4404 Interior Presentations	2	4	4	EDN 4307 Survey of Materials	1	4	3
EDN 4314 Survey of Painting, Sculp. & Interior Design I	3	0	3	General Education Elective	3	0	3
	12	12	18		11	8	15

<u>SIXTH QUARTER</u>			
EDN 4406	Contemporary Interiors	2	4 4
EDN 4400	Profess. Prac. & Procedures	2	4 4
EDN 4416	Applied Problems Studio III	2	4 4
EDN 4202	Thesis	0	4 2
	General Education Elective	<u>3</u>	<u>0 3</u>
		9	16 17

TELEVISION AND VISUAL GRAPHICS OPTION

FOURTH QUARTER

VCO 4304	Typography and Lettering I	2	2 3
VCO 3306	Photography III	2	2 3
TAV 4314	Visual Graphics Studio I	2	2 3
VCO 4414	Advertising Production I	3	2 4
TAV 4214	Visual Projection I	1	2 2
	General Education Elective	<u>3</u>	<u>0 3</u>
		13	10 18

FIFTH QUARTER

TAV 4204	Profess. Prac. & Proce. I	1	2 2
VCO 4324	Copywriting I	3	0 3
VCO 4305	Typography and Lettering II	2	2 3
TAV 4215	Visual Projection II	1	2 2
TAV 4315	Visual Graphics Studio II	2	2 3
TAV 4300	Photography IV	2	2 3
VCO 3301	Illustration	<u>2</u>	<u>2 3</u>
		13	12 19

SIXTH QUARTER

VCO 4325	Copywriting II	3	0 3
TAV 4316	Visual Graphics Studio III	2	2 3
TAV 4224	T.V. & Visual Graphics Thesis	1	2 2
TAV 4216	Visual Projection III	1	2 2
TAV 4205	Profess. Prac. & Proce. II	1	2 2
	General Education Elective	<u>3</u>	<u>0 3</u>
		11	8 15

VISUAL MERCHANDISING OPTION

FOURTH QUARTER

VCO 4304	Typography and Lettering I	2	2 3
VCO 3306	Photography III	2	2 3
VIM 4504	Visual Merchandising I	2	6 5
VIM 4200	Creative Design	1	2 2
	General Education Elective	<u>3</u>	<u>0 3</u>
		10	12 16

FIFTH QUARTER

VIM 4304	Retail Adver. & Promot. I	2	2 3
VIM 4505	Visual Merchandising II	2	6 5
VCO 4310	Fashion Illustration I	2	2 3
VCO 4324	Copywriting I	3	0 3
	General Education Elective	<u>3</u>	<u>0 3</u>
		12	10 17

SIXTH QUARTER

VIM 4305	Retail Advert. & Promot. II	2	2 3
VIM 4506	Visual Merchandising III	2	6 5
VCO 4311	Fashion Illustration II	2	2 3
VIM 4201	Professional Prac. & Proce.	1	2 2
	General Education Elective	<u>3</u>	<u>0 3</u>
		10	12 16

COMPUTER OPERATIONS

The increasing sophistication and expansion of data processing equipment throughout business and industry has created a need for skilled operators. The operator is responsible for the operation of computer and auxiliary machinery whose expense necessitates efficient utilization. The operator must be knowledgeable enough about the data processing equipment he is operating so he can efficiently monitor and control the equipment according to prescribed operating instructions and detect malfunctions as they occur.

DESCRIPTION OF CURRICULUM

The data processing equipment operator program at Central Piedmont Community College will provide the student with the knowledge essential for employment in computer operations and other auxiliary or peripheral equipment operation. The knowledge gained by the student falls into three categories: the operational details of the central processing unit and peripheral equipment; the ability to recognize the nature of the job being run and its processing requirements; and a knowledge of computer manufacturer supplied programs such as compiler programs, utility programs, and control programs. A graduate from this curriculum will receive a diploma from the College.

All developmental classes should be completed before entering the curriculum of Computer Operations. All pre-requisites and co-requisites must be met before enrolling in a particular class.

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	LAB	HRS		HR/WK	LAB	HRS
<u>FIRST QUARTER</u>	CLS	LAB	CR.	<u>SECOND QUARTER</u>	CLS	LAB	CR.
EDP 3300 Intro. to Computer Concepts	3	0	3	EDP 5424 Programming I	3	2	4
EDP 3310 Data Processing Fundamentals	2	2	3	EDP 5514 Computer Operations I	3	4	5
EDP 5100 Computer Operations Seminar	1	0	1	COM 3305 Communications II	3	0	3
EDP 5314 Intro. to Computer Systems	3	0	3	BUS 1400 Introduction to Business	3	2	4
COM 1314 Introduction to Communication	3	0	3		12	8	16
FIN 3314 Business Mathematics I	3	0	3				
	15	2	16				
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER*</u>			
EDP 5425 Programming II	3	2	4	EDP 5404 Operation Project	0	20	4
EDP 5515 Computer Operations II	3	4	5	or			
EDP 5524 General D. P. Applications	3	4	5	EDP 5615 Peripheral Equip. Operation	3	4	5
COM 3306 Communications III	3	0	3	EDP 5516 Computer Operations III	3	4	5
	12	10	17	SPH 1300 Oral Communications	3	0	3
					6/9	24/8	12/13

*SEC 3404 required only for Students that have not had a typing course.
EDP 5390 Individual Study is a computer operations elective.

CONTINUING EDUCATION PROGRAMS

The Continuing Education Program of Central Piedmont Community College provides adult education and extension courses for those individuals whose education stopped short of high school graduation, for those who wish instruction in home and family education and leisure activities and for those who need short-term training, retraining or upgrading in a vocational or professional area.

College credit is not given for completion of courses in the Continuing Education Program; however, a certificate is awarded by the College in some cases. Licenses, diplomas or other forms of recognition are awarded by certain non-College agencies upon successful completion of designated course sequences.

Basic adult, high school completion, and personal and family improvement courses require a registration fee of three dollars. Avocational/recreational courses require a charge of fifty cents per contact hour. Fee for avocational/recreational courses are non-refundable, unless the class is cancelled.

Admission requirements for courses in the Continuing Education Program depend upon the nature of the course. Admission to most of these classes is gained by registering during the regular College registration period; entry into some may be made at any time in the quarter. While some of these classes are conducted on the College campus, most are in adult centers which are located in schools scattered throughout the area or in other locations appropriate to the nature of the course.

Information about a specific course may be obtained from the College. General information about the present types of course offerings may be found in the following section. Other types of non-credit courses may be offered to meet expressed needs of the community when evidence of these needs is presented to the College.

I. ADULT EDUCATION AND COMMUNITY SERVICES

Adult education and community service course are offered for those whose education stopped short of high school graduation and/or for those who wish instruction in home and family, leisure time and cultural activities. The courses are made available to the community through Centers which are located throughout Charlotte-Mecklenburg and Union County.

Pre-High School Basic Education

The Adult Continuing Education Program of Central Piedmont Community College offers classes in fundamental education to those adults who are between the levels of 1st Grade and 8th Grade. Adults in the Pre-High School classes are divided in three Levels:

Level I---Grades 1 through 3 Level II---Grades 4 through 6 Level III---Grades 7 through 8

Upon completion of the 8th Grade, an adult may then enroll in high school courses to obtain an adult high school diploma. If you have any questions about these courses contact:

Director, Adult Education--373-6698

Avocational/Recreational Courses

The Adult Education Program offers courses for pastime and pleasure designated avocational/recreational. These courses are offered whenever interest is indicated by fifteen or more persons. Courses offered in this category include:

Archery, Tennis, Golf, Gym for Fun, Chess, Hobby Decoupage.

Personal and Family Improvement Courses

Other courses designated personal and family improvement also are offered when interest is indicated by fifteen or more persons. Courses which are available include:

Sewing	Personal Typing	Weight Control
First Aid	Defensive Driving	Personal Budgeting and Financing
Auto Care	Quantity Cooking	Child Care

Seminars and Conferences

Seminars and conferences can be organized upon request from special interest groups.

High School Completion

Adults who have not graduated from high school may earn an adult high school diploma through the High School Completion courses offered by the College. The adult high school diploma is an earned diploma granted by the local Board of Education in cooperation with the College.

An adult who has not met the requirements for high school graduation by having completed four units of English, one unit of mathematics, two units of general science and biology and one unit of American History must enroll for at least one quarter in each subject in which there is a deficiency. At the completion of a quarter and upon recommendation of the teacher, a standardized test will be administered by the College.

If a satisfactory level of achievement is indicated by the test score the student will be credited with having completed the subject and will be given credit toward graduation. English and mathematics must be completed first. If no high school credits have been earned and standardized achievement test results indicate an educational performance level lower than Grade 8.9, the adult must enroll in basic education classes to acquire skills necessary to successfully pursue high school completion courses.

Upon completion of all requirements, the adult is recommended to the local Board of Education as eligible to receive the Adult High School diploma. The local Board of Education, according to previous agreement with Central Piedmont Community College, then issues the high school diploma.

Adult Education Centers

Education courses for adults over 18 are offered at the following centers. Time and place may change. For up-to-date information, contact:

Director, Adult Education--373-6698

Belmont Neighborhood Center 700 Parkwood Avenue	Myers Park 2400 Colony Road
Bethlehem Center 2705 Baltimore Avenue	Myers Street Adult Activity Program 800 E. Independence
East Mecklenburg 6800 Monroe Road	Nevins Center 3523 Nevins Road
Garinger 1100 Eastway Drive	North Mecklenburg Statesville Road
Goodwill Industries 2001 Freedom Drive	Olympic Sandy Porter Road
Greek Orthodox Cathedral 600 East Blvd.	Plaza Presbyterian Church 2300 The Plaza
Greenville Neighborhood Center 1330 Spring Street	Randolph Clinic 1000 Billingsley Road
Huntersville Prison Huntersville, NC	Statesville Avenue 2802 Statesville Avenue
Independence 1967 Patroit Drive	West Charlotte 2219 Senior Drive
East Wing Monroe High School, Monroe NC	West Mecklenburg 7400 Tuckaseegee Road
Morgan Street School 510 S. Torrence	Winchester Center Winchester Avenue, Monroe, NC

II. OCCUPATIONAL EXTENSION COURSES

Extension courses are offered for those who need short-term training, retraining or upgrading in a vocational or professional area. The descriptions which follow are indicative of the types of courses that are frequently offered; however, any training, retraining or upgrading course can be offered to meet an expressed community need. For information contact: Director Occupational Extension.

Supervisory Development Training

Supervisory Development Training Classes train persons interested in becoming supervisors and provide instruction for supervisors at various levels of management as preparation for advancement.

Classes available to supervisory personnel are:

Human Relations	Conference Leadership
Economic in Business and Industry	Creative Thinking
Art of Motivating People	Industrial Safety and Accident Prevention
Effective Communications	Industrial First-Aid
Effective Writing	The Supervisor in North Carolina
Effective Speaking	The Supervisor and Employee Benefits
Reading Improvement	Job Analysis Training
Work Measurement	Cost Accounting for Supervisors
Job Methods	

Fire Science Training

The growing Piedmont area of North Carolina requires expansion of fire fighting units and an upgrading of fire service personnel. The need for better trained personnel is met by the College through training provided in the latest techniques.

Fire service training is taken directly to the individual fireman. Training sessions are held in the local fire departments allowing the men to be trained as an organized group utilizing equipment they would ordinarily use in controlling fire.

Fire Service classes include:

Forcible Entry	Rope Practices
Portable Fire Extinguishers	Ladder Practices
Salvage and Overhaul Practices	Fire Apparatus Practices
Ventilation	Rescue Practices
Protective Breathing Equipment	Firefighting Procedures

These are non-credit courses. The College also offers an associate degree curriculum in this area.

Apprenticeship and Licensure Training

Many men learn a trade by working on the job where they acquire skills by using tools of the trade. The College offers opportunities for these men to acquire related instruction in the classroom at night. Several of the trade areas in which related instruction is available are:

Electrical Code	Electrical Apprentice
Sheet-Metal Apprentice	Plumbing and Steamfitting Apprentice

Courses sequences and course descriptions may be obtained from the College.

Law Enforcement Training

A growing need for better trained law enforcement officers is met by the College through opportunities for training. Police Recruit Schools and Police Seminars are conducted several times a year in order to meet these needs. These are non-credit courses. The College also offers an associate degree curriculum in Law Enforcement.

Miscellaneous Training

Banking	Insurance
Creative Activi. for the Preschool Child	Institutional Housekeeping
Blueprint Reading	FCC Licensing
Constructon Electricity	Salesmanship
Hotel/Motel Management	Small Engine Repair
Sewing & Alternations	Apartment Resident Manager

III. CONTRACTUAL PROGRAMS

The College contracts with various local, state and federal agencies to provide specific training for students selected and referred by the agency.

CETA Courses

Under the provisions of the Comprehensive Employment Training Act (CETA) persons who are unemployed

or underemployed are eligible for certain types of training. In cooperation with the Employment Security Commission of North Carolina, the College offers specialized course work as scheduled by the Commission.

NEW and Expanding Industry Training

The College offers specialized courses as needed to meet the demands of new and expanding industries in the area for workers requiring specific skills training. For information contact: Vice President, Continuing Education.

DENTAL ASSISTING

The primary function of the dental assistant is to serve as the chairside assistant to the dentist. Here she plays an active and integral role in dental procedures by preparing patients for treatment, setting out instruments in the order in which they are to be used, keeping the operation field clear during treatment, mixing filling materials and dental cements and passing these materials and instruments to the dentists as he needs them.

The trained dental assistant also checks equipment, sterilizes instruments and engages in such laboratory work as making study models of teeth, casting inlays, processing x-ray films and mounting them in appropriate holders.

In many offices the dental assistant also serves as receptionist and office manager, schedules appointments and keeps records.

DESCRIPTION OF CURRICULUM

The curriculum at Central Piedmont Community College includes instruction in dental anatomy and physiology, bacteriology, pharmacology, oral pathology, dental materials, chairside assisting, typing, English, human relations and record keeping. A large portion of the student's time is spent in laboratory work and clinical experiences. A graduate from this curriculum will receive a diploma from the College and is eligible to take the National Certification Examination.

Suggested Sequence of Required Courses for Dental Assisting

COURSE TITLE	QTR				COURSE TITLE	QTR			
	CLS	LAB	CLN	CR.		CLS	LAB	CLN	CR.
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>				
DEA 5300 Anatomy and Physiology	3	0	0	3	DEA 5305 Preclinical Science II	3	0	0	3
DEA 5302 Introduction to Dental Asst.	2	0	3	3	DEA 5414 Dental Roentgenology	2	0	6	4
DEA 5600 Dental Materials	3	9	0	6	DEA 5424 Clinical Procedure I	2	0	6	4
DEA 5304 Preclinical Science I	3	0	0	3	ACC 5610 Medical Accounting	5	2	0	6
HSA 5200 Human Relations	2	0	0	2	COM 5301 Communications Skills II	3	0	0	3
COM 5500 Communication Skills	5	0	0	5		15	2	12	20
	18	9	3	22					
<u>THIRD QUARTER</u>					<u>FOURTH QUARTER</u>				
DEA 5525 Clinical Procedures II	4	0	3	5	DEA 5845 Dental Office Practice II	0	0	24	8
DEA 5534 Dental Office Management	4	0	3	5	DEA 5204 Dental Assistant Seminar	2	0	0	2
DEA 5344 Dental Office Practice I	0	0	9	3		2	0	24	10
SPH 1300 Oral Communications	3	0	0	3					
SEC 3404 Elementary Typewriting I	3	2	0	4					
	14	2	15	20					

DENTAL HYGIENE

The Curriculum at Central Piedmont Community College includes a background of basic studies, specialized and directed experience. The dental hygiene student will cultivate the judgement and skill prerequisite for providing oral health care to the public under the supervision of the dentist within the limits of the ethics and laws of the state.

DESCRIPTION OF CURRICULUM

The educational program consists of the theory and practice of dental hygiene, basic science and health courses and appropriate general education experiences. Dental hygiene experience is provided through the use of a dental hygiene clinic located on the College campus and through affiliations with nearby hospitals.

The curriculum is accredited. Graduates in this curriculum receive the degree Associate in Applied Science in Dental Hygiene. Prerequisites - High School Algebra, Chemistry, Red Cross 1st Aid or Equivalent.

Suggested Sequence of Required Courses for Dental Hygiene

COURSE TITLE	QTR				COURSE TITLE	QTR			
	HOURS/WEEK		HRS			HOURS/WEEK		HRS	
	CLS	LAB	CLN	CR.		CLS	LAB	CLN	CR.
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>				
COM 1314 Introduction to Communication	3	0	0	3	COM 1305 English Composition II	3	0	0	3
DEN 3504 Dental Anatomy I	2	6	0	5	DEN 3305 Dental Anatomy II	0	6	0	3
BIO 1504 Human Anatomy & Physiology I	3	4	0	5	BIO 1505 Human Anatomy & Phys. II	3	4	0	5
DEN 3214 Preventive Dentistry I	2	0	0	2	CHM 1501 Intro. Chemistry II	3	4	0	5
HPE 1107 Self Defense & Physical Con.	0	0	3	1	SPH 1300 Oral Communications	3	0	0	3
	10	10	3	16	HPE Elective*	0	0	3	1
						12	14	3	20
<u>THIRD QUARTER</u>					<u>FOURTH QUARTER</u>				
COM 1306 English Composition III	3	0	0	3	DEN 4200 Office Emergencies	2	0	0	2
BIO 1503 General Bacteriology	3	4	0	5	DEN 4500 Dental Materials	3	4	0	5
CHM 1502 Intro. Chemistry III	3	4	0	5	DEN 4315 Preventive Dentistry II	3	0	0	3
DEN 3324 Dental Hygiene I	1	0	6	3	DEN 4425 Dental Hygiene II	1	0	9	4
DEN 3224 Head and Neck Anatomy	2	0	0	2	DEN 4301 Roentgenology	2	3	0	3
HPE Elective*	0	0	3	1		11	7	9	17
	12	8	9	19					
<u>FIFTH QUARTER</u>					<u>SIXTH QUARTER</u>				
DEN 4204 Pharmacology	2	0	0	2	PSY 2504 General Psychology	5	0	0	5
DEN 4426 Dental Hygiene III	0	0	12	4	DEN 4527 Dental Hygiene IV	0	0	15	5
BIO 2304 Human Nutrition	3	0	0	3	DEN 4316 Preventive Dentistry III	3	0	0	3
DEN 4504 Embryology & Oral Histology	4	2	0	5	DEN 4390 Individual Study	3	0	0	3
DEN 4304 Pathology	3	0	0	3	DEN 4105 Clinical Theory II	1	0	0	1
DEN 4114 Periodontics	1	0	0	1		12	0	15	17
DEN 4104 Clinical Theory I	1	0	0	1					
	14	2	12	19					
<u>SEVENTH QUARTER</u>									
PSY Psychology Elective	5	0	0	5					
DEN 4628 Dental Hygiene V	0	0	18	6					
DEN 4314 Practice Administration	3	0	0	3					
SOC 2514 Introduction to Sociology	5	0	0	5					
DEN 4106 Clinical Theory III	1	0	0	1					
	14	0	18	20					

* Must be approved by Department Head

DIESEL ENGINE MECHANICS

Modern diesel engines are manufactured in a great variety of types and sizes and are used for many different purposes from stationary units to large trucks to construction equipment. These engines are complicated machines requiring highly skilled, well-trained personnel to properly repair and maintain them for operation at peak efficiency. Opportunities are excellent for the person who is anxious to learn and willing to work.

DESCRIPTION OF CURRICULUM

The Diesel Engine Mechanics Program of Central Piedmont Community College has two main objectives: To train the aspiring mechanic for entry into the diesel repair and maintenance field, and to serve the greater Charlotte area by providing training and upgrading for service people in two of our major industries, transportation and diesel equipment service. These objectives are obtained by hands-on training and individual study of major diesel engines. This curriculum provides for a detailed nine month study of diesel fundamentals, engine repair procedures, electrical systems, air, fuel and lubrication systems on Caterpillar, Cummins, Detroit and Mack diesel engines. Completion of this program leads to a certificate in Diesel Engine Mechanics.

Suggested Sequence of Required Courses For Diesel Engine Mechanics

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS			HR/WK	HRS.	
	CLS	LAB	CR.		CLS	LAB	CR.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
AUT 5401 Internal Combustion Engines I	2	6	4	AUT 5110 Electrical Testing	0	3	1
AUT 5242 Basic Electrical Systems	1	3	2	PHY 5304 Shop Science I	2	2	3
DSL 5300 Diesel Fundamentals	2	3	3	WLD 5120 Basic Electric Arc Welding	0	3	1
WLD 5110 Basic Oxyacetylene Welding	0	3	1	DSL 5404 Caterpillar Diesels	2	6	4
MAT 5304 Shop Math I	3	0	3	DSL 5405 Cummins Diesels	2	6	4
AUT 5211 Basic Fuel Systems	1	3	2	MAC 5201 Machine Shop Fundamentals	1	3	2
	9	18	15		7	23	15

THIRD QUARTER

PHY 5305 Shop Science II	2	2	3
AUT 5114 Automotive Air Conditioning	0	3	1
DSL 5406 Detroit Diesels	2	6	4
DSL 5407 Mack Diesels	2	6	4
DSL 5304 Hydraulics & Pneumatics	2	2	3
Elective	0	3	1
	<u>8</u>	<u>22</u>	<u>16</u>

ELECTIVES

AUT 5404 Auto Chassis & Suspen. Sys.	2	6	4
AUT 5824 Auto Power Train Systems	4	12	8
WLD 5140 Basic Gas Metal Arc Welding	0	3	1

NOTE: SPECIAL COSTS

When enrolling in DSL courses, the student is required to furnish his own tools. A list of these basic tools can be obtained by contacting one of the Diesel Engine Mechanics Instructors.



ELECTRICAL/ELECTRONICS ENGINEERING TECHNOLOGY

ELECTRONICS OPTION

ELECTRICAL OPTION

Recent developments in the Electrical/Electronics field have affected and are continuing to affect virtually every individual and company in some manner. Employment opportunities have correspondingly increased and are available at almost any geographical location with nearly every type of company. As engineers have become more theoretical, many employers have realized that the engineering technician is the best suited individual for an increasing percentage of positions previously filled by engineers. The engineering technician plays a vital role in being able to speak and understand the language of both the engineer and the craftsman. The broad electrical/electronics background enables the engineering technician to apply his or her skills as an engineering technician or engineering assistant in areas such as design, installation, manufacturing, maintenance, testing, inspection, and sales.

Specialty fields for the electrical and electronic engineering technician include medical electronics, industrial instrumentation, microprocessors, computers, microwave communication, radio and television communication, audio systems, electrical motors, motor control and solid state power conversion. An additional option open to the engineering technology graduate is continuing study for 2 years at one of the senior institutions which offer a Bachelor of Engineering Technology program.

DESCRIPTION OF CURRICULUM

The Electrical/Electronics Program at Central Piedmont Community College begins with basic electrical theory requiring a math level equivalent to 2 years of high school algebra. Electrical theory is reinforced with "hands-on" experience in one of the nation's most modern and well equipped instructional laboratories. For the student's convenience the laboratory remains open throughout normal day and evening school hours, and students may devote as much time to laboratory activity as desired. The electrical/electronics courses are listed in a recommended sequence which build on each other. Close attention should be paid to course corequisites (CR) and prerequisites (PR). General education electives are provided to broaden the student's general background and specialty electives allow further study in the special field of electronics in which the student is most interested. Many successful students find it helpful to enroll in a developmental math course (MAT 9000 series) prior to taking the regular courses listed below. Recommendations will be made when evaluating placement test scores.

Upon successful completion of the curriculum an Associate in Applied Science in either electrical or test and an interview with a counselor. To enter the program, call or visit the college information desk and arrange for class placement and interviews.

Suggested Sequence of Required Courses for Electrical-Electronics Engineering Technology

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS			HR/WK	HRS	
<u>FIRST QUARTER</u>	CLS	LAB	CR.	<u>SECOND QUARTER</u>	CLS	LAB	CR.
ELN 3100 Electrical/Electronics Seminar	1	0	1	ELN 3101 Electrical/Electronic Semi.	1	0	1
ELN 3514 Basic Electricity (DC)	3	6	5	ELN 3515 Basic Electricity (AC)	3	6	5
ELN 3304 Electronic Instru. & Measures	1	6	3	ELN 3404 Active Electronic Elements	3	3	4
MAT 3504 Technical Mathematics I	5	0	5	PHY 3404 Physics I: Basic Mechanics	3	2	4
DFT 3404 Technical Drafting I	<u>2</u>	<u>4</u>	<u>4</u>	MAT 3505 Technical Mathematics II	<u>5</u>	<u>0</u>	<u>5</u>
	12	16	18		15	11	19
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
ELN 3102 Electrical/Electronics Seminar	1	0	1	ELN 4102 Electrical/Electronics Semi.	1	0	1
ELN 4524 Transistor Cir. Anal. & Design	3	6	5	ELN 3717 Electronics Circuits	5	6	7
ELN 4544 Network Analysis	3	6	5	ELN 4427 Integrated Circuits	3	3	4
ELN 4525 Electrical Machines I	3	6	5	ELN 4405 Electric Motor Control	3	3	4
PHY 3405 Physics II: Work, Energy, Power	<u>3</u>	<u>2</u>	<u>4</u>	COM 1314 Introduction to Communicat.	<u>3</u>	<u>0</u>	<u>3</u>
	13	20	20		15	12	19
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
ELN 4103 Electrical/Electronics Seminar	1	0	1	ELN 4104 Electrical/Electronics Semi.	1	0	1
ELN 4414 Receivers and Transmitters	3	3	4	ELN 4307 Systems Correction Proced.	1	6	3
ELN 3414 Industrial Instrumentation	3	3	4	ELN Specialty Elective	3	0	3
MAT 3506 Technical Mathematics III	5	0	5	ELN 4434 Switching Logic	3	3	4
COM 3305 Communications II	3	0	3	ELN 4326 Electrical/Elect. Resea. Pro.1	3	6	3
General Education Elective	<u>3</u>	<u>0</u>	<u>3</u>	COM 3306 Communications III	<u>3</u>	<u>0</u>	<u>3</u>
	18	6	20	General Education Elective	<u>3</u>	<u>0</u>	<u>3</u>
					15	15	20

ELECTRICAL OPTION

FIFTH QUARTER

ELN 4103 Electrical/Electronics Seminar	1	0	1
ELN 4300 Planning Electrical Instal.	0	9	3
MAT 3506 Technical Mathematics III	5	0	5
COM 3305 Communications II	3	0	3
ELN 3414 Industrial Instrumentation	3	3	4
General Education Elective	3	0	3
	<u>15</u>	<u>12</u>	<u>19</u>

SIXTH QUARTER

ELN 4104 Electrical/Electronics Semi.	1	0	1
ELN 4307 Systems Corrections Proced.	1	6	3
ELN 4526 Electrical Machines II	3	6	5
ELN Specialty Elective	3	0	3
ELN 4326 Electrical/Elect. Resea. Pro.	1	6	3
COM 3306 Communications III	3	0	3
General Education Elective	3	0	3
	<u>15</u>	<u>18</u>	<u>21</u>

ENVIRONMENTAL SYSTEMS TECHNOLOGY

In recent years the use of air-conditioning and refrigeration equipment has increased tremendously! The accelerated use of sophisticated air conditioning, electric heat, and even more exotic combination heating and air conditioning systems are bringing swift and complex changes throughout the industry. Rapid strides are being made in refrigeration equipment; and machinery that is more intricate and highly efficient is replacing obsolete installations.

Air conditioning has become a major national industry and offers many opportunities for employment. The variety and complexity of today's air conditioning and refrigeration equipment requires continued upgrading of existing personnel and increased sophistication of training programs and their graduates.

The demand for research personnel, refrigeration engineers, refrigeration technicians, and field engineers who can plan, install, or manage industrial and commercial equipment will continue. There are also excellent opportunities for men who desire to establish their own business in this field. The air conditioning and refrigeration technician is in a specialized field, much in demand and offering high pay. He is the most important link in the atmosphere engineering chain.

DESCRIPTION OF CURRICULUM

The Environmental Systems Technology curriculum at Central Piedmont Community College includes both classroom and laboratory experiences with practical applications to the industry.

The degree Associate in Applied Science in Environmental Systems Technology is awarded upon completion of the program.

Entry into the Environmental Systems Technology curriculum shall be either upon satisfactorily passing a prescribed evaluation; or any person who is the holder of either a heating Group I, Group II or Group III qualifying license as issued in accordance with North Carolina General Statutes, Chapter 87, Article II; or a Refrigeration Contractor's License issued in accordance with the provisions of Chapter 87, Article V of the General Statutes of North Carolina; or graduate engineers with appropriate backgrounds shall be admitted without further examination, upon satisfactory evidence of such qualifications.

Any graduate of the present Air Conditioning and Refrigeration curriculum of Central Piedmont Community College will be admitted, without further testing or examination, with advanced standing.

Suggested Sequence of Required Courses for Environmental Systems Technology

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	LAB	HRS		HR/WK	LAB	HRS
<u>FIRST QUARTER</u>	CLS	LAB	CR.	<u>SECOND QUARTER</u>	CLS	LAB	CR.
AHR 5411 Refrigeration Theory	4	0	4	AHR 5321 Commercial Refrig. Instal.	2	3	3
AHR 5412 Refrigeration Shop Practices	2	6	4	AHR 5422 Commercial Refrig. Service	2	6	4
AHR 5313 Refrigeration Service Prin.	2	3	3	AHR 5323 Oil Burners	2	3	3
AHR 5314 Basic Automatic Controls	2	3	3	AHR 5324 Environ. Con. Blueprint Read	3	0	3
PHY 5304 Shop Science I	2	3	3	PHY 5305 Shop Science II	<u>2</u>	<u>3</u>	<u>3</u>
MAT 5304 Shop Mathematics I	3	0	3		<u>11</u>	<u>14</u>	<u>16</u>
	<u>15</u>	<u>14</u>	<u>20</u>				
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
AHR 5331 Air Conditioning-Residential	2	3	3	AHR 5441 Gas Heat	2	6	4
AHR 5432 Air Conditioning-Commercial	2	6	4	AHR 5342 Electric Heat	2	3	3
AHR 5333 Liquid Heat-One Pipe Systems	2	3	3	AHR 5343 All Weather Systems-Conven.	2	3	3
AHR 5334 Liquid Heat-Two Pipe Systems	2	3	3	AHR 5344 All Weather Systems-Heat Pump	2	3	3
MAT 5305 Shop Mathematics II	3	0	3	WLD 5110 Basic Oxyacetylene Welding	0	3	1
COM 5500 Communication Skills	5	0	5	HSA 5200 Human Relations	2	0	2
	<u>16</u>	<u>15</u>	<u>21</u>		<u>10</u>	<u>18</u>	<u>16</u>

FIFTH QUARTER

AHR 4451 Commercial Refrig. Sys. Design	4	0	4
AHR 4452 Resident. Air Con. Sys. Design	3	2	4
AHR 4453 Commer. Air Con. Sys. Design	3	2	4
DFT 4254 Environmental Sys. Drawing I	1	2	2
Elective-AHR	<u>3</u>	<u>0</u>	<u>3</u>
	14	6	17

SIXTH QUARTER

AHR 4361 Resident. Air Distri. & Bal.	2	2	3
AHR 4462 Commer. Air Distri. & Bal.	3	2	4
AHR 4563 Control Systems I		3	4
Elective-AHR		<u>3</u>	<u>0</u>
		11	8
			15

SEVENTH QUARTER

AHR 4571 Installation and Service Pro.	2	6	5
AHR 4372 Hydronic Distri. Sys. Design	3	0	3
AHR 4473 Hydronic Systems Balance	2	4	4
Elective-AHR		<u>3</u>	<u>0</u>
	10	10	15

RECOMMENDED ELECTIVES

AHR 4381 Gas Piping Design & Instal.	3	0	3	AHR 5396 Mechanical Codes III	3	0	3
AHR 4382 Air Condition Estimates & Cont.	3	0	3	AHR 5397 Mechanical Codes IV	3	0	3
AHR 4383 Transport Refrigeration	3	0	3	AHR 5594 Duct Design-Rectangular Duct	3	6	5
AHR 4487 Industrial Refrigeration I	3	2	4	AHR 5495 Duct DesignII-Round Duct	3	3	4
AHR 4584 Control Systems II	3	4	5	AHR 5398 Duct Des.III-Pat. & Spec. Des2	3	3	3
AHR 4585 Controls Systems III	3	4	5	AHR 4390 Individual Study	3	0	3
AHR 4586 Control Systems IV	3	4	5	BUS 5200 Shop Management	2	0	2
AHR 5390 Individual Study	3	0	3	MAC 5201 Machine Shop Practices	1	3	2
AHR 5394 Mechanical Codes I	3	0	3	WLD 5120 Basic Electric Arc Welding	0	3	1
AHR 5395 Mechanical Codes II	3	0	3	WLD 5140 Basic Gas Metal Arc Welding	0	3	1

NOTE: STUDENTS ARE EXPECTED TO FURNISH TOOLS FOR SELECTED COURSES.

FIRE SCIENCE TECHNOLOGY

The fire science technician is responsible for seeking to prevent losses by eliminating hazards. He inspects various types of buildings for fire and safety hazards, checks existing fire and safety codes for methods of eliminating hazards and applies principles of protection in a logical sequence to arrive at solutions.

Employment opportunities as a fire science technician are available with insurance companies, industrial firms, governmental agencies, educational organizations, fire protection equipment manufacturers and research groups. The technician may also be involved in teaching the use of basic fire protection and safety equipment, in demonstrating equipment and in supervising installation of equipment.

DESCRIPTION OF CURRICULUM

Fire Science Technology is a two-year curriculum of technical education designed to prepare the individual for entry-level employment as a fire science technician. The curriculum provides a basic technical background in fire protection, safety and related subjects. Students are trained to identify fire and safety hazards and to propose effective measures for eliminating hazards. Specific skills are developed in many phases of the occupation. Graduates will receive the degree Associate in Applied Science in Fire Science Technology.

Specialized Course Requirements for Fire Science Technology

COURSE TITLE	HRS/WK	HRS	QTR		COURSE TITLE	HRS/WK	HRS	QTR	
	CLS	LAB	CR.	OFRD		CLS	LAB	CR.	OFRI
FIP 3303 Fire Protection	3	0	3	F	FIP 3301 Fire Prevention Programs & Public Relations	3	0	3	S
FIP 3306 Arson Detection & Investi.	3	0	3	F	FIP 4434 Chemical & Radia. Hazards*	3	2	4	S
FIP 4414 Inspection Prin. & Practice*	2	4	3	F	FIP 4403. Hydran. For Fire Protect.*	3	2	4	S
FIP 4314 Training Programs & Methods of Teaching*	3	0	3	F	FIP 4423 Portable & Fixed Extin. Systems*	3	2	4	S
FIP 4444 Fire Fighting Strategy	3	2	4	W	FIP 4324 Construction, Codes, & Material Rating	2	2	3	SS
FIP 4304 Fire Protection Law	3	0	3	W	FIP 4405 Sprinkler & Standpipe Sys.	3	2	4	SS
FIP 3504 Chemistry of Flam. Material*	<u>3</u>	<u>4</u>	<u>5</u>	W	FIP 4404 Water Distribution Sys.*	3	2	4	SS
	23	10	27		FIP 4424 Automatic Alarm Systems	<u>3</u>	<u>2</u>	<u>4</u>	SS
						23	14	30	

GENERAL EDUCATION REQUIREMENTS

CHM 3500 Fire Science Chemistry*	3	4	5	S,F	COM 3305 Communications II**	3	0	3	
MAT 3500 Mathematics for Firemen	5	0	5		COM 3306 Communications III*	3	0	3	
COM 1314 Introduction to Communication	3	0	3		HSA 3321 Helping & Behavior Stress	3	0	3	W,SS
EDP 3300 Intro. to Computer Concept	3	0	3		DFT 3404 Technical Drafting I	2	4	4	
PHY 5304 Shop Science I	2	2	3		SPH 1300 Oral Communications	3	0	3	
PHY 5305 Shop Science II*	2	2	3		SPH 2304 Public Speaking*	3	0	3	
	18	8	22		BUS 4332 Personnel Management	3	0	3	
						20	4	22	
					GRAND TOTAL	84	38	101	

*Prerequisite required

**COM 3690 may be substituted

F = Fall Quarter W = Winter Quarter S = Spring Quarter SS = Summer Quarter

Completion of the above course work will entitle the student to the Associate Degree in Applied Science in Fire Science Technology. A full-time student may complete the above program in 18 months. All specialized courses are offered once per year. The general education course are offered every quarter, except those designated.

FOOD SERVICE TECHNOLOGY

The food service industry is among the largest employers in the country today. With the increase in numbers of people eating outside the home, projected employment needs in this area now and in the future are numerous. This curriculum is designed to provide the student with the basic fundamentals of all types of food preparation. In addition, supervisory skill and financial knowledge are emphasized so that the student will be able to progress into supervisory positions.

Job opportunities in the food service industry cover a broad span of positions and titles. With practical kitchen experience, the position of chef may be reached. Career positions available upon graduation will include the following: Garde Manger, First Cook, Sous Chef, Banquet Chef, Baker, Pastry Chef and Chef. Management positions such as executive chef and manager may be acquired with experience.

DESCRIPTION OF CURRICULUM

The Food Service Technology Program is designed to prepare the student for a variety of job opportunities in the food service industry. The curriculum provides basic skills in all areas of food preparation. In addition courses in Business Management, Accounting, Communications and Psychology provide a well balanced program designed to give both technical and administrative skills. Upon successful completion of the required courses the degree of Associate in Applied Science in Food Service Technology will be awarded.

Suggested Sequence of Required Courses for Food Service Technology

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	LAB	HRS		HR/WK	LAB	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
FSO 3300 Intro. to Food Service Tech.	3	0	3	FSO 3505 Food Pre. & Din. Room Ser. II	2	9	5
FSO 3804 Food Pre. & Din. Room Ser. I	3	10	8	COM 3305 Communications II	3	0	3
HRM 3104 Speaker Seminar I	1	0	1	FIN 3314 Business Mathematics I	3	0	3
COM 1314 Intro. to Communication	3	0	3	FSO 3305 Table Cookery	2	3	3
	10	10	15	Elective	3	0	3
					13	12	17
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
FSO 3506 Food. Pre. & Din. Rm. Ser. III	2	9	5	FSO 4506 Food Pre. & Din. Rm. Ser. IV	2	9	5
ACC 1604 Principles of Accounting I	5	2	6	ACC 3434 Hotel/Restaurant Accounting	3	2	4
SPH 1300 Oral Communications	3	0	3	FSO 4314 Garde Manger I	2	3	3
Elective	3	0	3	FSO 4407 Baking I	2	6	4
	13	11	17		9	20	16
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
FSO 4507 Food Prepar. & Din. Rm Ser. V	2	9	5	FSO 4508 Work Experience Seminar	2	9	5
BUS 3300 Applied Psychology	3	0	3	BUS 4332 Personnel Management	3	0	3
FSO 4415 Garde Manger II	2	6	4	FSO 4416 Garde Manger III	2	6	4
FSO 4408 Baking II	2	6	4	FSO 4409 Baking III	2	6	4
	9	21	16	FSO 4304 Food & Labor Cost Controls	3	0	3
					12	21	19

GRAPHIC ARTS

The Graphic Arts industry in the United States turns out an annual volume of printed products valued in the billions of dollars. The constant improvement of machines, methods and processes has transformed the printing procedure from the essentially slow, laborious hand methods of early days to a procedure where the craftsman or technician is aided by swift-operating automatic or semi-automatic machinery. Opportunities are excellent in this field for the person who is anxious to learn and willing to work.

DESCRIPTION OF CURRICULUM

The Graphic Arts curriculum at Central Piedmont Community College is designed to provide sound academic and technical training in major areas of lithographic preparation and printing. This program is designed for those who wish to prepare themselves for a career in the graphic arts industry or for those currently employed in this industry who wish to upgrade their skills. The student will not only learn the theory, but the practical application in laboratory experiences, with heavy emphasis on cooperative industrial training. In addition to a general introduction to graphic arts and other related courses, specific training will be offered in the following: offset stripping, platemaking, camera, and press applications.

Suggested Sequence of Required Courses for Graphic Arts

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
PRN 5400 Introduction to Graphic Arts	3	2	4	PRN 5434 Strip. I & Offset Platemak.	2	4	4
PRN 5401 Copy Preparation & Composition	4	0	4	PRN 5314 Offset Camera I	2	2	3
HSA 5200 Human Relations	2	0	2	PRN 5324 Offset Press I & Bindery	2	2	3
COM 5500 Communications Skills	5	0	5	PRN 5310 Paper & Ink	3	0	3
CHM 5300 Basic Chemistry	2	2	3	MAT 5304 Shop Mathematics I	3	0	3
BUS 5200 Shop Management	2	0	2	PRN 5204 Orientation to Co-Op	2	0	2
	18	4	20		14	8	18

Students may receive a Certificate of Accomplishment if all courses are completed except the Cooperative Labs. To the extent that cooperative education and/or work experience positions are available, the student may complete the Cooperative Labs and receive a Diploma. It is primarily the student's responsibility to obtain an approved position. Assistance will be provided by the College.

<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
PRN 5335 Offset Stripping II	2	2	3	PRN 5301 Printing Management	3	0	3
PRN 5315 Offset Camera II	2	2	3	PRN 5336 Color Reproduction	3	0	3
PRN 5325 Offset Press II	2	2	3	PRN 5305 Cooperative Lab II	2	15	5
PRN 5304 Cooperative Lab I	2	15	5	Electives	3	0	3
Electives	3	0	3		14	15	17
	11	21	17				

RECOMMENDED ELECTIVES							
PRN 5390 Individual Study	3	0	3	BUS 4330 Supervision	3	0	3
PRN 5303 Estimating I	3	0	3	BUS 4322 Purchasing	3	0	3
PRN 5354 Estimating II	3	0	3	BUS 3324 Marketing	3	0	3
PRN 5337 Color Separa. Tech. & Theory	3	0	3	BUS 4333 Production Planning & Con.	3	0	3
BUS 1400 Introduction to Business	3	2	4	BUS 3451 Traffic Management	3	2	4
ACC 1604 Principles of Accounting I	5	2	6	COM 1314 Introduction to Comm.	3	0	3
BUS 2314 Business Management	3	0	3	COM 3305 Communications II	3	0	3
BUS 2304 Business Law I	3	0	3	COM 3306 Communications III	3	0	3

HOTEL/RESTAURANT MANAGEMENT

The hospitality industry represents one of the fastest growing industries in the nation. With this tremendous growth, many career positions offer a future of challenge and personal satisfaction. This program is designed to equip the student with a strong basic knowledge of what transpires behind the gleaming facades of hotels and behind the crystal sparkle of the romantic atmosphere of restaurants.

The course is also designed to assist the student entering the field to adapt to its problems and become a part of the many executives and employees who are dedicated to serving the public and to making the hotel and restaurant industry a better field in which to work. Career positions available upon graduation will include the following: assistant hotel cashier, assistant supervisor of hotel service, night auditor, night manager, desk clerk, assistant front office manager, assistant restaurant manager, dining room manager, head waiter, food purchaser, food and beverage salesman, and kitchen steward.

DESCRIPTION OF CURRICULUM

The Hotel/Restaurant Management Curriculum is designed to prepare the student for a variety of occupations in the hospitality field. Upon successful completion of the required courses the degree of Associate in Applied Science in Hotel/Restaurant Management will be awarded. The curriculum provides for general education courses in Business, Accounting, Communications and Psychology, and specialized courses in Hotel/Restaurant Management.

Suggested Sequence of Required Courses for Hotel/Restaurant Management

COURSE TITLE	HOURS/WEEK				QTR CR.	COURSE TITLE	HOURS/WEEK				QTR CR.
	CLS	LAB	CLN	HRS			CLS	LAB	CLN	HRS	
FIRST QUARTER						SECOND QUARTER					
HRM 3300 Introduction to Hotel/ Restaurant Management	3	0	0	3	3	HRM 3105 Speaker Seminar II	1	0	0	1	1
ACC 1604 Principles of Accounting I	5	2	0	6	3	ACC 3434 Hotel/Restaurant Accounting	3	2	0	4	3
COM 1314 Introduction to Comm.	3	0	0	3	3	COM 3305 Communications II	3	0	0	3	3
HRM 3104 Speaker Seminar I	1	0	0	1	3	HED 1204 First Aid I	2	0	0	2	3
FIN 3314 Business Mathematics I	3	0	0	3	3	BUS 4332 Personal Management Elective	3	0	0	3	3
	15	2	0	16			15	2	0	16	
THIRD QUARTER						FOURTH QUARTER					
BUS 3300 Applied Psychology	3	0	0	3	3	HRM 4804 Work Experience Seminar I	3	0	15	8	3
FSO 3804 Food Pre. & Din. Ser. I	3	10	0	8	3	FSO 4304 Food & Labor Cost Controls	3	0	0	3	3
SPH 1300 Oral Communications	3	0	0	3	3	HRM 4300 Hotel/Restaurant Marketing	3	0	0	3	3
HRM 3301 Financial & Legal Aspects of Innkeeping	3	0	0	3	3	HRM 4301 Housekeeping Procedures	3	0	0	3	3
	12	10	0	17			12	0	15	17	
FIFTH QUARTER						SIXTH QUARTER					
HRM 4805 Work Experience Seminar II	3	0	15	8	3	HRM 4806 Work Experience Seminar III	3	0	15	8	3
BUS 2304 Business Law I	3	0	0	3	3	HRM 4302 Hotel/Restaurant Management Related Problems	3	0	0	3	3
ACC 4364 Budget and Record Keeping Elective	3	0	0	3	3	BUS 3341 Property & Casualty Insur. Elective	3	0	0	3	3
	12	0	15	17			3	0	0	3	3
							12	0	15	17	

HUMAN SERVICES ASSOCIATE

The Human Services Associate is a paraprofessional working in a variety of social, community and educational services. The associate uses his/her knowledge and understanding of human behavior, group dynamics, and psycho social processes, coupled with the use of appropriate helping skills, to work effectively with people.

DESCRIPTION OF CURRICULUM

The Human Services Associate Program is a two-year core curriculum designed to prepare the individual for entry-level employment. The core curriculum, HSA I thru VI, provides the associate with the basic skills for human services; the student also selects a specialty area for major study through completion of an extensive clinical internship and appropriate electives.

The major areas of study in Human Services are:

1. Casework: preparing the student for casework, assisting clients in assessing needs and attaining services. The associate may work in rehabilitation centers, social work and welfare facilities, personnel offices, hospitals, and schools.
2. Rehabilitation Services: preparing the student to deliver services to clients with particular psychological, social, and physiological needs. The associate may work with mental retardation, speech and hearing impairment, specific learning disabilities, behavioral dysfunctioning, and various intervention services.
3. Child Development: preparing the student to work as assistant teacher in public schools, in private, commercial, or church sponsored day care centers kindergartens, in social services centers, and with exceptional children.
4. Gerontology: preparing the student to work with the older adult in a variety of settings. The associate works within a wholeistic and normal framework of the aging process.
5. Volunteer Administration: preparing the student for positions of directing volunteer services in various community agencies. Entrance is by permission only at the time the student enters the program.

CLINICAL INTERNSHIP

The student in Human Services has a departmental faculty advisor who helps him/her develop a program of class work, course electives, and clinical internship in a community agency. It is the student's responsibility for contacting the agency and setting up his internship, only after conferring with and being advised by his/her departmental faculty advisor. Clinical internship generally begins with Human Services II of the core and continues through the final seminar, HSA VI. During each quarter the student is continuously supervised and then evaluated on performance levels in his clinical internship. Satisfactorily performance in the classroom and the clinical internship setting are required for completion of the Human Services Associate degree. Further details of the Human Services program are covered in the required Orientation to Human Services course, HSA 3200, which is taken by all incoming students.

Suggested Sequence of Required Courses For Human Services Associate

COURSE TITLE	QTR				COURSE TITLE	QTR			
	CLS	LAB	CLN	HRS		CLS	LAB	CLN	HRS
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>				
HSA 3200 Orientation to Human Ser.	2	0	0	2	COM 3305 Communications II	3	0	0	3
COM 1314 Communications I	3	0	0	3	HSA 3504 Human Services Aide II	3	0	6	5
HSA 3500 Human Services Aide I	3	0	6	5	SOC 2514 Introduction to Sociology	5	0	0	5
PSY 2504 General Psychology	5	0	0	5	Specialty Elective	0	0	0	4
HED 1204 First Aid I	2	0	0	2		11	0	6	17
	15	0	6	17					
<u>THIRD QUARTER</u>					<u>FOURTH QUARTER</u>				
COM 3306 Communications III	3	0	0	3	HSA 4506 Human Services Aide IV	3	0	6	5
HSA 3505 Human Services Aide III	3	0	6	5	PSY 2514 Abnormal Psychology	5	0	0	5
BIO 3500 Basic Health Science	3	4	6	5	SPH 1300 Oral Communications	3	0	0	3
Specialty Elective	0	0	0	4	Specialty Elective	0	0	0	4
	9	4	6	17		11	0	6	17
<u>FIFTH QUARTER</u>					<u>SIXTH QUARTER</u>				
HSA 4507 Human Services Aide V	3	0	6	5	HSA 4608 Human Services Aide VI	2	0	12	6
PSY 2505 Human Development	5	0	0	5	SOC 2515 Social Problems	5	0	0	5
Specialty Elective	0	0	0	4	Specialty Elective	0	0	0	3
	10	0	6	14		7	0	12	14
<u>SELECTED ELECTIVES</u>									
HSA 3310 The Exceptional Child	3	0	0	3	HSA 3301 Gerontology I: The Older Adult in Your Community	3	0	0	3
HSA 3311 Materials & Activities for Pre-School Children	3	0	0	3	HSA 3322 Human Sexuality In the Helping Skills	3	0	0	3
HSA 3312 Education for the Young Child	3	0	0	3	HSA 3302 Sign Language	3	0	0	3
HSA 3321 Helping & Behavioral Stress	3	0	0	3	HSA 3514 Introduction to Intrepre.	3	0	6	5
HSA 3300 Gerontology II: Aging in Contemporary Society	3	0	0	3	HSA 5200 Human Relations	2	0	0	2

EARLY CHILDHOOD AIDE

The expanding development of child care facilities in today's society has warranted specialized programs in child care training. Public and private child care centers desire trained personnel to aid in the effective daily care of children. These aides must have the knowledge and skills necessary to work well with children.

DESCRIPTION OF CURRICULUM

Students in the Early Childhood Aide curriculum focus their studies in areas of child development and care, communication, children's music and psychology. Practical skills are emphasized with the theoretical framework of child care. The curriculum in Early Childhood Aide leads to a certificate, but may also be used as credit toward the degree Associate in Applied Science in Human Services, thus providing an opportunity for career mobility and upgrading.

Required Courses For Early Childhood Aide

COURSE TITLE	QTR		
	HR/WK	CLS	HRS
COM 5500 Communication Skills	5	0	5
HSA 3311 Materials & Activities for Pre-School Children	3	0	3
HSA 5200 Human Relations	2	0	2
HSA 5500 Practical Problems of Child Care	3	6	5
HSA 5501 Child Development	3	6	5
	16	12	20

LAW ENFORCEMENT

The law enforcement profession can no longer rely on its past methodology in training and education. A law enforcement officer must have an understanding of the society he serves. His deep involvement with the entire administration of justice necessitates an understanding of the behavior, attitudes and motivations of groups and individuals.

A law enforcement officer must be proficient in his daily work area; he must develop a competency in investigative techniques, patrol functions, court procedures, police management, crime scene techniques and the mechanics of arrest, search and seizure. Above all, the law enforcement officer must understand and practice the meaning and value of ethical concepts relating to honesty, integrity and tolerance.

DESCRIPTION OF CURRICULUM

This curriculum will assist the student in acquiring the necessary training and education required of professional law enforcement officers. The approach is both theoretical and practical, with course work which covers areas of the practical, theoretical and technical application of law enforcement techniques. The courses in this curriculum are designed for law enforcement officers, prospective law enforcement officers, and citizens interested in the etiologies and results of crime and the police mission. Classes are scheduled so that they can be taken by law enforcement officers during their off-duty hours. The degree of Associate in Applied Science in Law Enforcement will be awarded upon successful completion of this curriculum.

Suggested Sequence of Required Courses for Law Enforcement

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	LAB	HRS		HR/WK	LAB	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
COM 1314 Introduction to Comm.	3	0	3	COM 3305 Communications II	3	0	3
PSC 3500 Introduction to Criminology	5	0	5	PSC 3501 Introduction to Law Enf.	5	0	5
SPH 1300 Oral Communication	3	0	3	PSC 4511 Administration of Justice	5	0	5
Elective	3	0	3	PSC 3514 Police Organization & Admin.	5	0	5
	14	0	14		18	0	18
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
COM 3306 Communications III	3	0	3	PSC 4501 Constitutional Law	5	0	5
PSC 4510 Police Operations	5	0	5	PSC 4505 Criminal Investigation	5	0	5
PSC 3504 Crime Scene Technology	5	0	5	PSC 4515 Police Management	5	0	5
PSC 3510 Criminal Law	5	0	5	Elective	2	0	2
	18	0	18		17	0	17
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
PSC 4520 Public Relations	5	0	5	PSC 4503 Law Enforcement Psychology	5	0	5
PSC 4504 Criminal Proce. & Rules of Evi.	5	0	5	SCU 4300 Self Defense & Weaponry	1	4	3
Elective	5	0	5	PSC Specialized Training Elective	3	0	3
	15	0	15	Elective	3	0	3
					12	4	14

RECOMMENDED ELECTIVES

BIO 1500 Biological Science	3	4	5	HIS 1501 World Civilization II	5	0	5
BUS 1400 Introduction to Business	3	2	4	MAT 1504 Intro. to Math I	5	0	5
BUS 2304 Business Law I	3	0	3	MAT 1514 College Algebra	5	0	5
BUS 2305 Business Law II	3	0	3	PHI 1500 Introduction to Philosophy	5	0	5
BUS 4330 Supervision	3	0	3	PHI 2500 Logic	5	0	5
CHM 1504 General Chemistry I	3	4	5	POL 1502 American Politics	5	0	5
EDP 3300 Introduction to Computer Con.	3	0	3	POL 2500 State & Urban Politics	5	0	5
FIN 3314 Business Mathematics I	3	0	3	PSC 4390 Individual Study	3	0	3
HED 1204 First Aid I	2	0	2	SEC 3404 Elementary Typing	3	2	4
HIS 1500 World Civilization I	5	0	5	VCO 3304 Photography I	2	2	3
				VCO 3305 Photography II	2	2	3

In addition to the above, the student can select any of the Public Safety courses.

MACHINIST

MACHINE TOOL TRADES

Modern manufacturing procedures require the service of a well-trained machinist to operate and maintain machine tools at peak efficiency. This highly-skilled craftsman transforms a piece of metal into an intricate part meeting precise requirements. Wages are high, and for the person willing to work the rewards of learning the machine tool trades are unlimited.

DESCRIPTION OF CURRICULUM

The Machinist curriculum at Central Piedmont Community College is designed to provide an opportunity to gain entry level employment in this most rewarding occupation.

Emphasis is placed on the basic operations which can be performed on the engine lathe and the milling machine. Additional training is provided in the use and care of each of the machine tools in the well-equipped lab. Possessing these fundamental skills the student in the machine tool trades is able to become a valued member of the growing and dynamic manufacturing industry.

Suggested Sequence of Required Courses For Machinist (Machine Tool Trades)

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS			HR/WK	HRS	
	CLS	LAB	CR.		CLS	LAB	CR.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
MAC 5311 Basic Lathe Operations	1	6	3	MAC 5313 Layout, Hand Tool, & Drill Press Procedures	1	6	3
MAC 5422 Basic Milling Operations	2	6	4	MAC 5424 Grinding Machine Operations	2	6	4
DFT 5300 Blueprint Reading	3	0	3	PHY 5304 Shop Science I	2	2	3
MAT 5304 Shop Mathematics I	3	0	3	DFT 5304 Blueprint Read & Draw.Mach I	3	0	3
COM 5500 Communications Skills	5	0	5	MAT 5305 Shop Mathematics II	3	0	3
	14	12	18	Elective	3	0	3
					14	14	19
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
MAC 5315 Repair & Maintenance Operat.	1	6	3	MAC 5307 Machine Tool Application I	0	9	3
MAC 5426 Production Machine Techniques	2	6	4	MAC 5308 Machine Tool Application II	0	9	3
MEC 5214 Heat Treatment of Metals I	1	3	2	HSA 5200 Human Relations	2	0	2
PHY 5305 Shop Science II	2	2	3	MEC 5215 Heat Treatment of Metals II	1	3	2
WLD 5110 Basic Oxyacetylene Welding or				BUS 5200 Shop Management	2	0	2
WLD 5120 Basic Electric Arc Welding	0	3	1		5	21	12
	6	20	13				

RECOMMENDED ELECTIVES

MAC 5300 Introduction to Numerical Control Programming	3	0	3	MAC 5390 Individual Study	3	0	3
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MECHANICAL ENGINEERING TECHNOLOGY

DRAFTING AND DESIGN OPTION

MANUFACTURING OPTION

There are more than fifty-two different types of operations in which a graduate of either of these two options of Mechanical Engineering Technology may be employed. Many of these occupations are closely related to management in industry and can provide paths to rewarding jobs.

The Mechanical Engineering Technician with a Drafting and Design option is well trained in drafting, the language of industry. He will use his knowledge to produce plans and specifications which describe the process and procedures by which products are made and the materials from which they are made.

The Mechanical Engineering Technician with a Manufacturing option is skilled in the production efficiency areas of industry. He will work in manufacturing areas such as quality control, inventory and materials control, process planning, time and motion study, materials handling and cost estimating.

DESCRIPTION OF CURRICULUM

The student in either the Drafting and Design option or the Manufacturing Option of Mechanical Engineering Technology receives a well-balanced program. The instruction, consisting of both laboratory and classroom experiences, includes courses in drafting, machine process, hydraulics and pneumatics, applied mechanics, strength of materials, metallurgy and thermodynamics.

Suggested Sequence of Required Courses For Mechanical Engineering Technology
Drafting And Design Option
Manufacturing Option

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	HRS			HR/WK	HRS	
	CLS	LAB	CR.		CLS	LAB	CR.
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
COM Communications Elective	3	0	3	COM Communications Elective	3	0	3
MAT 3504 Technical Mathematics I	5	0	5	MAT 3505 Technical Mathematics II	5	0	5
DFT 3404 Technical Drafting I	2	4	4	PHY 3404 Physics I: Basic Mechanics	3	2	4
MEC 3304 Machine Processes I	2	3	3	DFT 3405 Technical Drafting II	2	4	4
	12	7	15	MEC 3305 Machine Processes II	2	3	3
					15	9	19

<u>THIRD QUARTER</u>			
COM 3306 Communications III	3	0	3
PHY 3405 Physics II: Work, Energy, Power	3	2	4
MEC 4508 Applied Mechanics	4	3	5
DFT 3406 Descriptive Geometry	<u>2</u>	<u>4</u>	<u>4</u>
	12	9	16

<u>FOURTH QUARTER</u>			
SPH 1300 Oral Communications	3	0	3
CIV 3524 Strength of Materials	4	2	5
MEC 4414 Physical Metallurgy I	3	3	4
PHY 3406 Physics III: Electricity	3	2	4
General Education Elective	<u>3</u>	<u>0</u>	<u>3</u>
	16	7	19

FIFTH QUARTER

MEC 4324 Thermodynamics	3	0	3
MEC 4434 Hydraulics & Pneumatics	3	3	4
MEC 4415 Physical Metallurgy II	3	3	4
MEC 4304 Compound Angles	3	0	3
General Education Elective	<u>3</u>	<u>0</u>	<u>3</u>
	15	6	17

<u>SIXTH QUARTER (Drafting & Design Option)</u>			
MEC 4604 Machine Design	3	6	6
MEC 4405 Mechanisms	2	6	4
MEC 4404 Die Design	<u>2</u>	<u>6</u>	<u>4</u>
	7	18	14

<u>SIXTH QUARTER (Manufacturing Option)</u>			
ISC 4405 Process Planning	3	3	4
ISC 4400 Time and Motion Study	3	3	4
ISC 4404 Plant Layout & Mater. Hand.	3	3	4
ISC 4304 Production Planning	2	3	3
ISC 4314 Inspection & Quality Control	<u>2</u>	<u>3</u>	<u>3</u>
	13	15	18

MEDICAL OFFICE ASSISTING

The medical office assistant is a person trained to assist the licensed physician in the office, clinic or health department. After successfully completing the program the medical office assistant should be prepared to perform such duties as preparing patients for the physician's examination, cleaning and sterilizing equipment and supplies, collecting specimens, performing simple laboratory tests and carrying out the business office activities of the doctor.

DESCRIPTION OF CURRICULUM

A diploma will be awarded to students who satisfactorily complete the one year Medical Office Assisting curriculum. In addition to classroom study, each student will be provided with "on the job" practice under the direct supervision of a doctor and a medical assistant. These experiences are planned and coordinated by a member of the College faculty.

Suggested Sequence of Required Courses For Medical Office Assisting

<u>FIRST QUARTER</u>	COURSE TITLE	HOURS/WEEK			QTR	<u>SECOND QUARTER</u>	COURSE TITLE	HOURS/WEEK			QTR
		CLS	LAB	CLN	HRS			CLS	LAB	CLN	HRS
MED 5304	Orientat. to Medical Assist.	3	0	0	3	MED 3305	Medical Term. & Vocab. II	3	0	0	3
MED 3304	Medical Terminology & Vocab. I	3	0	0	3	ACC 5610	Medical Accounting	5	2	0	6
SEC 3404	Elementary Typewriting I	3	2	0	4	COM 3690	The Communication Course	6	0	0	6
BIO 3500	Basic Health Science	3	4	0	5	SEC 3405	Elementary Typewriting II	<u>3</u>	<u>2</u>	<u>0</u>	<u>4</u>
HSA 5200	Human Relations	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>			17	4	0	19
		14	6	0	17						
<u>THIRD QUARTER</u>						<u>FOURTH QUARTER</u>					
MED 3311	Medical Office Procedures	3	0	0	3	MED 5807	Medical Office Practice	0	0	24	8
MED 5604	Examination Room Procedures	3	6	0	6	MED 5414	Medical Office Assist. Semi.	4	0	0	4
MED 5614	Laboratory Procedures	3	6	0	6	MED 4302	Medical Ethics & Law	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
MED 3306	Medical Term. & Vocab. III	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>			7	0	24	15
		12	12	0	18						

MEDICAL RECORD TECHNOLOGY

A medical record is a permanent document of the history and progress of one person's illness or injury, made to preserve information of medical, scientific, legal and planning value. It is a compilation of observations and findings recorded by the patient's physician and other professional members of the medical team.

Medical Record Technicians serves as specially trained assistants to the Registered Record Administrator, carrying out the many technical activities within a medical record department. These duties consist of typing medical records, preparing statistical reports on patients treated, supervising clerical personnel, reviewing medical records for completeness, working with doctors, nurses and other health professionals on medical records and medical research projects. In small hospitals and nursing homes, the Medical Record Technician is often employed as a director of the medical record department.

DESCRIPTION OF CURRICULUM

An Associate in Applied Science degree will be awarded in Medical Record Technology upon completion of the six quarter program. The program includes study in basic sciences, social sciences, communication skills, secretarial sciences, and medical record science theory and clinical application. Medical record departments in local hospitals are used to provide clinical experiences.

Suggested Sequence of Required Courses For Medical Record Technician

COURSE TITLE	HOURS/WEEK				QTR	COURSE TITLE	HOURS/WEEK				QTR
	CLS	LAB	CLN	CR.			CLS	LAB	CLN	CR.	
<u>FIRST QUARTER</u>						<u>SECOND QUARTER</u>					
BIO 1504 Human Anatomy & Physiology I	3	4	0	5		BIO 1505 Human Anatomy & Physi. II	3	4	0	5	
MRT 3404 Medical Record Science I	3	2	0	4		MRT 3405 Medical Record Science II	3	2	0	4	
MED 3304 Medical Terminology & Vocab. I	3	0	0	3		MED 3305 Medical Term. & Vocab. II	3	0	0	3	
COM 1314 Intro. to Communications*	3	0	0	3		COM 3305 Communications II*	3	0	0	3	
SEC 3404 Elementary Typewriting I	3	2	0	4		SEC 3405 Elementary Typewriting II	3	2	0	4	
	15	8	0	19			15	8	0	19	
<u>THIRD QUARTER</u>						<u>FOURTH QUARTER</u>					
MRT 3414 Medical Record Science III	3	2	0	4		MRT 4304 Medical Record Science IV	3	0	0	3	
MED 3306 Medical Term. & Vocab. III	3	0	0	3		MRT 4205 Directed Practice II	0	0	6	2	
SEC 3406 Intermediate Typewriting I	3	2	0	4		SEC 4454 Advanced Medical Typewrit.	3	2	0	4	
COM 3306 Communications III*	3	0	0	3		SEC 3424 Medical Transcription I	2	4	0	4	
FIN 3314 Business Mathematics	3	0	0	3		PSY 2504 General Psychology	5	0	0	5	
MRT 3204 Directed Practice I	0	0	6	2			13	6	6	18	
	15	6	6	19							
<u>FIFTH QUARTER</u>						<u>SIXTH QUARTER</u>					
MRT 4315 Medical Record Science V	3	0	0	3		MRT 4305 Medical Record Seminar	3	0	0	3	
MRT 4206 Directed Practice III	0	0	6	2		MRT 4804 Directed Practice IV	0	0	24	8	
SOC 2514 Introduction to Sociology	5	0	0	5		EDP 3302 Automation Survey in Medical					
Elective	3	0	0	3		Facilities	3	0	0	3	
	11	0	6	13			6	0	24	14	

*COM. 1305, COM. 1306 may be substituted for COM 3305 and COM 3306.

MOTORCYCLE MECHANICS

Sales of motorcycles have increased in recent years. This has created a need for many additional motorcycle mechanics. Motorcycles are complicated machines requiring highly skilled, well-trained personnel to properly repair and maintain them for operation at peak efficiency.

DESCRIPTION OF CURRICULUM

The curriculum at Central Piedmont Community College is designed to provide a well-planned program of operational skills and theory necessary to become a motorcycle mechanic. The program of instruction includes a detailed study of motorcycle engines, electrical and fuel systems, frame and chassis, drive train and trouble shooting. The graduate will receive a certificate from the college.

Suggested Sequence of Required Courses For Motorcycle Mechanics

COURSE TITLE	HR/WK			QTR	COURSE TITLE	HR/WK			QTR
	CLS	LAB	CR.			CLS	LAB	CR.	
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>				
MME 5400 Electrical & Fuel Systems	2	6	4		MME 5401 Motorcycle Engine Service	2	6	4	
MME 5300 Frame & Chassis Service	2	3	3		MME 5301 Motorcycle Drive Train Serv.	2	3	3	
WLD 5110 Basic Oxyacetylene Welding	0	3	1		MME 5200 Motorcycle Trouble Shooting	1	3	2	
MAT 5304 Shop Mathematics I	3	0	3		COM 5500 Communication Skills	5	0	5	
PHY 5304 Shop Science I	2	2	3		PHY 5305 Shop Science II	2	2	3	
Elective	1	3	2			12	14	17	
	10	17	16						

SUGGESTED ELECTIVES

AUB 5431 Paint Equipment and Preparation	2	6	4
MAC 5201 Machine Shop Practices	1	3	2
WLD 5120 Basic Electric Arc Welding	0	3	1
PME 5211 Small Engine Repair I	1	3	2
MME 5390 Individual Study	3	0	3

NOTE: SPECIAL COSTS

When enrolling in MME courses, the student is required to furnish his own tools. A list of these basic tools can be obtained by contacting one of the Motorcycle Mechanics Instructors.

NURSE AIDE

The nurse aide is an important member of the nursing team. Hospitals, nursing homes and other health facilities are in need of trained people. Both men and women find employemny as nurse aides.

DESCRIPTION OF CURRICULUM

The Nurse Aide course provides the opportunity for students to gain an understanding of the principles essential to giving basic patient care.

The course of study is 11 weeks (one quarter) in length and provides both classroom and supervised hospital experience.

Upon successful completion of the course, the student will be awarded a certificate which will qualify her/him to work as a nurse aide.

Suggested Sequence of Required Courses for Nurse Aide

COURSE TITLE	HOURS/WEEK				QTR	
	CLS	LAB	CLN	CR.	HRS	
<u>FIRST QUARTER</u>						
NUA 5700 Nurse Aide Skills I	3	0	12	7		
NUA 5701 Nurse Aide Skills II	3	0	12	7		
COM 5500 Communication Skills	5	0	0	5		
HSA 5200 Human Relations	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>		
	13	0	24	21		

ORNAMENTAL HORTICULTURE

A great demand now exists in the Horticulture industry and related fields for persons trained to entry level skills. Available employment awaits horticultural technicians at nurseries, grounds maintenance businesses and landscape firms. A few of the positions that a horticultural technician could fill are:

Nursery Worker - Foreman	Plant Propagator	Greenhouse Worker
Nursery Salesperson	Landscape Worker - Foreman	
Grounds Maintenance Assistant	Private Gardener	

DESCRIPTION OF CURRICULUM

The purpose of this program is to prepare the student for entry level competence in Horticultural Technology. The student is trained by the use of classroom demonstrations, laboratory training periods, and practical work experience. This program emphasizes practical "hands-on" training in the following areas:

Plant Materials	Landscape Gardening	Plant Propagation
Nursery Procedures	Grounds Maintenance	Turf Management

Persons completing this program would be awarded a diploma in Horticultural Technology.

Suggested Sequence of Courses for Ornamental Horticulture

COURSE TITLE	HR/WK			QTR		COURSE TITLE	HR/WK			QTR		
	CLS	LAB	CR.	CLS	LAB		CR.	CLS	LAB	CR.	CLS	LAB
<u>FIRST QUARTER</u>						<u>SECOND QUARTER</u>						
FIN 3314 Business Math I	3	0	3			SPH 1300 Oral Communications	3	0	3			
BIO 1500 Biological Science	3	4	5			HED 1204 First Aid I	2	1	2			
CHM 3200 Chemistry Applied to Hort.	2	0	2			HOR 3303 Nursery Technology	2	3	3			
HOR 3300 Landscape Plants I	3	0	3			HOR 3404 Landscape Plants II	3	3	4			
HOR 3301 Plant Propagation	<u>2</u>	<u>3</u>	<u>3</u>			HOR 3302 Landscape Graphics & Meas.	<u>2</u>	<u>3</u>	<u>3</u>			
	13	7	16				12	10	15			
<u>THIRD QUARTER</u>						<u>FOURTH QUARTER</u>						
PME 5211 Small Engine Repair I	1	3	2			HOR 3305 Grounds Maintenance II	2	3	3			
COM 1314 Introduction to Communications	3	0	3			HOR 3310 Turf Management	2	3	3			
HOR 3505 Landscape Gardening	3	4	5			HOR 3804 Practical Field Work	<u>0</u>	<u>40</u>	<u>8</u>			
HOR 3504 Grounds Maintenance I	<u>3</u>	<u>4</u>	<u>5</u>				4	46	14			
	10	11	15									

PARALEGAL PROGRAM

In our complex society it has become necessary to have legally qualified personnel for research, reference, analysis, interpretation and contact with the public and private sectors of the law and the courts. In many instances a Paralegal can provide much of the background and support work for an employer who needs these types of services performed.

Trained Paralegals have the ability to provide needed legal services for judges, clerks, prosecutors, public defenders and other court personnel. Paralegals can assist correction officials, probation and parole officers. They can also provide valuable assistance to consumer laws organizations, real estate and finance companies and social services agencies.

DESCRIPTION OF CURRICULUM

The Paralegal curriculum incorporates a study of tort law, corporate law and property law. Students are trained in research and drafting techniques, preparation of cases for trial and management of law offices.

A graduate of this six-quarter program will receive an Associate Degree in Applied Science in Paralegism. This program is part of the Business Administration Department.

A paraprofessional graduate is qualified to render valuable assistance to those in the practice of law.

Suggested Sequence of Required Courses For Paralegal

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	ACC 1604 Principles of Accounting I	5	2	6
COM 1314 Intro. to Communications**	3	0	3	BUS 2304 Business Law I	3	0	3
ECO 3301 American Economic History***	3	0	3	COM 3305 Communications II	3	0	3
FIN 3314 Business Mathematics I*	3	0	3	LEX 3304 Paralegalism I	3	0	3
SEC 3301 Legal Terminology & Vocabulary	3	0	3	Electives****	3	0	3
	15	2	16		17	2	18
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
BUS 2305 Business Law II	3	0	3	BUS 2306 Business Law III	3	0	3
COM 3306 Communications III**	3	0	3	BUS 2314 Business Management	3	0	3
LEX 3305 Paralegalism II	3	0	3	LEX 4321 Tort Law	3	0	3
LEX 3400 Legal Research	2	4	4	LEX 4414 Real Property Law	3	2	4
LEX 3401 North Carolina Legal System	3	2	4	SPH 1300 Oral Communications	3	0	3
	14	6	17		15	2	16
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
ACC 4325 Advanced Taxation	3	0	3	LEX 4322 Corporate Law	3	0	3
LEX 4400 Domestic Relations Law	3	2	4	LEX 4331 Law Office Management	3	0	3
LEX 4415 Title Abstracting	2	4	4	LEX 4334 Trial Prep. & Procedures	3	0	3
LEX 4424 Wills and Trusts	3	2	4	LEX 4425 Probate and Tax. of Estates	2	4	4
PSY 3314 Humanistic Psychology	3	0	3	LEX 4431 Tech. of Interview & Inves.	2	4	4
	14	8	18		13	8	17

*MAT 1504, 1505 or Mat 1514, 1515 may be taken if student has met requirements.

**COM 1305, 1306 may be taken if student has met requirements.

***Students desiring college transfer credit may take the ECO 2304, 2305, 2306 series starting in the second quarter.

****SEC 3404, Elementary Typewriting I, required of students who have not had one year of typing in high school or equivalent.

PHYSICAL THERAPY ASSISTING

Since 1968 this program has attempted to help meet the increasing demands for physical therapy personnel. Working under the supervision of the professional physical therapist, the Assistant is prepared to offer direct patient services for prevention or alleviation of physical impairments. The Program holds interim approval granted by the American Physical Therapy Association.

DESCRIPTION OF CURRICULUM

The Associate of Applied Science degree will be awarded upon successful completion of a six-quarter period of study which combines specialized and general college courses. The classes are held on the College campus with clinical education carefully planned in community health facilities. The history, philosophy and procedures of physical therapy are interwoven with study in the basic physical and social sciences and communications.

Suggested Sequence of Required Courses For Physical Therapy Assistant

COURSE TITLE	HOURS/WEEK				QTR HRS	COURSE TITLE	HOURS/WEEK				QTR HRS			
	CLS	LAB	CLN	CR.			CLS	LAB	CLN	CR.				
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>									
BIO 1504 Human Anatomy & Physiology I	3	4	0	5	5	BIO 1505 Human Anatomy & Phys. II	3	4	0	5	5			
PSY 2504 General Psychology	5	0	0	5	5	COM 1314 Introduction to Communi.	3	0	0	3	5			
MED 3304 Medical Terminology & Vocabulary I	3	0	0	3	5	PTH 3524 Physical Therapy Proc. I	3	0	6*	5	5			
PTH 3404 Introduction to Physical Ther	3	0	3	4	5	PTH 3515 Applied Anatomy	3	4	0	5	5			
HED 1204 First Aid I	2	0	0	2	5		12	8	6	18				
	16	4	3	19										
<u>THIRD QUARTER</u>					<u>FOURTH QUARTER</u>									
COM 1305 English Composition II					5	COM 1306 English Composition III					5			
or					5	or					5			
COM 3305 Communications II	3	0	0	3	5	COM 3306 Communications III	3	0	0	3	5			
PSY Psychology Elective	5	0	0	5	5	SOC 2514 Introduction to Sociology	5	0	0	5	5			
PTH 3525 Physical Ther. Proc. II	3	0	6*	5	5	PTH 4627 Physical Ther. Proce. III	3	0	9*	6	5			
PTH 3614 Therapeutic Exercises	3	6	0	6	5	PTH 4324 Psychology of Adjustment	3	0	0	3	5			
	14	6	6	19			14	0	9	17				
<u>FIFTH QUARTER</u>					<u>SIXTH QUARTER</u>									
SOC Sociology Elective	5	0	0	5	5	PTH 4344 Semi. in Phys. Ther. Proc.	3	0	0	3	5			
SPH 1300 Oral Communication	3	0	0	3	5	PTH 4704 Clinical Education I	2	0	15	7	5			
PTH 4728 Physical Ther. Proc. IV	3	0	12*	7	5	PTH 4705 Clinical Education II	2	0	15	7	5			
PTH 4334 Community Health & Welfare	3	0	0	3	5		7	0	30	17				
	14	0	12	18										

*Clinic contact hours include a combination of laboratory and clinic hours as assigned by the instructor.

PRACTICAL NURSING

The Licensed Practical Nurse is an important member of the health team. In addition to the nursing care she is able to give to convalescing patients and to those with chronic or handicapping conditions, she is also prepared to assist the Registered Nurse in caring for the more seriously ill and injured. Both men and women find opportunities for service as Licensed Practical Nurses in hospitals, clinics, nursing homes, doctors offices and industries. Admission is based upon satisfactory scores on specific entrance tests, personal interviews, and evidence of good physical and mental health. Applicants must submit a completed high school transcript or other evidence of attainment of a high school education. Students are admitted to the Fall Quarter each year.

DESCRIPTION OF CURRICULUM

The curriculum of the Practical Nurse Program provides the opportunity for students to gain the knowledge, skills, and appreciations which are needed by the Licensed Practical Nurse. The course of study is four quarters or one year in length. Opportunity is provided for the study and practice of the nursing care of patients of all age groups in medical-surgical nursing, care of the sick child and care of the mother and newborn infant.

The Audio-Tutorial Method is used for the instruction of nursing theory. This method allows students to learn each week's work at their own pace and a time that is convenient to the student. Discussion groups and testing periods are scheduled weekly.

Upon completion of the curriculum, the graduate is awarded a diploma by the College and is qualified to write the licensing examination given by the North Carolina Board of Nursing.

Suggested Sequence of Required Courses for Practical Nursing

COURSE TITLE	HOURS/WEEK				QTR HRS	COURSE TITLE	HOURS/WEEK				QTR HRS			
	CLS	LAB	CLN	CR.			CLS	LAB	CLN	CR.				
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>									
COM 5500 Communications Skills	5	0	0	5	5	NUP 5400 Basic Principles of Drug Administration	3	2	0	4	5			
BIO 3500 Basic Health Science	3	4	0	5	5	NUP 5904 Care of Patients with Medical-Surgical Condi. I	3	2	15	9	5			
NUP 5203 Orientation to Vocational Relationships	2	0	0	2	5	HSA 5200 Human Relations	2	0	0	2	5			
NUP 5704 Introduction to Patient Care	3	4	6	7	5		8	4	15	15				
	13	8	6	19										
<u>THIRD QUARTER</u>					<u>FOURTH QUARTER</u>									
NUP 5705 Care of Patients with Medical-Surgical Conditions II	2	4	9	7	5	NUP 5706 Care of Infants & Children	2	4	9	7	5			
NUP 5717 Care of the Seriously Ill & Injured	2	4	9	7	5	NUP 5707 Care of Mothers & Newborn Infants	2	4	9	7	5			
	4	8	18	14		NUP 5104 Vocational Relationships	1	0	0	1	5			
							5	8	18	15				

RESPIRATORY THERAPY

The rapid advances in cardiorespiratory physiology, coupled with the development of sophisticated technology for the diagnosis and treatment of patients with cardiopulmonary disorders, have increased the need for the Respiratory Therapist. Respiratory Therapy is rapidly rising to the forefront of allied health services.

The Respiratory Therapist uses a wide variety of therapeutic skills, procedures, and techniques in the application of medical gases, medications and equipment in the treatment of respiratory dysfunction. Various testing techniques are used to assist in diagnosis, monitoring, treatment and research.

Most Respiratory Therapists are employed in hospital anesthesiology or pulmonary medicine departments. Others are employed by oxygen equipment rental companies, ambulance services, nursing homes and educational institutions.

DESCRIPTION OF CURRICULUM

The Associate of Applied Science Degree will be awarded upon successful completion of the seven quarter program. Respiratory therapy theory, laboratory procedures and clinical application are studied along with basic sciences, social sciences and communication skills. Theory classes will be held on the College campus with the clinical classes meeting in hospitals and other health care facilities.

Suggested Sequence of Courses for Respiratory Therapy

COURSE TITLE	HOURS/WEEK				QTR	COURSE TITLE	HOURS/WEEK				QTR
	CLS	LAB	CLN	CR.			CLS	LAB	CLN	CR.	
<u>FIRST QUARTER</u>						<u>SECOND QUARTER</u>					
BIO 1504 Anatomy & Physiology I	3	4	0	5		BIO 1505 Anatomy & Physiology II	3	4	0	5	
MAT 3200 Mathematics of Respir. Ther.	2	0	0	2		RTH 3205 Respiratory Pharmacology	2	0	0	2	
RTH 3807 Introduction to Respir. Ther.	4	4	6	8		RTH 3304 Pathology & Physical Diag.	2	2	0	3	
	9	8	6	15		RTH 3814 Respiratory Ther. Proc. I	3	2	12	8	
							10	8	12	18	
<u>THIRD QUARTER</u>						<u>FOURTH QUARTER</u>					
BIO 3304 Cardiopulmonary A&P	2	2	0	3		PHY 3414 Physics of Respir. Therapy	3	2	0	4	
BIO 1503 General Bacteriology	3	4	0	5		CHM 1501 Introductory Chemistry II	3	4	0	5	
RTH 3905 Respiratory Ther. Proc. II	3	4	12	9		RTH 4714 Introduction to Emergency & Intensive Respiratory Care	1	4	12	7	
	8	10	12	17			7	10	12	16	
<u>FIFTH QUARTER</u>						<u>SIXTH QUARTER</u>					
COM 1314 Introduction to Communication	3	0	0	3		COM 3305 Communications II	3	0	0	3	
PSY 3314 Principles of Human Psychol.	3	0	0	3		RTH 4604 Pulmonary Functions I	2	2	9	6	
RTH 4515 Equipment for Contin. Vent.	1	4	6	5		RTH 4605 Pulmonary Functions II	2	2	9	6	
RTH 4724 Continuous Ventilation	3	0	12	7			7	4	18	15	
	10	4	18	18							
<u>SEVENTH QUARTER</u>											
COM 3306 Communication III	3	0	0	3							
RTH 4606 Clinical Application I	2	0	12	6							
RTH 4607 Clinical Application II	2	0	12	6							
	7	0	24	15							

SECRETARIAL SCIENCE

EXECUTIVE SECRETARY
GENERAL OFFICE TECHNOLOGY

LEGAL SECRETARY
MEDICAL SECRETARY

EXECUTIVE SECRETARY

Secretaries are valuable to business, industry, government and the professions. The demand for good secretaries far exceeds the supply; thus, education in this occupational field provides many opportunities to work in pleasant and attractive surroundings on interesting things for appreciative people.

The private secretary is the boss's right hand and must bring to the position, along with basic skills of shorthand, typing and English, an understanding of office procedure, accounting, human relations and the place of business and industry in the American economic system.

DESCRIPTION OF CURRICULUM

The degree of Associate in Applied Science in Executive Secretarial Science will be awarded upon successful completion of this curriculum. The program of studies provides for classes in shorthand, typing, English, business correspondence, business law, and related areas.

Suggested Sequence of Required Courses For Executive Secretary

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	ECO 3301 American Economic History	3	0	3
COM 1314 Introduction to Communication	3	0	3	COM 3305 Communications II	3	0	3
SEC 3404 Elementary Typewriting I	3	2	4	SEC 3405 Elementary Typewriting II	3	2	4
FIN 3314 Business Mathematics I	3	0	3	FIN 3315 Business Mathematics II	3	0	3
SEC 3414 Shorthand I	3	2	4	SEC 3415 Shorthand II	3	2	4
	15	6	18		15	4	17
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
SEC 4305 Business Communications	3	0	3	SEC 4417 Dictation & Trans. I	3	2	4
SEC 3406 Intermediate Typewriting I	3	2	4	SEC 4407 Intermediate Typewriting II	3	2	4
SEC 3416 Shorthand III	3	2	4	SEC 4370 Records Management	3	0	3
ACC 3600 Secretarial Accounting*	5	2	6	BUS 2304 Business Law I	3	0	3
SEC 4100 Secretarial Seminar	0	2	1	EDP 3310 Data Processing Fundamentals	2	2	3
	14	8	18		14	6	17
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
SEC 4300 Office Machines	2	2	3	SEC 4301 Secretarial Procedures	3	0	3
SEC 4418 Dictation & Transcription II	3	2	4	SEC 4419 Dictation & Trans. III	3	2	4
SEC 4424 Advanced Executive Typewriting	3	2	4	SEC 4304 Machine Trans. & Duplication	2	2	3
SPH 1300 Oral Communications	3	0	3	SEC 3320 Personality Development	3	0	3
BUS 3300 Applied Psychology				Elective	3	0	3
or					14	4	16
BUS 4331 Administrative Office Mgmt.	3	0	3				
	14	6	17				

*Students desiring transfer credit may take ACC 1604, Principles of Accounting I.

GENERAL OFFICE TECHNOLOGY

Office technology differs from industrial technology. Industrial technology seeks to expand man's physical capabilities; office technology seeks to expand man's thinking capabilities.

Developments and changes in equipment, processes, and procedures are making it possible to handle the growing needs of information in offices today. The office worker of the future must have an appreciation for technology, systems work, and information management.

DESCRIPTION OF CURRICULUM

The degree of Associate in Applied Science in General Office Technology will be awarded upon successful completion of this curriculum. The curriculum is designed to prepare the student as a general-purpose secretary trained to handle typical office tasks: typing, filing, transcribing, duplicating, mail handling, telephoning, record keeping, greeting customers, and using various office machines.

Suggested Sequence of Courses For General Office Technology

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
SEC 3404 Elementary Typewriting I	3	2	4	SEC 3405 Elementary Typewriting II	3	2	4
COM 1314 Introduction to Communication	3	0	3	SEC 4370 Records Management	3	0	3
FIN 3314 Business Mathematics I	3	0	3	COM 3305 Communications II	3	0	3
BUS 1400 Introduction to Business	3	2	4	BUS 3300 Applied Psychology	3	0	3
SEC 4310 Vocabulary Building	3	0	3	FIN 3315 Business Mathematics II	3	0	3
	15	4	17	Elective	3	0	3
					18	2	19
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
ACC 3600 Secretarial Accounting*	5	2	6	SEC 4407 Intermediate Typewriting II	3	2	4
SEC 3406 Intermediate Typewriting I	3	2	4	SEC 4304 Machine Trans. & Duplication	2	2	3
SEC 4300 Office Machines	2	2	3	SEC 4305 Business Communications	3	0	3
SEC 3320 Personality Development	3	0	3	BUS 2304 Business Law I	3	0	3
	13	6	16	Elective	3	0	3
					14	4	16

FIFTH QUARTER

SEC 4424 Advanced Executive Typewriting	3	2	4
BUS 4331 Administrative Office Mgmt.	3	0	3
SPH 1300 Oral Communications	3	0	3
SEC 3310 Clerical Procedures	3	0	3
Elective	3	0	3
	15	2	16

SIXTH QUARTER

EDP 3310 Data Processing Fundamentals	2	2	3
SEC 4704 Office Production**	0	21	7
Elective	3	0	3
	5	23	13

*Students desiring transfer credit may take ACC 1604, Principles of Accounting I.

**Preregister with department one quarter in advance.

LEGAL SECRETARY

The legal secretary is an essential employee in any law office; well-qualified legal secretaries are in constant demand. It is the purpose of this curriculum, therefore, to provide a training program that will enable our graduates to meet the specialized needs of the legal profession.

The duties of a legal secretary may consist of filing, taking dictation, transcribing letters and legal documents, greeting clients and other office callers, screening telephone calls, and scheduling appointments. The legal secretary needs not only the usual secretarial skills but also knowledge of legal terminology and procedures.

Opportunities for the graduate exist in law offices, corporate legal departments, banks, trust companies, various governmental agencies, and many other firms.

DESCRIPTION OF CURRICULUM

The Legal Secretarial curriculum is designed to prepare the student for a variety of secretarial positions in the legal profession. Courses in typing, dictation, transcription, filing, and office machines are offered. Training in these secretarial skills is supplemented by related courses in business law, legal terminology, secretarial procedures, mathematics and accounting. The degree Associate in Applied Science in Legal Secretarial Science will be awarded upon successful completion of the curriculum.

Suggested Sequence of Required Courses For Legal Secretary

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	COM 3305 Communication II	3	0	3
COM 1314 Introduction to Communication	3	0	3	SEC 3405 Elementary Typewriting II	3	2	4
SEC 3404 Elementary Typewriting I	3	2	4	SEC 3320 Personality Development	3	0	3
FIN 3314 Business Mathematics I	3	0	3	FIN 3315 Business Mathematics II	3	0	3
SEC 3414 Shorthand I	3	2	4	SEC 3415 Shorthand II	3	2	4
	15	6	18		15	4	17
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
SEC 3406 Intermediate Typewriting I	3	2	4	SEC 4407 Intermediate Typewriting II	3	2	4
SEC 3416 Shorthand III	3	2	4	BUS 2304 Business Law I	3	0	3
SEC 4305 Business Communications	3	0	3	SEC 4417 Dictation & Trans. I	3	2	4
SEC 3301 Legal Terminology & Vocabulary	3	0	3	ACC 3600 Secretarial Accounting*	5	2	6
SEC 4370 Records Management	3	0	3		14	6	17
	15	4	17				
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
SEC 4614 Legal Typewriting & Procedures	5	2	6	SEC 4301 Secretarial Procedures	3	0	3
BUS 2305 Business Law II	3	0	3	BUS Business Law III	3	0	3
SEC 4300 Office Machines	2	2	3	SEC 4449 Legal Dictation & Trans. II	3	2	4
SEC 4448 Legal Dictation & Trans. I	3	2	4	SEC 4304 Machine Trans. & Duplication	2	2	3
SPH 1300 Oral Communications	3	0	3	BUS 4331 Administrative Office Mgmt.			
	16	6	19	or			
				BUS 3300 Applied Psychology	3	0	3
					14	4	16

*Students desiring transfer credit may take ACC 1604, Principles of Accounting I.

MEDICAL SECRETARY

The demand for well qualified medical secretaries in an ever-expanding medical profession is becoming acute. The purpose of this curriculum is to outline a training program that will provide specialized training in the accepted secretarial procedures required by the medical profession. The duties of a medical secretary may consist of filing; taking dictation; transcribing letters; memoranda and reports; meeting office callers; screening telephone calls and scheduling appointments. The graduate may enter a secretarial position in physicians' offices, private and public hospitals, public health agencies, and drug and pharmaceutical companies.

DESCRIPTION OF CURRICULUM

The Medical Secretary curriculum is designed to offer the student the necessary secretarial skills for employment in medical or health-related agencies. The graduate will have a knowledge of medical terminology and skills in typing, taking dictation and accurate transcription. Special training in secretarial subjects will be supplemented by related courses in mathematics, accounting and personality development. The degree Associate in Applied Science in Medical Secretarial Science will be awarded upon successful completion of the curriculum.

Suggested Sequence of Required Courses For Medical Secretary

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	CLS	HRS		HR/WK	CLS	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
BUS 1400 Introduction to Business	3	2	4	SEC 4370 Records Management	3	0	3
COM 1314 Introduction to Communication	3	0	3	COM 3305 Communications II	3	0	3
SEC 3404 Elementary Typewriting I	3	2	4	SEC 3405 Elementary Typewriting II	3	2	4
SEC 3414 Shorthand I	3	2	4	SEC 3415 Shorthand II	3	2	4
MED 3204 Medical Term. & Vocab. I	<u>1</u>	<u>2</u>	<u>2</u>	MED 3205 Medical Term. & Vocab. II	<u>1</u>	<u>2</u>	<u>2</u>
	13	8	17		13	6	16
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
SEC 4305 Business Communications	3	0	3	SEC 4407 Intermediate Typewriting II	3	2	4
SEC 3406 Intermediate Typewriting I	3	2	4	SEC 4304 Machine Trans. & Duplication	2	2	3
SEC 3416 Shorthand III	3	2	4	BUS 3300 Applied Psychology	3	0	3
BIO 3500 Basic Health Science	3	4	5	FIN 3314 Business Mathematics I	3	0	3
MED 3206 Medical Term. & Vocab. III	<u>1</u>	<u>2</u>	<u>2</u>	SEC 4406 Medical Shorthand	<u>3</u>	<u>2</u>	<u>4</u>
	13	10	18		14	6	17
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
SEC 4454 Advanced Medical Typewriting	3	2	4	SEC 4301 Secretarial Procedures	3	0	3
SEC 4300 Office Machines	2	2	3	SEC 3425 Medical Trans. II	1	6	4
MED 4302 Medical Ethics & Law	3	0	3	SEC 3320 Personality Development	3	0	3
FIN 3315 Business Mathematics II	3	0	3	ACC 5610 Medical Accounting	5	2	6
SEC 3424 Medical Trans. I	<u>2</u>	<u>4</u>	<u>4</u>	EDP 3302 Auto. Sur. in Med. Facilities	<u>3</u>	<u>0</u>	<u>3</u>
	13	8	17		15	8	19

SECURITY

Security education is rapidly emerging as a separate and distinct field of study. It is developing concurrently with the related occupational fields of fire science, law enforcement, corrections parole and probation, safety and health management, and other similar programs. Rising crime rates, increasing violence and generally increasing turmoil in the various social processes have generated extensive individual, public, and political concern for security of the individual, the home, the business, the government and society in general.

Such emphasis on the security needs of society is typified by the major crime control legislation passed in the latter part of the 1960's and by the national commissions created to study crime and other related problems of security. Not only is the individual in today's society concerned with the crime problem facing the nation, he is equally concerned with invasions of privacy and the general weakening of the freedoms of the individual for the benefit of the group as it protects itself against crime.

Prior to the early 1970's the security profession depended upon military, local law enforcement and federal investigatory agencies for its supply of personnel; however, these sources are no longer adequate to meet increased requirements. There is a growing need for men and women in the security field, and the opportunities are both challenging and lucrative. Private security is one of the most rapidly expanding professions in the United States today, with personnel salaries and benefits consuming 80-90% of the security budget.

DESCRIPTION OF CURRICULUM

This curriculum is intended to equip those individuals who would be employed or involved in the field of security to meet the needs of many different situations. It will provide the individual with a well-rounded educational background to prepare him for a professional career or further study. This curriculum is designed to meet the requirements for the degree of Associate in Applied Science-Security, which is awarded upon successful completion of the prescribed courses. It further satisfies the needs of those students transferring to 4-year programs in colleges and universities. Classes are scheduled to provide equal opportunity to attend day or evening sessions.

Suggested Sequence of Required Courses For Security

COURSE TITLE	HR/WK		QTR		COURSE TITLE	HR/WK		QTR	
	CLS	LAB	CLS	CR.		CLS	LAB	CLS	CR.
<u>FIRST QUARTER</u>					<u>SECOND QUARTER</u>				
COM 1314 Introduction to Communi.*	3	0	3		COM 3305 Communications II*	3	0	3	
PSC 3510 Criminal Law	5	0	5		PSC 4501 Constitutional Law	5	0	5	
SCU 3500 Introduction to Security	5	0	5		PSC 3500 Introduction to Criminology	5	0	5	
SCU 3501 Intro. to Princ. of Safety	5	0	5		Elective	3	0	3	
	18	0	18			16	0	16	
<u>THIRD QUARTER</u>					<u>FOURTH QUARTER</u>				
COM 3306 Communications III*	3	0	3		SCU 4504 Security Problems & Prac. I	5	0	5	
SCU 3300 Principles of Interviewing	3	0	3		PSC 4505 Criminal Investigation	5	0	5	
PSC 4520 Public Relations	5	0	5		PSY 3314 Prin. of Humanistic Psychol.	3	0	3	
FIP 3302 Fire Protection I	3	0	3		Elective	3	0	3	
Elective	3	0	3			16	0	16	
	17	0	17						
<u>FIFTH QUARTER</u>					<u>SIXTH QUARTER</u>				
SCU 4505 Security Problems & Prac. II	5	0	5		SCU 4300 Self Defense & Weaponry	1	4	3	
PSC 3504 Crime Scene Technology	5	0	5		SOC 2514 Introduction to Sociology	5	0	5	
HED 1204 First Aid I	2	1	2		SPH 1300 Oral Communications	3	0	3	
Elective	3	0	3		FIN 3314 Business Mathematics I**	3	0	3	
	15	1	15			12	4	14	
<u>RECOMMENDED ELECTIVES</u>									
SCU 3304 Access Controls & Loss Preven.	3	0	3		SCU 3502 Provisions of the Occup.				
SCU 4390 Individual Study	3	0	3		Safety & Health Act (OSHA)	5	0	5	
SCU 3503 Retail Security	5	0	5						

* or English Option: COM 1304, 1305, 1306

** or MAT 1504 College Algebra I



TRANSFER—ASSOCIATE IN ARTS DEGREE

With the increased demand for education beyond the high school level, Community Colleges throughout the nation are faced with the challenge of providing both the first two years of baccalaureate degree work as well as service-oriented courses for general education and personal development. The transfer section of Central Piedmont Community College is dedicated to assisting students achieve their educational goals in both areas.

Transfer courses at Central Piedmont Community College are taught through stated student performance objectives. This method of teaching involves both content and motivation objectives. Student accountability is at the heart of this method of instruction since the student is accountable for meeting particular performance objectives.

Upon successful completion of most courses for the 2 year baccalaureate degree at Central Piedmont Community College the student should be able to evidence:

1. effective communication skills.
2. adequate analytical capabilities.
3. workable problem-solving skills.
4. increased awareness and understanding of the world in which he or she lives.
5. familiarity with, and appreciation of the arts, literature, humanities.

GENERAL INFORMATION

The student should consult the general information section for general school policies. The following information is especially relevant to the program.

ADMISSION

The student should forward, as early as possible in advance of the date of registration, an application and a high school transcript to the Office of Student Services. Transcripts of any completed college work should be received prior to registration. While students may be processed to the date of registration, an early application assures adequate time for processing and counseling.

Central Piedmont Community College follows an "open door" policy and does not impose restrictive standards for admission to the College. All degree curricula, however, require high school graduation or the equivalent. Before any student is permitted to register for classes leading to a degree, he must take the School and College Ability Test (SCAT), a mathematics test and an English test. A student with satisfactory scores will be permitted to enter the curriculum of his choice. When scores on the tests indicate a lack of readiness to commence college-level work, the student will be assigned to courses in the Advancement Studies Department.

UNITS OF CREDITS AND COURSE DESCRIPTIONS

Central Piedmont Community College is on a quarter system. One unit of credit is equal to one class-hour meeting per week. In the section on course descriptions in subsequent pages, there appear the course number, the title of the course and the hours of credit for the course. The number of lecture hours and the number of laboratory hours are shown in parentheses. When the laboratory is required, one credit hour will equal at least two hours of laboratory time, as appropriate to the course. The letters P.R. indicate the prerequisite. The letters C.R. indicate a corequisite of the course. Either may be waived by the Vice President.

REQUIREMENTS FOR THE DEGREE

The student must complete a minimum of ninety-six quarter hours of course work to qualify for the Associate in Arts Degree. The student must have a quality-point average of 2.0 (or "C") to be eligible for graduation.

The student is eligible for the Associate in Arts Degree upon completing the required ninety-six quarter hours for graduation, including, the minimum hours in each area listed below.

	QTR HRS	CR.		QTR HRS	CR.
Communications		9	Humanities		9
English Composition 1314, 1315, 1316 (Required of all students.)			This requirement is met by a sequence in language or some combination of courses in the following areas: Art, Drama, Literature, Music or Philosophy.		
Social Science		10	Biological Science, Physical Science & Mathematics		20
Includes Anthropology, Economics, History, Political Science, Psychology and Sociology.			At least ten hours must be taken in a laboratory science, either biological or physical (Chemistry, Geology, Physical Geography or Physics).		

SAMPLE TWO-YEAR CURRICULA FOR LIBERAL ARTS AND CERTAIN PRE-PROFESSIONAL AREAS

NOTE: These are sample curricula patterns. They are not meant to be prescriptive for any particular student, nor are they minimum requirements. An individual student's schedule may vary from these model patterns. Each student will structure his own curricular pattern in conference with his advisor. His high school background, scholastic aptitude, vocational goal and choice of a four-year college or university (to which he plans to transfer) will be considered as factors shaping his particular curricular design.

<u>LIBERAL ARTS</u>		QTR HRS CR.	<u>PRE-AGRICULTURE (and Forestry)</u>		QTR HRS CR.
English Composition		9	English Composition		9
World Civilization (HIS 1500, 1501)		10	Mathematics (1524 level and above)		15
Literature (ENG 2504, 2505, or ENG 2514, 2515)		10	History		10
Modern Language (through Intermediate)	10 to	20	Biology		15
Mathematics 1504, 1505*, or 1514, 1515		10	Social Science Electives (HIS, POL, PSY, SOC, ANT)		10
Laboratory Science		20	Modern Language or Humanities	9 or	10
Elective in Major		15	General Chemistry		15
Free electives to complete 96 hours			Economics		9
			Physics (PHY 1504, 1505, 1506)		9
			Electives to complete 96 hours		12

*Math. 1504, 1505 not applicable to mathematics major.

<u>PRE-BUSINESS AND PUBLIC ADMINISTRATION</u>			<u>PRE-DENTAL</u>		
English Composition		9	English Composition		9
History		10	World Civilization (HIS 1500, 1501)		10
Psychology		5	Modern Language or Humanities		10
Economics		9	Mathematics (1514 level and above)		10
Mathematics (through Intermediate)	10 or	15	General Chemistry		15
Laboratory Science		10*	Organic Chemistry		12
Modern Language (through Intermediate)		9	Biological Sciences		10
Accounting		12	Psychology		5
Business Electives		9	Physics (PHY 1504, 1505, 1506)		12
Social Science electives to complete 96 hours			Electives to complete 96 hours		

*A total of 20 hours of mathematics and laboratory science is suggested.

<u>PRE-ENGINEERING</u>			<u>PRE-JOURNALISM</u>		
English Composition		9	English Composition		9
World Civilization (HIS 1500, 1501)		10	History		10
Humanities		10	American Politics (POL 1502)		5
Mathematics (1524 level and above)		20	Psychology		5
General Chemistry		15	Economics		9
General Physics		15	Mathematics		10
Economics		9	Laboratory Science		10
			Modern Language (through Intermed.)	10 to	20
			Literature (ENG 2504, 2505, Or 2514, 2515)		
			Speech		3
			Social Science Electives (HIS, POL, PSY, SOC, ANT)		10
			Free electives to complete 96 hours		

<u>PRE-LAW</u>			<u>PRE-MATHEMATICS</u>		
English Composition		9	English Composition		9
Modern Language (through Intermediate)	10 to	20	General Chemistry		15
Laboratory Science		10	Mathematics (MAT 1524 level and above)		25
Mathematics		10	World Civilization (HIS 1500, 1501)		10
History		10	Physics (PHY 2504, 2506)		15
Political Science (Including POL 1502)		15	Modern Language or Humanities		10
Economics		9	Electives from Mathematics, Philosophy, Sociology, Economics, Geology, or Computer Science		12
Sociology		9			
Speech		9			
Psychology		6			
Literature		5			
Electives to complete 96 hours		5			

PRE-MEDICAL

English Composition	9
World Civilization (HIS 1500, 1501)	10
Modern Language (through Intermediate)	10 to 20
Mathematics (1524 level and above)	10
General Chemistry	15
Organic Chemistry	12
Biological Sciences	20
General Psychology	5
Physics (PHY 1504, 1505, 1506)	12
Science electives to complete 96 hours	

PRE-OPTOMETRY

English Composition (1314, 1305, 1306)	9
Math (1524, 2504)	10
Biological Science (1500, 1502, 1504)	15
Chemistry (1504, 1505, 1506, 2614)	21
Physics (PHY 1504, 1505, 1506)	12
Humanities or Social Science	10
Sociology	5
Psychology (2504, 2505)	10
*Modern Language	
Electives to complete hours (From Mathematics, Sciences, or Social Science)	

*Check catalog of college of optometry to which student plans transfer upon graduation from CPCC. Requirements will vary.

QTR HRS CR.

QTR HRS CR.

PRE-PHARMACOLOGY (One year only, except under special advisement)

English Composition	9
World Civilization (HIS 1500, 1501)	10
Foreign Language (through Intermediate)	10 to 20
Mathematics (1514 level and above)	10
General Chemistry	15
Physics (1504, 1505, 1506)	12

PRE-SOCIAL WORK

English Composition	9
World Civilization (HIS 1500, 1501)	10
Laboratory Science	10
Mathematics	10
Modern Language or Humanities	10
Speech	6
Sociology	10
Psychology	10
Political Science	10
Electives to complete 96 hours	

*PRE-EDUCATION (Elementary)

English Composition	9
World Civilization (HIS 1500, 1501)	10
Geography	5 to 10
Mathematics	10
Laboratory Science	10
Art	3 to 9
Music	3
American History (HIS 1320, 1321, 1322)	10
Political Science (POL 1502)	5
Modern Language or Humanities	10
Introduction to Education	5
Educational Psychology	5
General Psychology	5
Electives to complete 96 hours	

PRE-EDUCATION (Secondary)

English Composition	9
World Civilization (HIS 1500, 1501)	10
American History (HIS 1320, 1321, 1322)	10
Mathematics*	10
Laboratory Science	10
Speech	6
Modern Language or Humanities	10
Introduction to Education	5
General Psychology	5
Educational Psychology	5
Major electives to complete 96 hours	

*Check catalog of senior institution to which student plans transfer upon graduation from CPCC. Requirements will vary.

*Math 1504, 1505 will suffice for many non-math majors. However, persons planning to major in math or physical science should begin with Math 1524.

PRE-TEXTILE

English Composition (1314, 1305, 1306)	9
English Elective	5
General Chemistry (1504, 1505, 1506)**	15
Mathematics (1524, 2504, 2505, 2506)	20
General Physics (2504, 2505, 2506)	15
American Politics (POL 1502)	5
History Elective	5
Humanities or Social Science Electives	15
Physical Education	6

**Students interested in Textile Chemistry should add Chemistry 2406, 2614, 2615.

The community college advisory committee, including representatives of state-supported colleges and the University, has worked with the Department of Community Colleges and Central Piedmont Community College to assist in the development of curricula acceptable to the senior institutions of the state. Consequently, courses taken at Central Piedmont Community College should transfer in grade and credit to the institution as applicable to the curriculum for which such courses were intended. The student is able to transfer to the senior institution with junior status after completing two years of credit work at Central Piedmont Community College. Counselors and faculty members are ready to assist the student in course selection. It is the responsibility of the student, however, to familiarize himself with the catalog of the senior institution to which he will transfer, and to make periodic checks of his progress while completing freshman and sophomore requirements.

TRANSFER COURSES

Each course listing begins with three capitalized letters and a number. This is the abbreviation of the course name and the number is the position in the curriculum. The courses are listed in alphabetical order at the end of this catalog. Following the number is the name of the course and a brief description of the course. Following the description are additional numbers. The numbers in parentheses indicate the number of lecture and laboratory hours. The last number indicates the number of credit hours for completion of the course. Departmental course listings follow.

ACCOUNTING

The accounting courses are designed to develop the student's knowledge and understanding of the fundamental and advanced principles and concepts of accounting; to develop manual skills in recording and in machine operation as needed on the job; and to familiarize the student with the areas in which accounting is used, its importance in business, and the manner in which all areas of business depend on accounting records as a strong tool.

	CLS	LAB	CR		CLS	LAB	CR
ACC 1604 Principles of Accounting I	5	2	6	ACC 2626 Intermediate Accounting I	5	2	6
ACC 1605 Principles of Accounting II	5	2	6	ACC 2627 Intermediate Accounting II	5	2	6

ART

The Art Department seeks to provide an environment including both instruction and experience which will enable its students to define the visual statements they wish to make and to equip them with the skills to make them. The broad range of courses offered seeks to provide for the wide variety of experience, interest, aptitude, and purpose of students. Opportunity for growth in skills, knowledge, and appreciation are offered for both the beginning and the experienced student.

	CLS	LAB	CR		CLS	LAB	CR
ART 1300 Introduction to Art I	3	0	3	ART 1319 Furniture Restoration III	0	6	3
ART 1301 Introduction to ART II	3	0	3	ART 1321 Serigraphy	0	6	3
ART 1302 Children's Art	2	2	3	ART 1322 Crafts	0	6	3
ART 1303 Woodcut	0	6	3	ART 1324 Design I	0	6	3
ART 1304 General Drawing I	0	6	3	ART 1325 Design II	0	6	3
ART 1305 General Drawing II	0	6	3	ART 1326 Design III	0	6	3
ART 1306 General Drawing III	0	6	3	ART 1327 Sculpture I	0	6	3
ART 1307 Basic Photography	2	2	3	ART 1328 Sculpture II	0	6	3
ART 1308 Intermediate Photography	2	2	3	ART 1329 Sculpture III	0	6	3
ART 1309 Advanced Photography	2	2	3	ART 1334 Painting I	0	6	3
ART 1310 History of Art I	3	0	3	ART 1335 Painting II	0	6	3
ART 1311 History of Art II	3	0	3	ART 1336 Painting III	0	6	3
ART 1312 History of Art III	3	0	3	ART 1364 Ceramics I	0	6	3
ART 1314 Basic Woodworking	0	6	3	ART 1365 Ceramics II	0	6	3
ART 1315 Intermediate Woodworking	0	6	3	ART 1366 Ceramics III	0	6	3
ART 1316 Advanced Woodworking	0	6	3	ART 1374 Jewelry I	0	6	3
ART 1317 Furniture Restoration I	0	6	3	ART 1375 Jewelry II	0	6	3
ART 1318 Furniture Restoration II	0	6	3	ART 1376 Jewelry III	0	6	3
				ART 2304 Independent Studio	0	6	3

BIOLOGY

The biology curriculum is designed to prepare students for professional careers in the life sciences and related areas; to teach students to apply the scientific method, to think logically and systematically, to have an open-minded attitude in interpreting data and to be thorough in considering all aspects of a problem; to impart knowledge of the fauna and flora of our region for aesthetic as well as functional usage; to understand the role of the life sciences in mastering environments; to help students recognize themselves as highly complex members of the living world for which they are responsible; to help students become more knowledgeable citizens, parents, and leaders.

	CLS	LAB	CR.		CLS	LAB	CR.
BIO 1500 Biological Science	3	4	5	BIO 2305 Dental Nutrition	3	0	3
BIO 1501 General Botany	3	4	5	BIO 2500 Introduction to Entomology	3	4	5
BIO 1502 General Zoology	3	4	5	BIO 2501 Ornithology	3	4	5
BIO 1503 Microbiology	3	4	5	BIO 2502 Marine Biology	3	4	5
BIO 1504 Human Anatomy & Physiology I	3	4	5	BIO 2504 Selected Topics in Biology	3	4	5
BIO 1505 Human Anatomy & Physiology II	3	4	5	BIO 2514 Vertebrate Zoology	3	4	5
BIO 2300 Genetics	3	0	3	BIO 2524 General Ecology	3	4	5
BIO 2304 Human Nutrition	3	0	3	BIO 3304 Cardio-Pulmonary Anatomy &Phy2	2	2	3
				BIO 3500 Basic Health Science	3	4	5

BUSINESS ADMINISTRATION

The business administration courses are designed to provide the student with a broad, general knowledge of business law, business organization, and human relations in business. Most of the courses in the business area are core courses for other areas of study.

	CLS	LAB	CR.		CLS	LAB	CR.
BUS 1400 Introduction to Business	3	2	4	BUS 2306 Business Law III	3	0	3
BUS 2314 Business Management	3	0	3	ECO 2304 Economics I	3	0	3
BUS 2304 Business Law I	3	0	3	ECO 2305 Economics II	3	0	3
BUS 2305 Business Law II	3	0	3	ECO 2306 Economics III	3	0	3

COMMUNICATIONS

The courses are designed to help the student improve his written and oral communication skills. He reads to observe the development of ideas by various techniques of expression, and he engages in class discussion to find a logical relationship between idea and expression. He writes and speaks to develop his own skill in clear, accurate, and effective expression. The Department of Communications provides a supplemental Writing Workshop to help students on a referral or voluntary basis; in addition other courses including English For Foreign Students are described in the Advancement Studies section of this catalog.

	CLS	LAB	CR.		CLS	LAB	CR.
COM 1314 Introduction to Communication	3	0	3	COM 3306 Communications III	3	0	3
COM 1305 English Composition II	3	0	3	COM 3690 The Communications Course	6	0	6
COM 1306 English Composition III	3	0	3	COM 5301 Communications Skills II	3	0	3
COM 1324 Creative Writing	3	0	3	COM 5500 Communications Skills	5	0	5
COM 1325 Advanced Creative Writing	3	0	3	SPH 1300 Oral Communications	3	0	3
COM 2390 Individual Study	3	0	3	SPH 2101 Parliamentary Procedure	1	0	1
COM 3305 Communications II	3	0	3	SPH 2300 Voice & Diction	3	0	3
				SPH 2304 Public Speaking	3	0	3

COMPUTER SCIENCE

The Computer Science Department offers courses for college transfer students to meet Computer Science requirements and/or to use as electives. As a student you should see an advisor or counselor in your major area or a member of the Computer Science faculty to determine the appropriate sequence to meet your objectives.

	CLS	LAB	CR.		CLS	LAB	CR.
EDP 1404 Computer Concepts & Fortran Programming	3	2	4	EDP 2307 Computer Programming II (Business)	2	2	3
EDP 1405 Fortran Programming I	3	2	4	EDP 2308 Computer Systems & Assembly Language I	2	2	3
EDP 2306 Computer Programming I (Business)	2	2	3	EDP 2309 Computer Systems & Assembly Language II	2	2	3
				EDP 2514 Statistical & Numerical Programming	4	2	5

HEALTH, PHYSICAL EDUCATION AND RECREATION

The health, physical education and recreation curriculum is designed to provide instruction which will lead to healthful living and to provide experience in physical activities which will lead to acquisition of skill and fitness with leisure-time or recreational value.

NOTE: A maximum of six quarter hours of Health, Physical Education and Recreation instruction may be counted toward the AA degree.

HEALTH

	CLS	LAB	CR.		CLS	LAB	CR.
HED 1100 Health Education I	1	0	1	HED 1201 Special Health Problems	2	0	2
HED 1101 Health Education II	1	0	1	HED 1202 Drugs & Related Issues	2	0	2
HED 1102 Health Education III	1	0	1	HED 1203 Cardiopulmonary Resusci. (CPR)	2	0	2
HED 1103 Special Health Problems	1	0	1	HED 1204 First Aid I	2	1	2
HED 1200 Public Health & Sanitation	2	0	2	HED 1205 First Aid II	2	0	2
				HED 1301 Special Health Problems	3	0	3

PHYSICAL EDUCATION AND RECREATION SKILLS

	QTR	LAB	CR.		QTR	LAB	CR.
HPE 1100 Individual Activity	0	3	1	HPE 1149 Tennis, Advanced	0	3	1
HPE 1101 Archery & Badminton	0	3	1	HPE 1154 Tap Dancing, Beginning	0	3	1
HPE 1102 Volleyball and Weight Lifting	0	3	1	HPE 1155 Intermediate Tap Dance	0	3	1
HPE 1103 Water Skiing	0	3	1	HPE 1156 Advanced Tap Dance	0	3	1
HPE 1104 Fencing, Beginning	0	3	1	HPE 1157 Jazz Dance, Beginning	0	3	1
HPE 1105 Fencing, Intermediate	0	3	1	HPE 1158 Jazz Dance, Intermediate	0	3	1
HPE 1106 Fencing, Advanced	0	3	1	HPE 1159 Jazz Dance, Advanced	0	3	1
HPE 1107 Self Defense & Physical Conditioning, Beginning	0	3	1	HPE 1164 Yoga-Beginning	0	3	1
HPE 1108 Self Defense & Phys. (Interm.)	0	3	1	HPE 1165 Yoga-Intermediate	0	3	1
HPE 1109 Self Defense & Phys. (Adv.)	0	3	1	HPE 1166 Yoga-Advanced	0	3	1
HPE 1110 Camping, Trailer	0	3	1	HPE 1167 Rhythmic Exercise, Beginning	0	3	1
HPE 1111 Scuba Diving	0	3	1	HPE 1168 Rhythmic Exercise, Intermed.	0	3	1
HPE 1114 Snow Skiing-Beginning	0	3	1	HPE 1169 Rhythmic Exercise, Advanced	0	3	1
HPE 1115 Snow Skiing-Intermediate	0	3	1	HPE 1170 Aerobics	0	3	1
HPE 1116 Snow Skiing-Advanced	0	3	1	HPE 1174 Mountaineering I	0	3	1
HPE 1117 Ice Skating-Beginning	0	3	1	HPE 1175 Mountaineering II	0	3	1
HPE 1118 Ice Skating-Intermediate	0	3	1	HPE 1176 Outdoor Skills (Basic)	0	3	1
HPE 1119 Ice Skating-Advanced	0	3	1	HPE 1177 Outdoor Skills II (Advanced)	0	3	1
HPE 1126 Social Dance, Beginning	0	3	1	HPE 1178 Horseback Riding, Beginning	0	3	1
HPE 1127 Social Dance, Advanced Begin.	0	3	1	HPE 1179 Horseback Riding, Advanced	0	3	1
HPE 1128 Social Dance, Intermediate	0	3	1	HPE 1184 Swimming-Beginner	0	3	1
HPE 1129 Social Dance, Advanced	0	3	1	HPE 1185 Swimming-Advanced Beginner	0	3	1
HPE 1130 Clogging	0	3	1	HPE 1186 Swimming-Intermediate	0	3	1
HPE 1134 Basic Course of Ameri. Sq. Dan.	0	3	1	HPE 1187 Swimming-"Swimmer"	0	3	1
HPE 1135 Extended Basic Course of American Square Dancing	0	3	1	HPE 1188 Swimming-(Advanced Life Sav.)	0	3	1
HPE 1136 Adv. Basic Course of Am. Sq.	0	3	1	HPE 1189 Swimming-Water Safety Instru	0	3	1
HPE 1137 Exploratory Sq. Dan. Class	0	3	1	HPE 1194 Slimnastics-Beginning	0	3	1
HPE 1144 Golf-Beginning	0	3	1	HPE 1195 Slimnastics-Intermediate	0	3	1
HPE 1145 Golf-Intermediate	0	3	1	HPE 1196 Gymnastics-Beginning	0	3	1
HPE 1146 Golf-Advanced	0	3	1	HPE 1197 Gymnastics-Intermediate	0	3	1
HPE 1147 Tennis-Beginning	0	3	1	HPE 1198 Bowling-Beginning	0	3	1
HPE 1148 Tennis-Intermediate	0	3	1	HPE 1199 Bowling-Intermediate	0	3	1

HISTORY AND POLITICAL SCIENCE

The courses offered in this department have as their objectives the broadening of students' comprehension of themselves and the world. Emphasis is placed on enabling the students to acquire an insight into man's political, economic, social and cultural development.

HISTORY

Upon successful completion of History courses, students should be able to:

1. Learn independently from written materials.
2. Organize and present, orally and/or in writing, coherent reports on historical topics.
3. Demonstrate comprehension that contemporary social, economic, and political problems are rooted in the past.
4. Demonstrate appreciation that casual explanation in history is necessarily complex.
5. Identify significant events, ideas, and persons in the area or period under study.
6. Explain basic political, socio-economic, religious, and cultural events in the area or period under study.

	CLS	LAB	CR.		CLS	LAB	CR.
HIS 1300 Afro-American History I	3	0	3	HIS 1500 World Civilization I	5	0	5
HIS 1301 Afro-American History II	3	0	3	HIS 1501 World Civilization II	5	0	5
HIS 1302 Afro-American History III	3	0	3	HIS 2104-2504 Special Topics in His.	1	to	5
HIS 1320 American History I	3	0	3	HIS 2500 North Carolina History	5	0	5
HIS 1321 American History II	3	0	3	HIS 2510 Survey of Latin Amer. His.	5	0	5
HIS 1322 American History III	3	0	3	HIS 2520 Survey of Asian History	5	0	5

POLITICAL SCIENCE

	CLS	LAB	CR.		CLS	LAB	CR.
POL 1502 American Politics	5	0	5	POL 2500 State and Urban Politics	5	0	5
POL 1510 Intro. to Comparative Politics	5	0	5	POL 2104-2504 Special Topics in Political Science	1	to	5
POL 1511 Intro. to Internat. Relations	5	0	5				

HUMANITIES

The courses in language and literature offer the student an opportunity to explore a wide range of ideas and values, to recognize his own needs as a human being, and ultimately to gain some perspective for making choices as an individual and as a member of society.

FRENCH

	CLS	LAB	CR.
FRE 1300 Travel French	3	1	3
FRE 1600 Elementary French I	5	2	6
FRE 1601 Elementary French II	5	2	6
FRE 2320 Special Topics	3	0	3
FRE 2600 Intermediate French I	5	2	6
FRE 2601 Intermediate French II	5	2	6

HUMANITIES

	CLS	LAB	CR.
HUM 1304 Current Dramatic Events	3	0	3
HUM 1314 The Novel	3	0	3
HUM 1319 Mythology	3	0	3
HUM 1500 Humanities I	5	0	5
HUM 1501 Humanities II	5	0	5
HUM 2320 Special Topics for Indep. Study	3	0	3

LITERATURE

	CLS	LAB	CR.		CLS	LAB	CR.
LIT 2314 Contemporary Literature	3	0	3	LIT 2505 British Literature II	5	0	5
LIT 2320 Special Topics for Independent Study	3	0	3	LIT 2514 American Literature I	5	0	5
LIT 2324 The Bible as Literature	3	0	3	LIT 2515 American Literature II	5	0	5
LIT 2504 British Literature I	5	0	5	LIT 2534 European Literature	5	0	5

PHILOSOPHY

	CLS	LAB	CR.		CLS	LAB	CR.
PHI 1500 Introduction to Philosophy	5	0	5	PHI 2500 Logic	5	0	5

SPANISH

	CLS	LAB	CR.		CLS	LAB	CR.
SPA 1300 Travel Spanish	3	1	3	SPA 2320 Special Topics	3	0	3
SPA 1600 Elementary Spanish I	5	2	6	SPA 2600 Intermediate Spanish I	5	2	6
SPA 1601 Elementary Spanish II	5	2	6	SPA 2601 Intermediate Spanish II	5	2	6

MATHEMATICS

The mathematics courses are designed to prepare students for professional careers in mathematics and related areas, to develop student knowledge and understanding of the fundamental principles and concepts of mathematics, and to develop manipulative skills and the ability to apply mathematics to physical situations.

	CLS	LAB	CR.		CLS	LAB	CR.
MAT 1504 College Algebra I	5	0	5	MAT 2514 Statistics I	5	0	5
MAT 1505 College Algebra II	5	0	5	MAT 2590 Individual Study	5	0	5
MAT 1514 Precalculus Mathematics I	5	0	5	MAT 3200 Mathematics for Respir. Ther.	2	0	2
MAT 1515 Precalculus Mathematics II	5	0	5	MAT 3314 Numbering Sys. & Boolean Algebra	3	0	3
MAT 1516 Introductory Calculus	5	0	5	MAT 3504 Technical Mathematics I	5	0	5
MAT 1524 Analytic Geometry & Cal. I	5	0	5	MAT 3505 Technical Mathematics II	5	0	5
MAT 2415 Statistics II	4	0	4	MAT 3506 Technical Mathematics III	5	0	5
MAT 2504 Analytic Geometry & Cal. II	5	0	5	MAT 4507 Technical Mathematics IV	5	0	5
MAT 2505 Analytic Geometry & Cal. III	5	0	5	MAT 5304 Shop Mathematics I	3	0	3
MAT 2506 Analytic Geometry & Cal. IV	5	0	5	MAT 5305 Shop Mathematics II	3	0	3

PERFORMING ARTS

DRAMA

The drama programs permit the student to learn theater practices and theories by involving him in regular college theater productions. He has the opportunity to learn basic backstage procedures in addition to acting in plays. Basic theater courses in play production, stagecraft, theater history, acting, and scene design are open to all students. The college theater productions are correlated with course activities whenever possible.

	CLS	LAB	CR.		CLS	LAB	CR.
DRA 1300 Introduction to Drama	3	0	3	DRA 1310 One-Act Production	0	6	3
DRA 1301 Stagecraft	1	4	3	DRA 1311 Comedy/Drama Production	0	6	3
DRA 1302 Scene Design	1	4	3	DRA 1312 Musical Theater Production	0	6	3
DRA 1303 Acting	1	4	3	DRA 2204 Special Problems in Drama	1	3	2
				DRA 2414 Movies: The Medium of the Imagination	3	2	4

MUSIC

The music courses are designed to provide opportunities to the greatest number of students to share in the heritage of musical culture and skills. Emphasis is placed on creative participation in performance and upon music as a medium of communication. Music is also studied as a reflection of the cultures that created it -- whether present or past.

NOTE (1) A maximum of six quarter hours of applied vocal and/or instrumental may be counted toward an A.A. degree.

NOTE (2) A maximum of six quarter hours of choral and/or instrumental ensemble may be counted toward an A.A. degree.

	CLS	LAB	CR.		CLS	LAB	CR.
MUS 1100 Men's Choir	0	3	1	MUS 1324 Recording Studio Techni. I	3	0	3
MUS 1101 Women's Glee Club	0	3	1	MUS 1325 Recording Studio Techni. II	3	0	3
MUS 1104 Class Voice I	0	2	1	MUS 1326 Recording Studio Techni. III	0	6	3
MUS 1107 Chamber Choir	0	3	1	MUS 1327 Recording Studio Techni. IV	0	6	3
MUS 1110 Folk Guitar	0	3	1	MUS 1334 Music Writing: Autography & Preparation	2	2	3
MUS 1111 Classical & Flamenco Guitar	0	3	1	MUS 1335 Music Writing II	2	2	3
MUS 1112 Orchestral Strings	0	3	1	MUS 1504 Music Theory I	5	0	5
MUS 1114 Class Piano I	0	3	1	MUS 1505 Music Theory II	5	0	5
MUS 1115 Class Piano II	0	3	1	MUS 1506 Music Theory III	5	0	5
MUS 1116 Class Piano III	0	3	1	MUS 2114 Advanced Class Piano I	0	3	1
MUS 1117 Wind Ensemble	0	3	1	MUS 2115 Advanced Class Piano II	0	3	1
MUS 1120 Modern Dance	0	3	1	MUS 2116 Advanced Class Piano III	0	3	1
MUS 1127 Orchestra	0	3	1	MUS 2117 Piano Ensemble	0	3	1
MUS 1130 Ballet	0	3	1	MUS 2118 Jazz Piano	0	3	1
MUS 1134 Concert Band	0	4	1	MUS 2136 Advanced Applied Voice	1	0	1
MUS 1135 Applied Voice	1	0	1	MUS 2204 Special Problems in Music	1	3	2
MUS 1144 Modern Dance II	0	3	1	MUS 2214 Choreography	0	4	2
MUS 1300 Introduction to Music I	3	0	3	MUS 2304 History & Liter. of Music I	3	0	3
MUS 1301 Introduction to Music II	3	0	3	MUS 2305 History & Liter. of Music II	3	0	3
MUS 1304 Children's Music I	3	0	3	MUS 2306 History & Lit. of Music III	3	0	3
MUS 1305 Children's Music II	3	0	3	MUS 2307 Advanced Music Theory I	3	0	3
MUS 1310 Introduction to Music Theory	3	0	3	MUS 2308 Advanced Music Theory II	3	0	3
MUS 1314 Music Appreciation I	3	0	3	MUS 2309 Advanced Music Theory III	3	0	3
MUS 1315 Music Appreciation II	3	0	3	MUS 2338 Opera Workshop	0	6	3
MUS 1316 Music Appreciation III	3	0	3				

PHYSICAL SCIENCE

The physical science courses are designed to prepare students for the professional courses in science and related areas, to teach the students to apply the scientific method, to think logically and systematically, to have an open-minded attitude in interpreting data, to be thorough in considering all aspects of a problem; to prepare people to live in a complex society; to impart knowledge of scientific facts; and to promote an understanding of the contributions that physical science has made and is making to the ability of man to master his environment.

CHEMISTRY

	CLS	LAB	CR.		CLS	LAB	CR.
CHM 1500	3	4	5	CHM 2304	1	4	3
CHM 1501	3	4	5	CHM 2604	3	6	6
CHM 1502	3	4	5	CHM 2614	4	4	6
CHM 1504	3	4	5	CHM 2615	4	4	6
CHM 1505	3	4	5	CHM 3200	2	0	2
CHM 1506	3	4	5	CHM 3500	3	4	5
				CHM 5300	2	2	3

GEOLOGY

	CLS	LAB	CR.		CLS	LAB	CR.
GEL 1604	5	2	6	GEL 2605	5	2	6

GEOGRAPHY

	CLS	LAB	CR.
GEO 1614	5	2	6

PHYSICS

	CLS	LAB	CR.		CLS	LAB	CR.
PHY 1300	3	0	3	PHY 3324	2	2	3
PHY 1400	3	2	4	PHY 3325	2	2	3
PHY 1504	4	2	5	PHY 3414	3	2	4
PHY 1505	4	2	5	PHY 3404	3	2	4
PHY 1506	4	2	5	PHY 3405	3	2	4
PHY 2504	4	2	5	PHY 3406	3	2	4
PHY 2505	4	2	5	PHY 3407	3	2	4
				Atomic Physics			
PHY 2506	4	2	5	PHY 5304	2	2	3
				PHY 5305	2	2	3

SOCIAL SCIENCES

The Social Science Department courses are designed to help the student understand the social, cultural, psychological, and educational growth and development of the society in which he participates and how to apply principles learned to modern life.

ANTHROPOLOGY

	CLS	LAB	CR.
ANT 1501	5	0	5
ANT 1511	5	0	5

EDUCATION

	CLS	LAB	CR.
EDU 2500	5	0	5

PSYCHOLOGY

	CLS	LAB	CR.		CLS	LAB	CR.
PSY 2500	5	0	5	PSY 2514	5	0	5
PSY 2504	5	0	5	PSY 2524	5	0	5
PSY 2505	5	0	5	PSY 2536	5	0	5
				PSY 3314	3	0	3

SOCIOLOGY

	CLS	LAB	CR.		CLS	LAB	CR.
SOC 1301	3	0	3	SOC 2502	5	0	5
SOC 1500	5	0	5	SOC 2514	5	0	5
SOC 2501	3	4	5	SOC 2515	5	0	5
				SOC 2524	5	0	5

WELDING

Many of the parts used in missiles, automobiles, airplanes, refrigerators and thousands of other products are joined by a widely-used process known as welding. Welders join metals by applying intense heat and sometimes pressure to melt the edges to form a permanent bond.

Welding provides the opportunity to see the world and make good money at the same time. Skilled welders work on bridges, buildings, dams and other construction projects around the globe. A well-trained welder can travel if he wishes, or he can obtain one of the many jobs now available locally for a person skilled in this trade.

DESCRIPTION OF CURRICULUM

The curriculum at Central Piedmont Community College provides the opportunity for students to develop the skills necessary in the operation of a variety of types of welding equipment. Other courses such as shop math and blueprint reading play important parts in developing a first-class welder. A graduate from this curriculum will receive a diploma from the College.

Suggested Sequence of Required Courses For Welding

<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
COURSE TITLE	HR/WK	CLS LAB	QTR CR.	COURSE TITLE	HR/WK	CLS LAB	QTR CR.
WLD 5810 Oxyacetylene Welding & Cutting	4	12	8	WLD 5820 Arc Welding	4	12	8
OR				OR			
(WLD 5411 Oxyace. Weld. & Cut. I 2-6-4*)				(WLD 5421 Arc Welding I 2-6-4*)			
(WLD 5412 Oxayce. Weld. & Cut. II 2-6-4*)				(WLD 5422 Arc Welding II 2-6-4*)			
DFT 5300 Blueprint Reading	3	0	3	MAT 5305 Shop Mathematics II	3	0	3
COM 5500 Communication Skills	5	0	5	DFT 5400 Blueprint Reading & Sket.	3	2	4
MAT 5304 Shop Mathematics I	3	0	3	PHY 5304 Shop Science I	2	2	3
	15	12	19		12	16	18
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
WLD 5830 Inert Gas Welding	4	12	8	WLD 5654 Commercial & Indus. Prac.	2	12	6
OR				OR			
(WLD 5431 Inert Gas Welding I 2-6-4*)				(WLD 5355 Com. & Indus. Prac. I 1-6-3*)			
(WLD 5432 Inert Gas Welding II 2-6-4*)				(WLD 5356 Com. & Indus. Prac. II 1-6-3*)			
WLD 5240 Introductory Pipe Welding	1	3	2	WLD 5267 Certification Practice	0	6	2
MEC 5214 Heat Treatment of Metals I	1	3	2	WLD 5268 Certification Testing	2	0	2
PHY 5305 Shop Science II	2	2	3	MEC 5215 Heat Treatment of Metals II	1	3	2
	8	20	15	HSA 5200 Human Relations	2	0	2
				BUS 5200 Shop Management	2	0	2
					9	21	16

RECOMMENDED ELECTIVES

MAC 5201 Machine Shop Practice	1	3	2
WLD 5390 Individual Study	3	0	3

*FOR EVENING STUDENTS

NOTE: STUDENTS MUST FURNISH THEIR OWN PERSONAL PROTECTIVE EQUIPMENT AND HAND TOOLS.



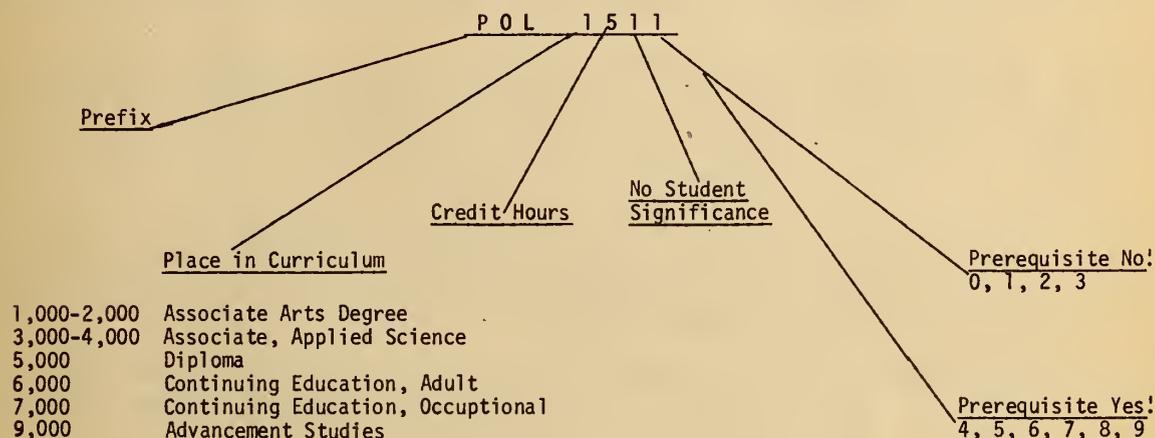
COURSE DESIGNATION, TITLE AND DESCRIPTION

Each course listed begins with three capitalized letters and a four digit number. This is the course prefix and number. The number shows the position in the curriculum. Following the number is the title of the course and a brief description. Following the description may be a PR or a CR or both. This means that there is a course that is a prerequisite or a corequisite. The numbers in parentheses at the end of the course description indicate the number of lecture, laboratory, and clinic hours. The last number indicates the number of credit hours earned for completion of the course. The courses are listed alphabetically by prefix letters and numerically under each prefix. The course prefix indicates the program area (i.e., POL = Political Science course). The course number describes the course (see diagram below). The first digit to the left indicates the area in which the course is offered, such as a "1" indicates a course in first year of Associate in Arts degree, a "2" indicates second year of Associate in Arts degree, a "3" indicates first year of Associate in Applied Science degree, a "4" indicates second year of Associate in Applied Science degree, a "5" indicates a course in the diploma program, a "6" indicates a course in Continuing Education Adult Education program, a "7" indicates a course in Continuing Education Occupational Extension program, and a "9" indicates a course in Advancement Studies program.

The second digit indicates the number of credit hours granted for the course.

The third digit has no significance.

The fourth digit indicates whether there is a prerequisite or not. If the fourth digit is 0, 1, 2, or 3, there is no prerequisite required for the course. If the fourth digit is 4, 5, 6, 7, 8, or 9, it is indicated that there are prerequisites required and/or that there is a series of courses.



ACCOUNTING

ACC 1604 PRINCIPLES OF ACCOUNTING I: In this study of basic accounting principles and procedures, the student will demonstrate satisfactory competency in solving practical problems for both service and merchandising businesses. The student will analyze and record various transactions; and prepare financial statements for the accounting period. After this basic study of the accounting cycle, the student will study more specialized areas--including notes receivable and payable, uncollectible accounts, inventory, plant assets, and payroll systems. (5 - 2) 6

ACC 1605 PRINCIPLES OF ACCOUNTING II: In this continuing study of accounting principles and applications, the student will satisfactorily solve a variety of problems involving the accumulation and interpretation of accounting data for managerial decision making and control. Principles and procedures of accounting for partnerships and corporations are included, along with the fundamentals of cost accounting, the statement of changes in financial position, and the analysis of financial statements. P.R. ACC 1604 or consent. (5 - 2) 6

ACC 2626 INTERMEDIATE ACCOUNTING I: Upon completion of this course, the student will have demonstrated satisfactorily an understanding of all phases of the accounting cycle, and the ability to solve problems related to a variety of business situations. Topics studies include accounting principles and their application, with emphasis on the APB and FASB opinions and pronouncements; preparation of the balance sheet, income statement, retained earnings statement, and the statement of changes in financial position; monetary assets; inventory costing and valuation methods; current liabilities; and long term debt. P.R. ACC 1605. (5 - 2) 6

ACC 2627 INTERMEDIATE ACCOUNTING II: To complete this course the student will satisfactorily solve numerous intermediate level problems and discussion cases which apply accounting principles to a wide variety of business situations. Specific topics include plant assets and depreciation, depletion, intangible assets, stockholders' equity, dilutive securities and earnings per share, investments, income taxes, pensions, leases, and financial statement analysis. APB opinions and FASB pronouncements are related to the foregoing topics. Corporate annual reports from a variety of industries are used in the study of reporting procedures and financial statement analysis. P.R. ACC 2626. (5 - 2) 6

ACC 3434 HOTEL RESTAURANT ACCOUNTING: Upon satisfactory completion of this course the student will have demonstrated his ability to apply generally accepted accounting principles to the hospitality industry. Problems will be studied and solved in the following areas: uniform system of accounts for hotels; basic control tenets; food, beverage and labor accounting principles and controls; specialized journals and ledgers; financial statements; voucher systems; budget planning; and, credit systems. The NCR 4200 Accounting machine will be used throughout the course. P.R. ACC 1604 (3 - 2) 4

ACC 3600 SECRETARIAL ACCOUNTING: Upon completion of this course the student should be able to apply generally accepted accounting principles in the following processes: analyzing and journalizing business transactions; posting and maintaining ledgers; taking a trial balance; preparing a worksheet and statements; recording, adjusting, closing, and reversing entries; and interpretation of statements. (5 - 2) 6

ACC 4325 ADVANCED TAXATION: In this study of Federal and State income tax laws and regulations, the student will demonstrate satisfactory competency in researching and solving problems and preparing returns for partnerships, corporations, and fiduciaries. The topics include applications of federal and state laws to gifts and estates. (3 - 0) 3

ACC 4338 ACCOUNTING PROBLEMS: The student will study APB opinions, Research Studies, and FASB pronouncements while demonstrating satisfactory competency in solving a wide variety of accounting problems adapted from recent CPA examinations. Worksheet techniques leading to efficient, accurate solutions are developed. (3 - 0) 3

ACC 4364 BUDGET AND RECORD KEEPING: When this course is completed the student should be able to: use historical accounting records to make future projections of revenues and expenses; prepare budgets and use them for control purposes; apply budget procedures for departmental evaluation; prepare management reports and recommendations based on the budget; analyze variances between budgeted and actual figures to determine responsibility. P.R. ACC 1604 (3 - 0) 3

ACC 4395 INDIVIDUAL STUDY-ACCOUNTING: This offering is to provide students an opportunity to develop a special program of study to fill a need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. The student works under the supervision of a sponsoring faculty member. Approval of the sponsor, department head, and vice-president is required. (3 - 0) 3

ACC 4404 AUDITING: The student will study the theory and practices of auditing and will demonstrate satisfactory knowledge of generally accepted auditing standards and rules of professional conduct. The student will solve numerous problems illustrating specific techniques of auditing various balance sheet accounts. These problems will develop internal auditing concepts and procedures as well as the public accounting viewpoint. Current trends in financial statement preparation will be reviewed. P.R. ACC 2627. (3 - 2) 4

ACC 4434 INCOME TAXES-INDIVIDUAL: The student will study current federal and state income tax laws and demonstrate satisfactory competency in finding, interpreting, and applying the relevant laws in the preparation of individual income tax returns of some complexity, including supporting schedules and forms as necessary for reporting income, deductions, and tax computations. The student will also demonstrate competency in solving problems in tax planning to minimize taxes for the average taxpayer and in the preparation of declarations of estimated tax, extensions of time to file, and amended tax returns. (3 - 2) 4

ACC 4444 COST ACCOUNTING: In this study of manufacturing cost systems, the student will satisfactorily solve a variety of problems illustrating the principles and procedures of job order and process costing operations. The use of standard costs and other data for management control is included. The student will calculate and apply estimated overhead rates using a variety of bases. (3 - 2) 4

ACC 4447 ADVANCED ACCOUNTING: In this course the student will solve a wide variety of problems illustrating advanced applications of accounting principles and practices. Topics include parent-subsidiary consolidations, partnerships, installment sales accounting, branch accounting, governmental accounting, and accounting for estates and trusts. Emphasis is placed on the development of worksheet techniques in problem solving. APB opinions and FASB pronouncements are related to the foregoing topics. P.R. ACC 2627. (3 - 2) 4

ACC 5610 MEDICAL ACCOUNTING: A specialized course dealing with accounting in the medical profession. The student will demonstrate ability in this specialized area in doing the following: journalizing entries; posting ledgers; preparation of worksheets and statements; recording, adjusting, closing, and reversing entries; keeping daily records for an office; and doing special reports. (5 - 2) 6

ADV 4204 ADVERTISING THESIS: Upon completion of this course the student should be able to: (1) identify immediate and long-range vocational objectives; (2) prepare a professional portfolio; (3) present the portfolio to prospective employers in a professional manner; and (4) prepare a resume of personal, professional qualifications. P.R. ADV 4305, VCO 4415. (0 - 4) 2

ADV 4214 PROFESSIONAL PRACTICES AND PROCEDURES: Upon completion of this course the student should be able to describe the organization and operations of various businesses concerned with advertising art production and reproduction. The student will analyze buying, selling and pricing practices of these businesses and will understand legal responsibilities of private ownership of these businesses, partnerships and corporations. P.R. ADV 4305, VCO 4415. (1 - 2) 2

ADV 4300 ADVERTISING PRINCIPLES: Upon completion of this course the student should be able to: (1) describe the relationship of social and economic problems to today's advertising; (2) identify the advantages and limitations of major communications media; (3) describe the operation and organization of an advertising agency; (4) discuss the advertising spiral; and (5) plan a small advertising campaign. (3 - 0) 3

ADV 4304 ADVERTISING STUDIO I: Upon completion of this course the student should be able to: (1) produce simple layouts for newspaper and magazine advertisements; (2) use transfer lettering and tint screens in a professional manner; (3) produce newspaper advertisements using clipper art; (4) use photo-stat machines and the photo-typewriter properly; and (5) cut amber lith overlays for multi colored art. P.R. VCO 3316, VCO 3326, and VCO 3305. (2 - 2) 3

ADV 4305 ADVERTISING STUDIO II: Upon completion of this course the student should be able to: (1) prepare camera-ready art with a variety of half-tone finishes; (2) use the air brush properly; (3) plan and produce comprehensives and camera-ready art for booklets, folders or brochures; (4) understand the proper use of paper and ink in conjunction with visual communications of all types; and (5) prepare camera-ready art for a direct-mail advertisement or announcement. P.R. ADV 4304, VCO 3306. (2 - 2) 3

ADV 4306 ADVERTISING STUDIO III: Upon completion of this course the student should be able to: (1) complete layouts, comprehensive and camera-ready art for full color reproduction; (2) describe the four-color reproduction process; (3) plan and execute an advertising campaign using a variety of communications media including newspaper ads, direct mail, magazines, television, point-of-purchase and outdoor advertising; and (4) prepare a cost study for the above campaign. P.R. ADV 4305. (2 - 2) 3

AHR 4361 RESIDENTIAL AIR DISTRIBUTION AND BALANCE: Upon completion of this course the student, with guidance should be able to: (1) demonstrate a comprehensive knowledge and understanding of air and its behavior in a duct or residential air distribution system; (2) measure air volume; (3) measure air velocity; (4) estimate blower capacity; (5) estimate and measure friction loss; (6) correctly size an air distribution system for a residence; (7) properly balance a correctly installed air distribution system for a residence; (8) appraise a residential air distribution system and distinguish between a good and bad system. P.R. * (2 - 2) 3

AHR 4372 HYDRONIC DISTRIBUTION SYSTEMS DESIGN: Upon completion of this course the student, with guidance, should be able to: (1) design four different types of hydronic systems; (2) estimate water temperature requirements for a given application; (3) select all equipment and components, such as heat distributing units, circulating pumps, compression tank, zone valves, zone controls, relief valve, flow control valve, pressure reducing valves, check and balancing valves; (4) choose the correct size chiller and/or boiler; (5) estimate hot water requirements for domestic purposes; (6) select the type of domestic water heating system best suited for a particular application; (7) estimate pipe sizes for entire system(s); (8) select proper pipe insulation; (9) design a cooling tower installation; (10) select tower capacity, pump capacity and type; (11) estimate all pipe sizes, including valves and accessories; (12) evaluate all work done against industry standards and various codes. P.R. * (3 - 0) 3

AHR 4381 GAS PIPING DESIGN AND INSTALLATION: Upon completion of this course the student should be able to: (1) demonstrate a knowledge and an understanding of the American Gas Association (A.G.A.) Recommended Procedures for Gas Piping and Appliance Installation; (2) select the proper size gas piping for any specified application; (3) correctly estimate the size, type and quantity of fittings required in said piping; (4) select the correct vent material and size for any given application; (5) estimate the correct amount of combustion and ventilation air required for any specified job; (6) evaluate a given system and specify the net clearances required by A.G.A. P.R. * (3 - 0) 3

AHR 4382 AIR CONDITIONING ESTIMATES AND CONTRACTS: Upon completion of this course the student should be able to: (1) demonstrate a knowledge of various forms used in estimating; (2) select the best definition for the word "estimate"; (3) prepare an annual and monthly cost budget for a contracting business; (4) formulate a Profit and Loss Statement; (5) compose a balance sheet; (6) given the cost of a job, add a percentage for overhead and profit, accurately estimate the proper selling price of said job; (7) given the total selling price of a job, the percentage of overhead and profit, accurately estimate the cost of material, labor, sub contracts, etc.; (8) choose the "break-even" point of a stated dollar volume of business when overhead is known; (9) evaluate several contracts and compare a contract to suit the individual needs of the student; (10) compare several contracts to determine whether each is legal and/or enforceable by law, according to N.C. General Statutes and the U.S. Statute of Frauds; (11) compare an estimate for a specified job;

(12) prepare the estimate, proposal and contract in a manner to be compared with actual costs and estimated overhead and profit. P.R. None. (3 - 0) 3

AHR 4383 TRANSPORT REFRIGERATION: Upon completion of this course the student should be able to: (1) Assess the potential in transportation type refrigeration; (2) choose the best type system for a specified application; (3) demonstrate a full comprehension of the refrigeration cycle; (4) select the special equipment and controls required to meet the needs of various types of transport refrigeration systems; (5) differentiate between the several type systems currently in use today and judge which type would be best suited for a specified application; (6) compare the various methods of air distribution used in transport refrigeration; (7) estimate the load requirements of a specified transport refrigeration application; (8) select the correct size system for the application specified; (9) compose electrical wiring diagrams of various systems as directed by the instructor; (10) analyze and solve theoretical problems as presented by the instructor. P.R. None. (3 - 0) 3

AHR 4390 INDIVIDUAL STUDY - 2ND YEAR LEVEL: This course is to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Upon completion of this course the student shall: (1) present the work to the instructor for evaluation by instructor(s) and peers; (2) present a written summary of the things he/she has learned as a direct result of completing this course. P.R. 1. The student will submit, in writing, all of the following in proper form, to the Environmental Systems Program Director for approval, prior to beginning this course: (a) a brief statement of specific objectives of the project; (b) statement of exact procedures proposed to be used to achieve stated objectives; (c) describe in precise terms the nature of the finished project; (d) provide statement as to how student believes project should be evaluated; (e) explain the nature and estimate the amount of instructor time, if any, that will be needed to achieve the stated objective; (f) estimate total lab hours anticipated to complete the project, if any; (g) state the times, either mornings, afternoons or evenings that any specific lab(s) will be required to complete the project, if any; (h) state the disposition to be made of the project upon completion and evaluation (no college funds may be expended for personal use); 2. student must have completed at least six (6) full quarters of AHR subjects. (3 - 0) 3

AHR 4451 COMMERCIAL REFRIGERATION SYSTEMS DESIGN: Upon completion of this course the student should be able to: (1) estimate the cooling load requirements for any known commercial refrigeration application; (2) choose the proper condensing unit; (3) select the correct evaporator coil assembly; (4) select the proper operating and safety controls for a given application; (5) inspect, test and analyze existing systems; (6) estimate the materials required to construct a given size walk-in cooler; (7) measure the internal volume of a given unit and estimate the actual storage capacity of various products; (8) design a proper refrigerant piping system; (9) diagram the piping system illustrating all components thereof; (10) estimate the average compressor running time for any given commercial refrigeration application. P.R. * (4 - 0) 4

AHR 4452 RESIDENTIAL AIR CONDITIONING SYSTEMS DESIGN: Upon completion of this course the student, with guidance should be able to: (1) estimate the heating and/or cooling needs of a residence; (2) select the proper size of heating and/or cooling equipment required to meet the estimated needs; (3) choose the correct operating and safety controls for said equipment; (4) prepare data for load calculations to be made by electronic computer. P.R. * (3 - 2) 4

AHR 4453 COMMERCIAL AIR CONDITIONING SYSTEMS DESIGN: Upon completion of this course the student, with guidance should be able to: (1) estimate the heating and/or cooling requirements of a commercial type structure; (2) choose the proper size of heating and/or cooling equipment to meet these requirements; (3) interpret a psychrometric chart to measure the state of mixture of two air streams; (4) use various engineering data in the form of charts, tables and graphs to evaluate specific heat, humidification and dehumidification; (5) assess air flow calculations. P.R. * (3 - 2) 4

AHR 4462 COMMERCIAL AIR DISTRIBUTION AND BALANCE: Upon completion of this course the student, with guidance, should be able to: (1) demonstrate a comprehensive knowledge and understanding of air and its behavior in a commercial air distribution system; (2) design a simple constant velocity system; (3) design a simple velocity reduction system; (4) design a simple equal friction system; (5) design a simple static regain system; (6) compare the four systems and evaluate each; (7) select the best system(s) for a specific application; (8) calculate individual room air volume requirements; (9) select proper diffusers, registers and grilles; (10) design a complex equal friction system; (11) estimate air requirements for each outlet; (12) estimate air volume and velocity in each section of duct; (13) use many instruments in testing, adjusting and balancing various air distribution systems in college lab; (14) evaluate air motion within a conditioned area using modern instrumentation. P.R. * (3 - 2) 4

AHR 4473 HYDRONIC SYSTEMS BALANCE: Upon completion of this course the student with guidance, should be able to: (1) measure water temperatures in various sections of the system; (2) measure water flow in specified sections of the system; (3) use a wide variety of instruments in testing, adjusting and balancing a properly designed and installed system; (4) compare several designs and applications; (5) choose the best design for a specific application; (6) revise lab systems to evaluate effect on operation and/or efficiency; (7) measure water temperature at various terminal units to determine BTU output; (8) construct a system curve based on measured water flow; (9) use pump curves to estimate flow rate and head; (10) evaluate overall efficiency of system under test, both before and after adjusting and balancing has been performed to assure optimum performance; (11) measure water flow, temperature and efficiency of a cooling tower application; (12) test, balance and adjust tower for optimum performance. P.R. * (2 - 4) 4

AHR 4487 INDUSTRIAL REFRIGERATION: Upon completion of this course the student should be able to: (1) differentiate between refrigeration equipment and/or systems designed especially for industrial application and all other types of refrigeration; (2) demonstrate a high degree of comprehension in the fundamentals of refrigeration; (3) analyze the pressure temperature relationship; (4) compare and select refrigerants for specified applications; (5) compare theoretical and actual capacities; (6) plan the duties of a plant operating engineer; (7) compare various methods of purging non-condensable gases from different types of industrial refrigeration systems; (8) rate the function of condensing systems and evaluate various types of condensers. P.R. * (3 - 2) 4

AHR 4563 CONTROLS SYSTEM I: Upon completion of this course the student, with guidance should be able to: (1) interpret symbols on a control schematic diagram; (2) compose a control schematic diagram; (3) select the correct diagram for use in actually constructing an operating control system; (4) compare various control systems and select the one best suited for a specific application; (5) create a control circuit for automatic ventilation; (6) prepare a control diagram for a refrigeration system; (7) design a system of controls for an air conditioning system; (8) properly assemble the components so as to have an operating control system; (9) test and analyze control circuits; (10) measure voltage, current, and efficiency of a given control system, using appropriate test instruments; (11) adjust various controls in a system; (12) evaluate the overall performance of a specific control system. P.R. * (3 - 4) 5

AHR 4571 INSTALLATION AND SERVICE PROBLEMS: Upon completion of this course the student, with guidance should be able to: (1) use a variety of test instruments both common and peculiar to the environmental systems field; (2) estimate capacity requirements of various components and equipment; (3) measure air mix conditions; (4) select proper location for various components; (5) examine various systems and solve service problems on same; (6) using a variety of shop and field equipment, test and repair lab units, including adding (or removing excess) refrigerant; (7) choose the correct refrigerant for a specific system; (8) evaluate insulation requirements; (9) compare piping techniques; (10) select system accessories; (11) experiment with lab units to gain additional "hands-on" practice in solving service problems; (12) evaluate own learning experiences for the entire time in Program. P.R. * (2 - 6) 5

AHR 4584 CONTROLS SYSTEMS II: Upon completion of this course the student, with guidance should be able to: (1) demonstrate an understanding of the terminology associated with solid state control systems; (2) demonstrate a knowledge of the basic fundamentals of solid state controls; (3) compose a simple wiring diagram of a solid state control circuit for use in heating and/or air conditioning applications; (4) select proper instruments necessary to service solid state control circuits; (5) evaluate and compare several control circuits; (6) measure voltage, wattage, resistance, etc., in a solid state control circuit for heating and/or air conditioning. P.R.* None. (3 - 4) 5

AHR 4585 CONTROLS SYSTEMS III: Upon completion of this course the student, with guidance should be able to (1) demonstrate an understanding of the terminology associated with pneumatic controls; (2) demonstrate a knowledge of the basic fundamentals of pneumatic controls; (3) prepare a sketch of a simple pneumatic control circuit for a heating and/or air conditioning application; (4) select proper test instruments and tools to service a pneumatic control circuit; (5) compare and evaluate several pneumatic control systems; (6) measure air pressures and revise settings on several pneumatic controls in a system; (7) apply the knowledge gained in this class to service and solve problems in a real pneumatic control circuit; (8) select the correct components and assemble an operating model of a pneumatic control circuit. P.R. * (3 - 4) 5

AHR 4586 CONTROLS SYSTEMS IV: Upon completion of this course the student, with guidance should be able to: (1) demonstrate an understanding of the terminology associated with fluidic controls; (2) demonstrate a knowledge of the theory and basic fundamentals of fluidic controls; (3) evaluate a fluidic controller and compare same with other types of controllers used in the environmental systems industry; (4) select the components and assemble a working model of a fluidic control unit; (5) operate a fluidic control unit; (6) design and construct a working model of a fluidic control. P.R. * (3 - 4) 5

AHR 5313 REFRIGERATION SERVICE PRINCIPLES: Upon completion of this course the student with guidance, should be able to: (1) properly use the gauge manifold; (2) analyze several operating refrigeration systems; (3) measure the degree of efficiency of each; (4) inspect, remove and re-install various sub assemblies of the system; (5) examine all components; (6) distinguish and replace faulty system components; (7) evaluate the acid content in the system, if any; (8) choose the proper components and construct an acid removal assembly; (9) measure acid content after cleaning; (10) assess the cleanliness of the system; (11) reassemble the system for normal operation (12) employ all necessary ordinary and special tools and equipment in above procedures; (13) test entire system; (14) place system into operation. C.R. AHR 5411, AHR 5412, AHR 5314, or one year field experience in lieu of AHR 5412. (2 - 3) 3

AHR 5314 BASIC AUTOMATIC CONTROLS: Upon completion of this course the student should be able to: (1) demonstrate an understanding of ohms Law; (2) interpret the electrical control symbols; (3) construct a wiring diagram for a refrigeration, heating and cooling system; (4) inspect and locate trouble in a real control system; (5) select the correct tools and instruments to trouble shoot a control circuit; (6) employ service techniques learned in this course to correct the trouble, including the replacement of any component(s) found to be defective; (7) evaluate a system, select the proper operating and safety controls necessary for same; (8) compose a wiring diagram for same; (9) assemble the entire control circuit in a proper manner; (10) test and appraise the final product. P.R. None. (2 - 3) 3

AHR 5321 COMMERCIAL REFRIGERATION INSTALLATION: Upon completion of this course the student with guidance should be able to: (1) demonstrate a knowledge of the various types and applications of commercial refrigeration installations; (2) differentiate between each type; (3) compare various defrost methods; (4) select all necessary equipment, sub assemblies and components for a proper installation of a given type application; (5) design a simple refrigerant piping system for a given type application; (6) select correct safety and operating controls for a given application; (7) set up the equipment properly; (8) arrange all components in their proper order; (9) construct the refrigerant piping system; (10) assemble all components in accordance with National Code and ordinary field practice; (11) charge system with proper amount of refrigerant and test for leaks; (12) employ all tools and equipment necessary to perform the above; (13) start up system; (14) evaluate the complete installation. C.R. AHR 5324. P.R. AHR 5313 or one year field experience, AHR 5411, AHR 5314. (2 - 3) 3

AHR 5323 OIL BURNERS: Upon completion of this course the student, with guidance, should be able to: (1) differentiate between the various types of oil burners; (2) test and evaluate all components of both the high pressure and vaporizing type burners; (3) select the proper tools and equipment necessary to properly repair any high pressure and vaporizing burner; (4) completely assemble both a high pressure and vaporizing type oil burner; (5) interpret an electrical diagram for an oil burner assembly; (6) apply the skills and techniques learned in this course to solve at least ten common problems with oil burners; (7) prepare the oil burner for testing; (8) using appropriate test instruments, measure combustion efficiency; (9) evaluate the results of the test; (10) set up burner for maximum efficiency with minimum air pollution. P.R. AHR 5314. (2 - 3) 3

AHR 5324 ENVIRONMENTAL CONTROL BLUEPRINT READING: Upon completion of this course the student should be able to: (1) interpret a simple environmental control blueprint; (2) use plans, charts, tables, instruction and service manuals; (3) compose an environmental control system blueprint; (4) compare various Environmental Control Systems Blueprints; (5) demonstrate a retained knowledge of comprehension of notes, lines, projections and dimensioning procedures. P.R. None. (3 - 0) 3

AHR 5331 AIR CONDITIONING - RESIDENTIAL: Upon completion of this course the student should be able to: (1) demonstrate a retained knowledge of the terminology used in the trade; (2) diagram a complete refrigeration cycle, properly identifying all components; (3) choose all necessary major components; (4) differentiate between water and air cooled equipment and explain advantages and disadvantages of both; (5) design a simple residential air conditioning system, select all components; (6) assemble the system, using proper tools and equipment found in the field today; (7) employ all safety measures taught in this and previous courses; (8) compare remote and self-contained systems; (9) compare various air moving equipment. C.R. MAT 5305, P.R. AHR 5411, AHR 5314, AHR 5313, or one year field experience in lieu of AHR 5313. (2 - 3) 3

AHR 5333 LIQUID HEAT - ONE PIPE SYSTEMS: Upon completion of this course the student should be able to: (1) illustrate the various one pipe systems; (2) select all components for either type of one pipe systems; (3) design two types of one pipe systems; (4) construct a one pipe system; (5) measure water flow in an operating system; (6) analyze and test a one pipe system; (7) solve various problems which may be found in a typical one pipe system. P.R. Mat 5304. (2 - 3) 3

AHR 5334 LIQUID HEAT - TWO PIPE SYSTEMS: Upon completion of this course the student should be able to: (1) illustrate the various two pipe systems; (2) select all components for either type of a two-pipe system; (3) design two types of two pipe systems; (4) construct a two pipe system; (5) measure water flow in an operating two pipe system; (6) analyze and test a two pipe system; (7) solve various problems which may be found in a typical two pipe system; (8) estimate the heat loss of a small residence, using method suggested for use with one and two pipe liquid heat systems; (9) demonstrate full comprehension of the correct piping procedures for wet heat systems; (10) prepare a diagram indicating safety and operating controls for a two pipe liquid heat system. P.R. AHR 5333. (2 - 3) 3

AHR 5342 ELECTRIC HEAT: Upon completion of this course the student, with guidance, should be able to: (1) calculate the heat loss in wattage on a room by room basis for a structure; (2) select the most appropriate type of system for a particular application; (3) choose the correct controls for the system selected; (4) design the complete system; (5) assemble all components and install same, using either ceiling cable, panels, baseboard, valance, electric furnaces, electric boilers, electric radiators, or a combination of any or all types of units; (6) inspect and test systems and components for safe and proper operation; (7) employ knowledge gained in this course to solve any problem with any system or component thereof; (8) compare and evaluate various systems; (9) estimate approximate annual cost of operation; (10) measure efficiency, voltage and wattage or current draw of either system. P.R. MAT 5304, AHR 5314. (2 - 3) 3

AHR 5343 ALL WEATHER SYSTEMS-CONVENTIONAL: Upon completion of this course the student, with guidance should be able to: (1) demonstrate a thorough comprehension of the application of both heating and cooling into one single system; (2) compare the various combinations of oil-electric, gas-electric, all electric and other available combination systems; (3) choose the best type of system for a given application; (4) select the proper safety and operating controls for either type system; (5) assemble all equipment and components and construct an all weather system of conventional type; (6) install system; (7) inspect and test systems; (8) solve service problems; (9) revise improperly installed systems; (10) measure and evaluate the overall performance of an all weather conventional type system. C.R. WLD 5110, AHR 5441, AHR 5342, P.R. AHR 5411, AHR 5314, AHR 5432. (2 - 3) 3

AHR 5344 ALL WEATHER SYSTEMS - HEAT PUMPS: Upon completion of this course the student, with guidance should be able to: (1) demonstrate a thorough comprehension of the refrigerant cycle by constructing a diagram of same; (2) create a heat pump cycle by revising the refrigerant cycle to employ a reversing valve and related electrical controls; (3) select all components necessary to

construct a heat pump cycle and compare an electrical diagram employing all necessary operating and safety controls and illustrating their use in the system; (4) compare the various heat pumps in the college lab; (5) solve a series of service problems on lab models; (6) practice service procedures on lab models; (7) prepare a list of advantages and disadvantages of using a heat pump; (8) measure the co-efficient of performances of a heat pump in the lab and evaluate same. C.R. PSY 5200; P.R. AHR 5343. (2 - 3) 3

AHR 5390 INDIVIDUAL STUDY - 1ST YEAR LEVEL: This course is to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Upon completion of this course the student shall: (1) present the work to the instructor for evaluation by instructor(s) and peers; (2) present a written summary of the things he/she has learned as a direct result of completing this course. P.R. 1. the student will submit, in writing, all of the following in proper form, to the Environmental Systems Program Director for approval, prior to beginning this course: (a) a brief statement of specific objectives of the project; (b) statement of exact procedures proposed to be used to achieve stated objectives; (c) describe in precise terms the nature of the finished project; (d) statement as to how student believes project should be evaluated; (e) explain the nature and estimate the amount of instructor time, if any, that will be needed to achieve the stated objective; (f) estimate total lab hours anticipated to complete the project, if any; (g) state the times, either mornings, afternoons or evenings that any specific lab(s) will be required to complete the project, if any; (h) state the disposition to be made of the project upon completion and evaluation (no college funds may be expended for personal use); 2. student must have completed at least three (3) full quarters of AHR subjects. (3 - 0) 3

AHR 5394 MECHANICAL CODES I - AIR CONDITIONING CODE: Upon completion of this course the student should be able to: (1) demonstrate a comprehensive understanding of the North Carolina Building Code relating to air conditioning in residences and commercial buildings; (2) recognize the necessary precautions for the protection and preservation of life and property through the application of said code; (3) compare the systematic methods of designing and sizing an air conditioning system; (4) evaluate the systematic methods of designing, sizing and installing the refrigerant piping and condensate drain(s); (5) employ the applicable standards to the installation of all air conditioning systems and equipment. P.R. * (3 - 0) 3

AHR 5395 MECHANICAL CODES II - WARM AIR HEATING CODE: Upon completion of this course the student should be able to: (1) demonstrate a comprehensive knowledge of the North Carolina Building Code relating to warm air heating in residences and commercial buildings; (2) recognize the necessary precautions for the protection and preservation of life and property through the application of said code; (3) compare the systematic methods of designing and sizing warm air heating systems; (4) evaluate the systematic methods of designing, sizing and installing the various venting systems, including breeching, chimneys, flues, and special venting systems for all fuels; (5) select the proper fuel storage and/or distribution system for any specified warm air heating system; (6) assess the various types of electrical warm air heating systems covered by the code; (7) employ the applicable standards to the installation of any and all warm air heating equipment and/or systems. P.R. * (3 - 0) 3

AHR 5396 MECHANICAL CODES III - REFRIGERATION CODE: Upon completion of this course the student should be able to: (1) demonstrate a comprehensive understanding of the North Carolina Building Code relating to commercial refrigeration, transport and industrial refrigeration applications and installations in North Carolina; (2) recognize the necessary precautions for the protection and preservation of life and property through the application of said code; (3) assess the various types of refrigeration equipment available for the different applications; (4) select the correct type and size equipment best suited for any specific application; (5) evaluate the systematic methods of designing, sizing and installing the refrigerant piping and condensate drains for specified applications; (6) choose the proper refrigerant and oil for any given application; (7) employ the applicable standards to the installation of all commercial, transport and industrial refrigeration systems and equipment. P.R. * (3 - 0) 3

AHR 5397 MECHANICAL CODES IV - HOT WATER AND STEAM CODE: Upon completion of this course the student should be able to: (1) demonstrate a comprehensive understanding of the North Carolina Building Code relating to hot water and steam boilers; (2) demonstrate a comprehensive knowledge of the Rules and Regulations of the North Carolina Board of Boiler and Pressure Vessels; (3) recognize the necessary precautions for the protection and preservation of life and property through the application of said code and/or rules; (4) compare the systematic methods of designing hydronic and steam systems including the proper sizing of boilers, pressure vessels and all safety, operating and relief devices related thereto; (5) evaluate the systematic methods of designing and installing the various venting systems, including breeching, chimneys, flues and special venting systems for all fuels including both direct and indirect fired boilers and/or pressure vessels; (6) select the proper fuel storage and/or distribution system for any specific application; (7) assess the various types of direct and indirect fired and unfired boilers and/or pressure vessels using electricity or other energy sources; (8) employ the applicable standards, rules and regulations to the installation of any and all boilers and/or pressure vessels and/or systems, including all components, as such may be installed within the State of North Carolina. P.R. * (3 - 0) 3

AHR 5398 DUCT DESIGN III - PATTERNS AND SPECIALTY DESIGN: Upon completion of this course the student, with guidance should be able to: (1) estimate the required size, choose the correct gauge metal, design and construct the following: (a) one rectangular exhaust hood, (b) one rectangular discharge exhaust hood or cap, one O.G. range canopy; (2) select, design and fabricate no less than six (6) special fittings of their own choice. (Suggested: Flat clinch-edge access door, frame for door, insulation filled access door, fresh air intake louvers, fan housing, coil casing). P.R. AHR 5594, AHR 5495. (2 - 3) 3

AHR 5411 REFRIGERATION THEORY: Upon completion of this course the student should be able to: (1) analyze the elements of thermodynamics; (2) evaluate Pressure-Temperature relationships; (3) compare Boyle's Law and Charles' Law; (4) design a simple refrigeration cycle; (5) apply these principles using special built lab units. C.R. PHY 5304, MAT 5304, P.R. None. (4 - 0) 4

AHR 5412 REFRIGERATION SHOP PRACTICES: Upon completion of this course the student should be able to: (1) select the correct tubing for refrigerant use; (2) properly bend tubing; (3) flare and swage tubing; (4) use various solders and techniques in making a series of soldered connections; (5) select the correct tool(s) to demonstrate a knowledge and understanding of the above; (6) construct a small piping system; (7) use a gauge manifold; (8) examine tubing or piping system for leaks utilizing at least three leak detection methods; (9) recognize and describe no less than 25 different tools and pieces of equipment found and used in the average refrigeration repair shop. C.R. AHR 5411, P.R. None. (2 - 6) 4

AHR 5422 COMMERCIAL REFRIGERATION SERVICE: Upon completion of this course the student with guidance should be able to: (1) compare various commercial refrigeration systems; (2) use necessary tools and apply service techniques taught in this course; (3) test for and repair refrigerant leaks; (4) analyze system for malfunction; (5) choose correct replacement component(s); (6) properly install new part(s); (7) test for proper operation of entire system; (8) employ special equipment to dehydrate and evacuate system; (9) use proper tools and equipment for testing oil and refrigerant charge; (10) install correct refrigerant charge; (11) examine entire system before start-up; (12) start system; (13) evaluate system operation. C.R. PHY 5305, P.R. AHR 5321. (2 - 6) 4

AHR 5432 AIR CONDITIONING - COMMERCIAL: Upon completion of this course the student, with guidance, should be able to: (1) demonstrate full comprehension of the various commercial air conditioning systems; (2) dismantle and reassemble a compressor unit; (3) using appropriate tools and equipment, inspect, test and analyze the entire system and all components thereof; (4) evaluate water cooled towers; (5) select all components necessary and diagram a complete air cooled and water cooled commercial air conditioning system; (6) solve various service problems on systems in lab; (7) compare several piping systems and evaluate each for best performance; (8) appraise several different air distribution systems; (9) solve air distribution problems on lab units; (10) start-up a system and using appropriate tools and equipment, measure system performance. C.R. COM 5500, P.R. AHR 5331. (2 - 6) 4

AHR 5441 GAS HEAT: Upon completion of this course the student, with guidance, should be able to: (1) differentiate between the various types of gas furnaces; (2) distinguish the type of burner used; (3) prepare the jobsite; (4) plan the installation of a given gas furnace; (5) choose the best venting system; (6) select the proper operating and safety controls for a given application; (7) properly design and assemble the gas piping system; (8) test vent and gas piping for leaks and proper operation; (9) dismantle entire furnace and all components, evaluate the condition of same, repair or replace faulty material(s) and re-assemble the complete unit and all components; (10) inspect, start up and assess the completed installation; (11) demonstrate complete comprehension of safety codes through proper interpretation and application of same; (12) measure combustion efficiency. P.R. MAT 5304, AHR 5314. (2 - 6) 4

AHR 5495 DUCT DESIGN II - ROUND DUCT: Upon completion of this course the student should be able to: (1) measure, design and construct no less than ten (10) different sizes of round metal duct; (2) compare different gauges of metal and select the proper gauge for a specific size duct, in accordance with governing codes and/or ordinances; (3) construct round duct using the grooved lock seam, the hammer grooved lock seam, the riveted lap seam, the snap lock seam and the button lock seam; (4) select and construct fittings which are rectangular to round, square to round, square to round with two (2) sides straight, rectangular to round off center, rectangular to round on a pitch and rectangular to round offset; (5) choose, design and construct a round two (2) piece 45 degree angle, a three (3) piece 90 degree round elbow, a round four (4) piece 90 degree riveted elbow, a round three (3) piece offset, a round tee intersecting a round pipe at a 90 degree angle, and a round tee intersecting a round pipe at a 45 degree angle on center. P.R. AHR 5494. (3 - 3) 4

AHR 5594 DUCT DESIGN I - RECTANGULAR DUCT: Upon completion of this course the student should be able to: (1) identify correctly and safely operate all of the hand tools normally found in a sheet metal shop; (2) identify correctly and safely operate all of the metal working machinery usually found in the average sheet metal shop; (3) measure, diagram, cut out and construct nine (9) different types of "seams" or "lock seams" plus three (3) different types of "cleats" essential to the fabrication and installation of metal ductwork; (4) design and construct twelve (12) different rectangular and/or square sections of duct and/or fittings, using various gauges of sheet metal. P.R. MAT 5305, DFT 4254 and AHR 5324. (3 - 6) 5

* P.R. Completion of AHR Diploma Program at CPCC or those with considerable experience in the environmental systems industry or equal.

ANTHROPOLOGY
ARCHITECTURE

ANT 1501 INTRODUCTION TO CULTURAL ANTHROPOLOGY: A cross-cultural system with special emphasis on preliterate societies. Topics include linguistics, subsistence technology, marriage-family-kinship, law and order, war, stratification, religion, economics, personality, and art. (5 - 0) 5

ANT 1511 INTRODUCTION TO PHYSICAL ANTHROPOLOGY: A study of human paleontology, archaeology, primatology, human variation, and cultural history in both the old and new worlds. (5 - 0) 5

ARC 3200 INTRODUCTION TO ARCHITECTURE: Upon course completion the student should be able to: (1) identify the role of the architect and the technician in our society and architectural profession; (2) discuss the development of buildings; (3) list the ways in which architectural design has responded to changes in society which are reflected in the major building types; (4) evaluate

ARC 3300 ARCHITECTURAL STRUCTURAL MODEL CONSTRUCTION: Upon course completion the student should be able to: (1) use basic tools and equipment necessary to build models; (2) build various types of contours and landscape models; (3) construct simple study models for architectural, engineering or interior design study; (4) represent the basic building materials at various scales; (5) construct either architectural, structural or interior models from blueprints; (6) apply color and photography techniques. P.R. ARC 3435 or ability to read blueprints. (2 - 3) 3

ARC 3301 BUILD YOUR

HOME: Upon course completion the student should be able to: (1) evaluate information and procedures required in all facets of building or remodeling a home, including areas of building codes, zoning laws, and site selection; (2) perform basic interior and exterior design programs including selection and use of building materials; (3) recognize the various alternatives in heating and air conditioning, plumbing and electrical systems; (4) review plans, specifications, and other contract documents required in the relationship with contractors and financial institutions. P.R. None. (3 - 0) 3

ARC 3434 ARCHITECTURAL DRAFTING I: Upon completion of this course the student should be able to: (1) use drafting equipment; (2) letter; (3) construct geometric designs; (4) draw isometric drawings, elevations and plans with proper dimensioning; (5) do freehand sketching; (6) apply methods of drawing reproduction. P.R. None. (2 - 4) 4

ARC 3435 ARCHITECTURAL DRAFTING II: Upon completion of this course the student should be able to: (1) apply basic light construction terminology to drawings; (2) draw residential plans, elevations and sections; (3) use reference material and graphic standards; (4) apply basic principles of civil drafting, including topographic contours, profiles and surveying drafting. P.R. ARC 3434. (2 - 4) 4

ARC 3436 ARCHITECTURAL DRAFTING III: Upon course completion the student should be able to: (1) apply basic commercial construction terminology in the development of working drawings; (2) develop architectural details and wall sections from preliminary sketches; (3) draw basic construction elements, such as, stair systems, curtain, walls and incorporate manufacturers building products; (4) organize working drawings to conform to construction sequence. P.R. ARC 3435; C.R. ARC 3404. (2 - 4) 4

ARC 4201 ARCHITECTURAL OFFICE PRACTICE: Upon completion of the course the student should be able to: (1) define the position of the architectural profession within the building field; (2) list the various services which the architect provides and the way a job is processed through the office; (3) discuss the relationship of architectural firms to clients, contracts, suppliers and consultants; (4) outline the organization of small to large architectural firms. P.R. None. (2 - 0) 2

ARC 4300 ARCHITECTURAL MECHANICAL EQUIPMENT: Upon course completion the student should be able to: (1) identify the types of pumping, distribution, and hot water supply systems; (2) size piping layout for a fresh water and a sanitary plumbing system; (3) identify the types of electric wiring and service equipment; (4) associate the types of heating and cooling systems with various classifications of buildings; (5) describe sound and signal systems, and vertical transportation equipment such as elevators. P.R. ARC 3435. (2 - 2) 3

ARC 4310 APPLIED SOLAR ENERGY: Upon completion of this course the student should be able to: (1) utilize conservation techniques in building design to reduce energy consumption; (2) design solar collector panels for a specific requirement; (3) size heat storage requirements for specific buildings; (4) Solve solar energy design problems; (5) Do life cycle costing studies on various solar systems; (6) Utilize passive solar energy systems in building design; (7) Discuss photovoltaic conversion and wind electric conversion; and (8) Discuss other alternate sources of energy utilization. (3 - 0) 3

ARC 4345 ARCHITECTURAL PERSPECTIVE DRAWING I: Upon completion of this course the student should be able to: (1) define perspective drawing vocabulary; (2) layout a perspective drawing using the office method; (3) execute interior one point perspectives; (4) draw curved figures in perspective; (5) construct drawing of reflections. P.R. ARC 3434. (2 - 3) 3

ARC 4346 ARCHITECTURAL PERSPECTIVE DRAWING II: Upon course completion the student should be able to: (1) construct the shadow of a point of a line for perspective drawings; (2) draw shadows cast by a single source of artificial light; (3) render a perspective using pencil, pen and ink showing material texture; (4) draw trees, foliage, figures and auto in perspective. P.R. ARC 4345. (2 - 3) 3

ARC 4437 ARCHITECTURAL DRAFTING IV: Upon completion of this course the student should be able to: (1) identify symbols used for mechanical equipment components; (2) complete a set of plumbing drawings including a riser diagram; (3) draw an electrical plan with a fixture schedule; (4) locate and detail heating and cooling systems when given the architectural drawings of a building. P.R. ARC 3435. (2 - 4) 4

ARC 4438 ARCHITECTURAL DRAFTING V: Upon completion of this course the student should be able to: (1) design and draw plans and shop details for the structural steel of a building including connections; (2) detail the component parts of reinforced concrete structures; (3) analyze continuous beams; (4) design and draw plans for structural timber and formwork. P.R. ARC 3435, CIV 4527, C.R. CIV 4534. (2 - 4) 4

ARC 4439 ARCHITECTURAL DRAFTING VI: Upon course completion the student should be able to: (1) perform as a team member in the preparation of schematic design drawings to meet the building requirements of a hypothetical client; (2) function as a member of the production team in the preparation and presentation of design development drawings; (3) apply the fundamentals of ordinances and regulations pertaining to zoning, traffic and facilities for the physically handicapped; (4) produce, as a member of the team, a set of architectural working drawings, consisting of site plan, floor plans, reflected ceiling plans, elevations, wall sections and details. P.R. ARC 4438, CIV 3504. (2 - 4) 4

ARC 4 94 INDEPENDENT STUDY: This course is designed to provide students with the opportunity to develop special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and program director is required prior to enrollment. P.R. None. (1-5 credits)

ART ART 1300 INTRODUCTION TO ART I: Through the use of lecture, discussions, field trips, readings, and audio-visual materials, the student will analyze, recognize, and understand general terms, media and methods used in the various visual arts with special emphasis on two dimensional arts. (3 - 0) 3

ART 1301 INTRODUCTION TO ART II: Through the use of lectures, discussions, field trips, readings, and audio-visual materials, the student will recognize and understand general terms used in contemporary art. The student will demonstrate an understanding of media and methods used in the three-dimensional arts through projects and examinations. (3 - 0) 3

ART 1302 CHILDREN'S ART: Upon completion of this course, the student should be able to: (1) discuss and compare some of the major trends in the history, psychology, philosophy, and methods of art education, (2) plan, organize, conduct, and evaluate a classroom art experience. (Does not satisfy humanities requirement.) (3 - 0) 3

ART 1303 WOODCUT: Upon completion of this course the student should be able to select woods, execute appropriate designs for woodcut, handle woodcut tools properly, and produce editions of prints using various woodcut techniques. (Does not satisfy humanities requirement.) (0 - 6) 3

ART 1304 GENERAL DRAWING I: Upon completion of this course, the student should be able to identify problems and possible graphic solutions of representing visual experience on the two-dimensional surface. The student will have explored a variety of material including pencil, pen, and ink, conte, and charcoal and will have employed various techniques with an emphasis upon utilizing these materials and techniques as a means of personal expression. (Does not satisfy humanities requirement.) (0 - 6) 3

ART 1305 GENERAL DRAWING II: Upon completion of this course, the student will have been introduced to the study of perspective and other systemized methods of rendering the illusion of form and space. The student will be able to apply elements of good pictorial composition and will have continued to develop technical competence in the use of a variety of material and techniques. P.R. ART 1304 or consent. (Does not satisfy humanities requirement) (0 - 6) 3

ART 1306 GENERAL DRAWING III: Upon completion of this course, the student will be able to analyze the graphic media as a personal expression and will have continued to develop technical competency. P.R. ART 1305 or consent. (Does not satisfy humanities requirement). (0 - 6) 3

ART 1307 BASIC PHOTOGRAPHY: The student will be introduced to the Basics of Photography, including use of the camera, composition, exposure and dark room techniques (does not satisfy Humanities Requirement). (2 - 2) 3

ART 1308 INTERMEDIATE PHOTOGRAPHY: This is a continuation of Art 1307 with the introduction of more advanced camera and dark room techniques, (does not satisfy Humanities Requirement) P.R. ART 1307 or consent. (2 - 2) 3

ART 1309 AVANCED PHOTOGRAPHY: The student will experience Advanced Darkroom Techniques in Film and Print Processing, Specialized instruction in specific areas and regular critiques of Photography provided. P.R. Art 1308 (does not satisfy Humanities Requirement). (2 - 2) 3

ART 1310 HISTORY OF ART I: The student will survey major visual arts and the influence of the historical past on the concepts and form of contemporary creative endeavor. Prehistoric through Early Gothic. (3 - 0) 3

ART 1311 HISTORY OF ART II: The student will survey major arts and the influence of the historical past on the concepts and form of contemporary creative endeavor. The Late Gothic through Renaissance to Baroque. (3 - 0) 3

ART 1312 HISTORY OF ART III: The student will survey the major arts and the influence of the historical past on the concepts and form of contemporary creative endeavor. Neoclassicism and Romanticism through the twentieth century. (3 - 0) 3

ART 1314 BASIC WOOD WORKING: Upon completion the student will know the characteristics of a variety of woods and will be able to properly use powered and hand tools in the processes of shaping, joining, and finishing wood. (Does not satisfy humanities requirement) (0 - 6) 3

ART 1315 INTERMEDIATE WOODWORKING: Using and improving the knowledge and skills acquired in basic woodworking the student will produce finished woodworking projects. P.R. 1314 or consent (Does not satisfy humanities requirement.) (0 - 6) 3

ART 1316 ADVANCED WOODWORKING: Continuing to expand knowledge and skills from basic and intermediate woodworking, the student will design and produce original projects in wood. P.R. ART 1315 or consent. (Does not satisfy humanities requirement.) (0 - 6) 3

- ART 1317 FURNITURE RESTORATION I: After completing this course, the student will be capable of identifying the presence of shellac, lacquer, oil, and varnish finishes on furniture. He will know the process for removing old wood finishes, applying oil stains, bleaching wood, proper sanding methods, applying new finishes, and proper waxing techniques. (Does not satisfy humanities requirement.) (0 - 6) 3
- ART 1318 FURNITURE RESTORATION II: The student will continue to improve his skills in applying new finishes, sanding techniques, and waxing furniture. In addition, he will learn how to operate woodworking tools, and to perform minor repairs on furniture. He will learn the distinctions between oil stains, varnish stains, sealer stains, spirit stains, and water stains, when each should be used and how to apply them. P.R. ART 1317 or consent. (does not satisfy humanities requirements.) (0 - 6) 3
- ART 1319 FURNITURE RESTORATION III: The student will further his craftsmanship in removing old finishes and applying new ones. He will demonstrate his ability to perform major repairs on furniture including chair caning, repairing inlay, repairing veneer and mending broken wood. P.R. ART 1318 or consent. (Does not satisfy humanities requirement.) (0 - 6) 3
- ART 1321 SERIGRAPHY: Students will demonstrate an understanding of silk screening as a fine art by designing and producing editions of prints which use various techniques such as tusche and glue, crayon and glue and paper stencils. (Does not satisfy humanities requirements.) (0 - 6) 3
- ART 1322 CRAFTS: Upon completion of this course, the student should be able to: (1) identify and describe major textile craft forms, (2) design, construct, and exhibit textile craft projects. Crafts will include stitchery, macrame, hand-weaving, tie-dyeing and batik. (Does not satisfy humanities requirement.) (0 - 6) 3
- ART 1324 DESIGN I: Upon completion of this course the student will be able to identify and use the principles and elements of design as they relate to the two-dimensional surface. Flat pattern development, pictorial composition, depiction of spacial illusion, and value analysis will have been studied. (Does not satisfy humanities requirement.) (0 - 6) 3
- ART 1325 DESIGN II: The student will continue the analysis and implementation of the principles and elements of design with an emphasis upon color theory. P.R. 1324 or consent. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1326 DESIGN III: The student will continue the study of principles of design and will employ these principles for works in both two and three dimensions. Emphasis will be upon personal solutions to design problems. P.R. ART 1325 or consent. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1327 SCULPTURE I: In this course the student will experiment with a variety of materials and methods of sculpture. The student will construct and use piece molds to reproduce their clay originals. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1328 SCULPTURE II: The student will continue to experiment with a variety of materials and methods of sculpture. There will be an emphasis on carving in wood and stone. P.R. ART 1327 or consent. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1329 SCULPTURE III: Upon completion of this course, the student will have (1) expanded knowledge of basic sculpture (2) performed individual investigation and work in modeling, casting, carving, and construction (3) experimented with recently developed media in sculpture. P.R. ART 1328 or consent. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1334 PAINTING I: Upon completion of this course, the student will be able to select tools and materials for painting and will be able to demonstrate a knowledge of the elements of art and the principles of design as they apply to the production of painting. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1335 PAINTING II: The student will continue the analysis and production of good pictorial composition and will continue experimentation in a variety of painting media. P.R. ART 1334 or consent. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1336 PAINTING III: The student will give special attention to painting as a means of personal expression and will continue to identify and solve the problems of pictorial production such as color, form, and special illusion. The student will continue technical experimentation. P.R. ART 1335 or consent. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1364 CERAMICS I: Upon completion of this course, the student should be able to: (1) design and produce ceramic projects by the pinch pot, coil, slab, and potter's wheel methods (2) weigh, mix, and apply glaze formulas to ceramic projects. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1365 CERAMICS II: Upon completion of this course, the student should be able to: (1) design and produce ceramic projects building on the foundation of skills acquired in Ceramics I (2) construct one major sculpture project which will combine at least one additional material with the clay (3) keep an individual test tile record of glaze experiments. P.R. ART 1364. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1366 CERAMICS III: Upon completion of this course, the student should be able to: (1) design and produce ceramic projects building on the foundation of skills acquired in Ceramics I and II, (2) formulate a base glaze with variations, (3) describe how to load, fire, and unload a gas and an electric kiln. P.R. ART 1365. (Does not satisfy humanities requirement) (0 - 6) 3
- ART 1374 JEWELRY I: Upon completion of this course, the student should be able to: (1) design and produce finished metal jewelry projects (2) demonstrate a knowledge of and proper care for jewelry tools and equipment (3) demonstrate the ability to saw, file, forge, solder, cast, and finish a variety of metals. (Does not satisfy humanities requirement) (0 - 6) 3

jewelry tools and equipment (3) demonstrate the ability to saw, file, forge, solder, cast, and finish a variety of metals. (Does not satisfy humanities requirement) (0 - 6) 3

ART 1375 JEWELRY II: Upon completion of this course, the student should be able to: (1) design and produce finished jewelry projects building on basic skills acquired in Jewelry I (2) demonstrate a knowledge of and proper care for jewelry tools and equipment including centrifugal casting equipment. P.R. ART 1374. (Does not satisfy humanities requirements) (0 - 6) 3

ART 1376 JEWELRY III: Upon completion of this course, the student should be able to: (1) design and produce finished jewelry projects building on the basic skills acquired in Jewelry I and II (2) demonstrate a knowledge of and proper care for jewelry tools and equipment. Emphasis will be on the relationship of material, function, and individual approach of the student. P.R. ART 1375. (Does not satisfy humanities requirement) (0 - 6) 3

ART 2304 INDEPENDENT STUDIO: A course designed to permit the student to work beyond the limits of the regular sequence of courses in a particular area of art. As the course title indicates, the student will be working independently on self-determined objectives utilizing the resources of the Art Department. P.R. Completed sequence of art courses in the area of proposed independent study. (0 - 6) 3

AUTOMOTIVE BODY REPAIR

AUB 5100 SEMINAR: A one hour rap session with films, field trips and outside speakers designed to broaden students' knowledge of the Auto Body Repair field. P.R. None, C.R. AUB 5412. (1 - 0) 1

AUB 5101 SEMINAR: A one hour rap session with films, field trips and outside speakers designed to broaden students' knowledge of the Auto Body Repair field. P.R. None. C.R. AUB 5421. (1 - 0) 1

AUB 5102 SEMINAR: A one hour rap session with films, field trips and outside speakers designed to broaden students' knowledge of the Auto Body Repair field. P.R. None. C.R. AUB 5431. (1 - 0) 1

AUB 5201 TRIM AND GLASS: Upon completion of this course a student should be able to: (1) disassemble and rebuild car doors; (2) remove and install windshields; (3) repair vinyl tops; (4) aim headlights; (5) test cooling systems; (6) remove and replace seat covers and side trim. P.R. None. (1 - 3) 2

AUB 5202 AUTO RENEWAL: Upon completion of this course a student should be able to: (1) clean and repaint engines; (2) clean and dye seats and doors; (3) clean and dye headliners and carpets; (4) renew trunk and engine compartments; (5) buff and polish exterior surfaces; (6) clean and restore chrome; (7) clean and dress vinyl tops and convertible tops. P.R. None. (1 - 3) 2

AUB 5203 ESTIMATING AUTO DAMAGE: Upon completion of this course a student should be able to: (1) read a crash estimating guide; (2) prepare a damage estimate; (3) interpret an estimate; (4) estimate straight time costs. P.R. None. (2 - 0) 2

AUB 5214 DOOR AND FENDER ALIGNMENT: Upon completion of this course the student should be able to: (1) align the hood and fenders of cars; (2) align the doors of cars; (3) align deck lids of cars; (4) replace the chassis sheet metal of a car as a unit. C.R. WLD 5110. P.R. None. (1 - 3) 2

AUB 5223 FIBERGLASS AND METALLIC FILLERS: Upon completion of this course the student should be able to: (1) solder fill minor dents; (2) fiberglass fill small cracks and openings; (3) use powdered metal to fill rusted areas; (4) finish minor body defects using hammer and dolly, files, grinders, sanders and related tools. C.R. AUB 5421. P.R. None. (1 - 3) 2

AUB 5224 PANEL INSTALLATION: Upon completion of this course the student should be able to: (1) remove damaged sheet metal panels; (2) use a power chisel; (3) install partial panels, patch panels and full panels; (4) use pop rivets; (5) use a panel spotter and wire spot welder. C.R. AUB 5421. P.R. None. (1 - 3) 2

AUB 5233 LACQUER PAINTING: Upon completion of this course the student should be able to: (1) spray paint using various lacquers; (2) sand and prepare a car for lacquer painting; (3) buff and finish a car after lacquer painting; (4) spot paint using lacquer paint; (5) seal and paint lacquer over old surfaces. P.R. None. C.R. AUB 5431. (1 - 3) 2

AUB 5234 ENAMEL PAINTING: Upon completion of this course the student should be able to: (1) sand and prepare a car for enamel painting; (2) spray paint using various enamel paints; (3) paint a single panel using enamel paint. P.R. None. C.R. AUB 5431. (1 - 3) 2

AUB 5235 SPECIAL FINISHES: Upon completion of this course the student should be able to: (1) spray paint a vinyl top; (2) paint trunk compartments; (3) paint plastic parts; (4) pin-stripe; (5) use various custom paints. P.R. None. C.R. AUB 5431, AUB 5233. (1 - 3) 2

AUB 5344 BODY SHOP APPLICATIONS: Upon completion of this course the student will have: (1) gained confidence and skill in the use of all the techniques covered in the previous courses; (2) worked on actual collision repairs using the same methods and practices as recommended by the automobile manufacturers and related industry. P.R. All AUB prefix course first three quarters. (0 - 9) 3

AUB 5345 BODY SHOP APPLICATIONS: A continuation of AUB 5344. P.R. AUB 5344. (0 - 9) 3

AUB 5346 BODY SHOP APPLICATIONS: A continuation of AUB 5344. P.R. AUB 5345. (0 - 9) 3

AUB 5347 BODY SHOP APPLICATIONS: A continuation of AUB 5344. P.R. AUB 5346. (0 - 9) 3

- AUB 5390 INDIVIDUAL STUDY: Upon completion of this course the student will have: (1) written repair estimates; (2) completed repair orders; (3) ordered necessary parts, materials and supplies; (4) made a variety of repairs to automobiles and light trucks using hand tools, power tools, hydraulic jacks and other equipment; (5) worked at his own pace and developed skills at his own rate completing each project to commercial standards. P.R. All AUB prefix courses through first three quarters. (0 - 9) 3
- AUB 5412 FRAME AND DOOR ALIGNMENT: Upon completion of this course the student should be able to: (1) use frame gages; (2) use hydraulic tools for straightening body damage; (3) align body openings; (4) describe the types of major frame damage; (5) tie down a car; (6) use a frame machine to straighten frame damage. P.R. None. C.R. WLD 5110. (2 - 6) 4
- AUB 5421 METAL FINISHING AND PLASTIC FILLERS: Upon completion of this course the student should be able to: (1) shrink sheet metal; (2) use a hammer and dolly; (3) rough out and fill dents; (4) finish dents with plastic fillers; (5) use a grinder, body file and long sander. P.R. None. C.R. WLD 5110. (2 - 6) 4
- AUB 5431 PAINT EQUIPMENT AND PREPARATION: Upon completion of this course the student should be able to: (1) disassemble, clean and reassemble a paint spray gun; (2) maintain a spray paint system; (3) select spray paint equipment; (4) sand and mask a car prior to painting; (5) use the basic techniques of spray painting. P.R. None. (2 - 6) 4
- AUT 5110 ELECTRICAL TESTING: Upon completion of this course the student will be able to: (1) operate automotive electrical diagnostic equipment. P.R. AUT 5242. (0 - 3) 1
- AUT 5114 AUTOMOTIVE AIR CONDITIONING: Upon completion of this course the student will be able to: (1) describe the operation and construction of an air conditioning system; (2) evacuate and charge an automotive air conditioning system; (3) trouble-shoot auto air conditioning; (4) describe the proper handling precautions of refrigerants. P.R. None. (0 - 3) 1
- AUT 5204 ORIENTATION TO CO-OP: Upon completion of this course the student will have: (1) demonstrated ability to complete a job application form; (2) satisfactorily completed a simulated job interview; (3) described in writing, twelve student actions that will lead to positive employee/ employer relations; (4) with the support of the program faculty, located his/her co-op training station. P.R. Completion of first and second quarter. (2 - 0) 2
- AUT 5211 BASIC FUEL SYSTEMS: Upon completion of this course the student will be able to: (1) disassemble, repair as necessary, and reassemble all major truck manufacturers' carburetors; (2) describe the operation and construction of major truck manufacturers' carburetors, and fuel pumps; (3) test fuel pump pressure. P.R. None, C.R. DSL 5300. (1 - 3) 2
- AUT 5242 BASIC ELECTRICAL SYSTEMS: Upon completion of this course the student will be able to: (1) disassemble, repair if necessary, and reassemble major truck manufacturers' generators, alternators, starters (electric) and distributors; (2) describe the operation and construction of the above listed components. P.R. None, C.R. DSL 5300. (1 - 3) 2
- AUT 5391 AUTOMOTIVE INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department chairman is required. P.R. None. (3 - 0) 3
- AUT 5401 INTERNAL COMBUSTION ENGINES I: Upon completion of this course the student will be able to: (1) disassemble, measure parts, reassemble, run selected automobile engines and adjust to manufacturers specifications. P.R. None. (2 - 6) 4
- AUT 5402 INTERNAL COMBUSTION ENGINES II: Upon completion of this course the student will be able to: (1) disassemble, measure parts, reassemble, run selected automobile engines and adjust to manufacturers specifications; (2) grind valves and reface seats on cylinder heads; (3) remove and install cam bearings using special tools. P.R. AUT 5401. (2 - 6) 4
- AUT 5404 AUTO CHASSIS AND SUSPENSION SYSTEMS: Upon completion of this course the student will be able to: (1) disassemble, repair as necessary, reassemble the following components; (a) manual and power steering, (b) front and rear suspension unit, (c) drum and disk type brakes; (2) check and adjust front end alignment angles; (3) balance wheels. P.R. None. (2 - 6) 4
- AUT 5405 FUEL SYSTEMS: Upon completion of this course the student will be able to: (1) disassemble, repair as necessary, and reassemble all major United States' manufacturers carburetors; (2) describe the operations and construction of carburetors, fuel pumps and modern emission control devices. P.R. None. (2 - 6) 4
- AUT 5415 ELECTRICAL SYSTEMS I: Upon completion of this course the student will be able to: (1) disassemble, repair as necessary, reassemble and test automobile generators, alternators, starters, distributors and electrical accessories; (2) describe the operation and construction of the above automobile components. P.R. None. (2 - 6) 4
- AUT 5416 ELECTRICAL SYSTEMS II: Upon completion of this course the student will be able to: (1) operate automotive electrical diagnostic equipment; (2) describe the procedures used in an automotive tune-up. P.R. AUT 5415. (2 - 6) 4

AUT 5425 AUTO POWER TRAIN SYSTEMS I: Upon completion of this course the student will be able to: (1) disassemble, repair as necessary, and reassemble the following components; (a) three and four speed manual transmissions; (b) drivelines; (c) differential units. P.R. None. (2 - 6) 4

AUT 5426 AUTO POWER TRAIN SYSTEMS II: Upon completion of this course the student will be able to: (1) disassemble, repair as necessary, and reassemble the following automatic transmissions; (a) General Motors Powerglide; (b) C-4 Ford; (c) General Motors Turbo-350; (d) Chrysler Torqueflite. P.R. AUT 5425. (2 - 6) 4

AUT 5695 AUTO MECHANICS CO-OP: Upon completion of this course the student should be able to: (1) produce and describe a master work log sheet containing the various types and number of job tasks completed in an automotive service agency during this cooperative work experience; (2) make the transition from the classroom and lab to an actual job in the automotive industry with little or no difficulty. P.R. Fourth quarter standing in Auto Mechanics Program. (2 - 22) 4

AUT 5800 INTERNAL COMBUSTION ENGINES: Upon completion of this course the student will be able to: (1) disassemble, measure parts, reassemble, run selected automobile engines, and adjust to manufacturers specifications; (2) grind valves and reface seats on cylinder heads; (3) remove and install cam bearings using special tools. P.R. None. (4 - 12) 8

AUT 5814 ELECTRICAL SYSTEMS: Upon completion of this course the student will be able to: (1) disassemble, repair as necessary, reassemble and test automobile generators, alternators, starters, distributors and electrical accessories; (2) describe the operation and construction of the above automobile components; (3) operate automotive electrical diagnostic equipment; (4) describe the procedures used in an automotive tune-up. P.R. None. (4 - 12) 8

AUT 5824 AUTO POWER TRAIN SYSTEMS: Upon completion of this course the student will be able to disassemble, repair as necessary, and reassemble the following components: (1) three and four speed manual transmissions; (2) drivelines and U-joints; (3) differential units; (4) Powerglide Automatic transmissions; (5) C-4 Ford Automatic transmissions; (6) Turbo-350 Automatic transmissions; (7) Torque-Flite Automatic transmissions. P.R. None. (4 - 12) 8

BANKING AND FINANCE
BAF 3301 BANK MANAGEMENT: The student will be introduced to new trends which have emerged in the philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management. Since case study is becoming well established as an effective management learning technique, illustrative cases are used. (3 - 0) 3

BAF 3400 PRINCIPLES OF BANK OPERATIONS: This course presents the fundamentals of bank functions in a descriptive fashion so that the beginning banker may acquire a broad (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective so necessary for career advancement. (3 - 2) 4

BAF 4301 MANAGEMENT OF COMMERCIAL BANK FUNDS: This course deals with those necessary principles from which the student can derive an adequate philosophy of funds management. Differences between practices in large banks and smaller institutions are spelled out so that this study is useful to bankers in institutions of all sizes. The student will learn the importance of funds management as the catalyst that brings together policies in the areas of loans, deposits, investments, and capital, and relates each to the other. (3 - 0) 3

BAF 4302 FEDERAL RESERVE SYSTEM: The student will examine the operations and policies of the Federal Reserve System during critical periods over the past 60 years. The approach taken is topical rather than chronological, thereby enabling a student to compare and contrast Federal Reserve policies dealing with similar problems at different periods in time. Attention is given to international monetary affairs and economic developments affecting the American fiscal system. (3 - 0) 3

BAF 4400 LOAN CREDIT ANALYSIS: The student will learn practical work in credit analysis of an individual or a business seeking a bank loan. Assets and liabilities of the borrower will be examined for short and long term risk and the potential cash flow developed. Projected statements as well as cash and operating budgets will be prepared and analyzed as aids to sound credit analysis. Accepted financial ratios are studied and applied to representative financial statements. Particular emphasis is placed on verification of the borrower's assets and liabilities. (3 - 2) 4

BAF 4403 INTERNATIONAL BANKING: The successful completion of this course will enable the student to understand the basic framework and fundamentals of international banking: how money is transferred from one country to another, how trade is financed, what the international agencies are and how they supplement the work of commercial banks, and how money is changed from one currency to another. (3 - 2) 4

BIOLOGICAL SCIENCE
BIO 1500 BIOLOGICAL SCIENCE: A foundation course designed to introduce selected fundamental biological principles. Upon satisfactory completion of this course the student will be able to demonstrate an understanding of the following topics: the cell, reproduction, genetics, embryology, transport mechanisms, photosynthesis, respiration, evolution, and ecology. (3 - 4) 5

BIO 1501 GENERAL BOTANY: An introductory study of green and non-green plants. Upon satisfactory completion of this course the student will be able to demonstrate a knowledge of the following topics: plant cell structure and function, taxonomy reproduction, genetics, mineral nutrition, and ecology. P.R. BIO 1500 suggested but not required. (3 - 4) 5

- BIO 1502 GENERAL ZOOLOGY: An introductory study of the major groups of animals. Upon satisfactory completion of this course the student should be able to demonstrate knowledge of animal anatomy, physiology, homology, ecology, life histories, classification, and evolution. P.R. BIO 1500 suggested but not required. (3 - 4) 5
- BIO 1503 MICROBIOLOGY: An introduction to the world of Microorganisms - bacteria, viruses, fungi, protozoa and Rickettsia - with emphasis upon bacteria. The student, upon satisfactory completion of this course, will have gained knowledge of the structure of Microorganisms, interrelationships between them, factors influencing their growth, and some effects of their activities upon man. (3 - 4) 5
- BIO 1504 HUMAN ANATOMY AND PHYSIOLOGY I: An introductory course in the normal structure and function of human body systems emphasizing interrelationships of each. Upon satisfactory completion of this course the student will be able to demonstrate knowledge of the following systems: cellular biology, tissues, skeletal, muscular, nervous, and sense organs. (3 - 4) 5
- BIO 1505 HUMAN ANATOMY AND PHYSIOLOGY II: A continuation of BIO 1504 with emphasis on the following systems: circulatory, respiratory, digestion, endocrine, reproduction, urinary, acid base, fluid-electrolyte. (3 - 4) 5
- BIO 2300 GENETICS: A study of the fundamental laws of heredity with emphasis on human heredity. Having satisfactorily completed this course a student will be able to demonstrate a working knowledge of the behavior of chromosomes and genes, mutation chromosomal abnormalities. Quantitative inheritance, gene and chromosome structure, cytoplasmic inheritance, evolution, population genetics, environment and heredity, eugenics. (3 - 0) 3
- BIO 2304 HUMAN NUTRITION: Upon successful completion of this course the student should be able to identify sources and functions of nutrients and relate them to the life cycle, and interpret modified diets. (3 - 0) 3
- BIO 2305 DENTAL NUTRITION: Upon successful completion of this course the student should be able to identify sources and functions of nutrients and relate them to the life cycle and have a basic understanding of principles of interviewing. (3 - 0) 3
- BIO 2500 INTRODUCTION TO ENTOMOLOGY: A basic course designed to give a practical approach to the study of insects. Upon satisfactory completion of this course the student should be able to demonstrate a knowledge of the fundamentals of insect classification, development, food habits, and controls. (3 - 4) 5
- BIO 2501 ORNITHOLOGY: An introduction to the study of birds. Upon satisfactory completion of this course the student should be able to demonstrate knowledge of anatomy, physiology, ecology, life histories, behavior, evolution, and identification of birds. (3 - 4) 5
- BIO 2502 MARINE BIOLOGY: Upon satisfactory completion of this course, the student should be able to demonstrate, orally or in writing, understanding of topics on marine biology, with emphasis on field studies of various marine habitats (including the beach intertidal zone, the salt marsh, mud flats, salt water creeks and the open ocean). P.R. BIO 1502 or consent of instructor. (3 - 4) 5
- BIO 2504 SELECTED TOPICS IN BIOLOGY: This course is offered in order to comply with the needs of students who want subject matter not included in the other courses offered by the biology department. Upon satisfactory completion the student should have an understanding of the following topics: Animal Behavior, Embryology, Histology, Exercise Physiology, Parasitology, Physiology, Crop Plants, Local Flora, Plant Anatomy, and Plant Morphology. P.R. Consent of the Department. (3 - 4) 5
- BIO 2514 VERTEBRATE ZOOLOGY: An introductory study of the vertebrate animals. Upon satisfactory completion of this course the student should be able to demonstrate knowledge of vertebrate anatomy, physiology, embryology, systematics, homology, life histories, ecology, behavior, and evolution. P.R. BIO 1500 or consent. (3 - 4) 5
- BIO 2524 GENERAL ECOLOGY: An introductory course in general ecology and environmental functions. Upon satisfactory completion of this course the student should be able to demonstrate a knowledge in the following areas: animal and plant relationships, habitats, energy flow, biogeochemical cycles and the economic importance of ecology. A laboratory is included which should point out to the student the importance of pollution problems and their effects on normal ecological systems. (3 - 4) 5
- BIO 3304 CARDIO-PULMONARY ANATOMY AND PHYSIOLOGY: A specialized course to provide an in-depth study of cardiovascular and respiratory functions and their interrelationships. Upon satisfactory completion of this course the student will be able to demonstrate an understanding of Circulatory and Respiratory Anatomy and Physiology. Emphasis is placed on the interpretation of blood-gas measurements. (2 - 2) 3
- BIO 3500 BASIC HEALTH SCIENCE: An introductory course in the normal structure and function of the human body. Upon satisfactory completion of this course the student should be able to discuss the anatomy, physiology, and interrelationships of the following systems: musculoskeletal, nervous, circulatory, respiratory, urinary, endocrine, and reproductive. (3 - 4) 5

- BUSINESS** BUS 1400 INTRODUCTION TO BUSINESS: The student will have a basic understanding of the following concepts at the completion of the course: (1) The economic and political environment of business; (2) the forms of business organization; (3) the functions of business; and (4) the role of management. (3 - 2) 4
- BUS 2304 BUSINESS LAW I: Upon the successful completion of this course the student will be acquainted with the general structure of our court systems and understand how they relate to everyday living and to business. The student will also have the ability to recognize a business crime and a tort as well as have a general understanding of contract law and how the Uniform Commercial Code affects contracts. (3 - 0) 3
- BUS 2305 BUSINESS LAW II: In this course the student will continue his study of the Uniform Commercial Code and other business laws. Upon successful completion of this course the student will have a working knowledge of Sales, Commercial Paper, Secured Transactions, Insurance and Bankruptcy. P.R. BUS 2304 or consent of department head. (3 - 0) 3
- BUS 2306 BUSINESS LAW III: Upon successful completion of this course the student will have an understanding of Agency and what affects Agency has on the rights and liabilities of the principal, agent and third party. He will also understand the difference between Partnerships and Corporations and the general rights and liabilities created by each. The student will further be introduced to the laws governing Employment Contracts, Personal Property, Real Property, Trusts and Estates. P.R. BUS 2305 or consent of department head. (3 - 0) 3
- BUS 2314 BUSINESS MANAGEMENT: The student will examine in depth the principles of management. Upon successful completion of the course the student will have a working knowledge of how planning, organizing, staffing, directing and controlling a firm's operations affect a business. Case studies and a company analysis are used as intergral parts of the learning process. P.R. BUS 1400. (3 - 0) 3
- BUS 3300 APPLIED PSYCHOLOGY: The student will participate in understanding and applying the basic concepts and principles of psychology which will enable him to further his comprehension of interpersonal relationships relative to his identity as well as group and family relationships. Special emphasis is focused on employment roles, personal motivations, feelings, attitudes, and emotions, and on-the-job problems. Individual attention is given to these personal and group dynamics in order to facilitate the student's application of these mental hygiene principles to his adjustment as a member of the general community and as an employee. (3 - 0) 3
- BUS 3304 BUSINESS STATISTICS: At the completion of this course the student will be able to demonstrate competence in the following three areas of statistics: (1) Descriptive measures; (2) Simple correlations; and (3) Trend analyses. P.R. FIN 3315. (3 - 0) 3
- BUS 3320 SALES DEVELOPMENT: The student will make an analysis of the principles and techniques of effective selling. The qualifications, training and obligations of the salesman are emphasized through sales demonstrations and interviews. (3 - 0) 3
- BUS 3324 MARKETING: The student is introduced to the overall system of distributing goods and services. The course deals with marketing functions and policies, product line, brands, channels of distribution, advertising and price policies. P.R. BUS 1400 or consent of department head. (3 - 0) 3
- BUS 3340 PRINCIPLES OF RISK AND INSURANCE: The student will learn the principles of purse risk, risk management, and insuring techniques in the context of the managerial decision-making process. Topics include risk and the nature of insuring devices, life, health, retirement, property, and liability insuring devices; planning and integrating risk treatment programs; and insuring organizations and their functions. (3 - 0) 3
- BUS 3341 PROPERTY AND CASUALTY INSURANCE: The student will analyzs casualty coverages available, with emphasis on the personal and business needs for property and liability insurance; and the underwriting, marketing and social problems or issues pertaining to casualty or liability insurance. (3 - 0) 3
- BUS 3342 LIFE AND HEALTH INSURANCE: The student will examine a basic analysis of personal and business needs for life and health insurance and the characteristics of the various plans appropriate to meet the needs. Consideration is given to unique legal considerations important to life insurance, the impact on the needs of group life and health insurance, pensions, social security, veterans benefits, beneficiary provisions and settlement options. (3 - 0) 3
- BUS 3343 MONEY AND BANKING: The student will understand the principles of commerical and central banking including monetary and income theory. Students will be able to apply their understanding and knowledge of federal fiscal and monetary policy to current problems in international monetary relations. (3 - 0) 3
- BUS 3350 HIGHWAY TRANSPORTATION: The student will examine the development of the motor carrier industry, classification of highway users, types of motor carriers, types of operations and services performed; state and federal safety regulations, highway policies and "barriers"; organization and operation of a motor carrier; terminals, facilities, types of equipment and cost, insurance, financing and labor relations. (3 - 0) 3

- BUS 3360 REAL ESTATE PROPERTY MANAGEMENT: The student will make a detailed study of property management. Upon successful completion of this course the student should have a good understanding of leasing, maintenance, market analysis and zoning practices and how each affects the management of property. P.R. BUS 3465 or current N.C. Real Estate License and consent of department head. (3 - 0) 3
- BUS 3364 RESIDENTIAL REAL ESTATE APPRAISAL I: The student is introduced to the product and tools necessary in appraising such as: nature and definitions of value; nature and objectives of appraisals; economic principles and value theory; the appraisal process; preparing form and narrative appraisal reports; estimating building reproduction costs; land accrued depreciation of building value; appraising residential real estate by the cost approach to value; and the code of ethics. P.R. BUS 3465 or current N.C. Real Estate License and consent of department head. (3 - 0) 3
- BUS 3365 RESIDENTIAL REAL ESTATE APPRAISAL II: The student will further examine the methods and techniques used in estimating value of residential properties. In addition the student will learn how to use the three approaches to value -- cost approach, market data approach, and the gross rent multiplier and also sources of appraisal information; mechanics of inspecting sites and buildings; how to make the final estimate of value; and the mechanics of listing. Upon completion of this course successfully, the student should be able to appraise residential real estate and use this ability to serve clients and customers. P.R. BUS 3364 or consent of department head. (3 - 0) 3
- BUS 3450 MOTOR CARRIER RATES: The student will take a problem approach to the study of motor carrier rates and charges. Emphasis is placed on tariffs published by the Southern Motor Carriers Rate Conference. Consideration is also given to rail and trailer-on-flat-car rates. (3 - 2) 3
- BUS 3451 TRAFFIC MANAGEMENT: The student will make a study of the management of the flow of goods in commerce including the organization and duties of a traffic department, effective employment of for-hire carrier services and private transportation. Emphasis is placed on shipping, receiving, routing, warehousing, transit privileges, exports and imports, documentation, and procedure before rate and classification bureaus. (3 - 2) 4
- BUS 3464 REAL ESTATE BROKERAGE I: Upon completion of this course successfully the student will have a comprehensive background in the basics of real estate brokerage. The student will be introduced to real estate licensing laws, real estate terminology, basic technical laws that apply to real property and personal property, preparation and use of listings, contracts, deeds, and practical real estate mathematics. (4 - 0) 4
- BUS 3465 REAL ESTATE BROKERAGE II: Upon satisfactory completion of both BUS 3464 and BUS 3465, the student will be certified by the College as having met the educational requirements agreed upon between CPCC and the North Carolina Real Estate Licensing Board for admission to the N. C. Real Estate Broker's Licensing Examination. The student should be able to: (1) pass the examination required to obtain a broker's license; (2) enter the real estate business as an agent or as an employee of an established firm; and (3) in some instances, start an independent real estate brokerage firm. The student will have an understanding of: mortgage/equity capitalization for financed purchases; effects of ownership period on value; estimating value; lease interests; and the application of special techniques and mathematics to ownership and investment analysis problems. P.R. BUS 4365 and BUS 3464 or consent of department head. (4 - 0) 4
- BUS 4320 RETAILING: In this course the student will make a study of the role of retailing in our distribution system. Topics include the development of present retail practices, functions performed, principles governing effective operation, and managerial problems resulting from current economic and social trends. (3 - 0) 3
- BUS 4321 ADVERTISING: The student will examine advertising from three different points of view: the marketing viewpoint, the communications viewpoint, and the viewpoint of the citizen who is exposed to advertising, everyday, to provide a better understanding of the force of advertising in our economic environment. (3 - 0) 3
- BUS 4322 PURCHASING: The student is exposed to the organization of industrial and commercial purchasing, methods of procurement, purchasing policies, sources of supply and legal aspects. P.R. BUS 3324 or consent of department head. (3 - 0) 3
- BUS 4324 MARKETING SEMINAR: A continuing analysis of the marketing functions is made by the student with an emphasis on case study and strategical techniques used in the distribution cycle. P.R. BUS 3324 or consent of department head. (3 - 0) 3
- BUS 4330 SUPERVISION: The student will examine the critically important and principal concepts of modern-day first-line supervision. Emphasis is placed on the supervisor's major functions, his face-to-face relations with others, and his intellectual, emotional and ethical development. (3 - 0) 3
- BUS 4331 ADMINISTRATIVE OFFICE MANAGEMENT: This course involves principles and actual practices in the management of the flow of information within an enterprise. The student will study the basic management functions of planning, controlling, organizing, and coordination as applied to offices, services, physical facilities, systems and procedures, work measurement and standards, and business information systems. (3 - 0) 3

- BUS 4332 PERSONNEL MANAGEMENT: The student is introduced to the operation of a personnel department. Emphasis is placed on the scientific management of manpower through personnel policies pertaining to recruitment, selection, placement, training, promotion, health and safety and employee services. (3 - 0) 3
- BUS 4333 PRODUCTION PLANNING AND CONTROL: This course provides the student with an indepth study of the managerial and technical skills involved in the planning and control of the production process in a manufacturing organization. Procedures and performances will be developed to improve the contribution to management objectives such as increased machine and labor utilization, tighter control of operations and inventory control, and to provide better customer satisfaction. (3 - 0) 3
- BUS 4334 MANAGEMENT SEMINAR: A course designed to develop the student's deductive and decision-making abilities in the management area. Lectures, case studies, and critical incident analysis are some of the teaching techniques used. P.R. BUS 2300, BUS 4330 and BUS 4332 or consent of department head. (3 - 0) 3
- BUS 4340 CONSUMER CREDIT: At the completion of this course the student should have an understanding of (1) the types of consumer credit and (2) the management and analysis of consumer credit. (3 - 0) 3
- BUS 4341 COMMERCIAL CREDIT: The student will gain an understanding of the management of the commercial credit function with an emphasis on credit decision making and financial statement analysis. (3 - 0) 3
- BUS 4344 CREDIT MANAGEMENT PROBLEMS: This course incorporates the case method of solving various credit problems which a credit executive might expect to encounter in the daily performance of his work. Credit decision based on different situations using financial statement, analysis, credit reports, bank references, etc., will be required of the student. The course offers an opportunity for direct dialogue between student and instructor. P.R. BUS 4341 and FIN 4317 or consent of department head. (3 - 0) 3
- BUS 4350 RAILROAD TRANSPORTATION: The student will survey the development, ownership, and control of railroads; Organization of the Association of American Railroads, its duties and functions; Railroad systems; services; equipment; car service; per diem and interchange rules; trailer-on-flatcar and other rail-motor services. Railroad publications and their uses are also considered. (3 - 0) 3
- BUS 4351 TRAFFIC CLAIMS: The student will conduct a comprehensive analysis of rights and liabilities of common carriers, consignors and consignees, claim procedures, settlements, and prevention of loss and damage claims. (3 - 0) 3
- BUS 4354 TRANSPORTATION LAW I: The student will make a thorough analysis of the Interstate Commerce Act. The history of this Act, court cases interpreting it, and related acts affecting interstate commerce are studied. (3 - 0) 3
- BUS 4355 TRANSPORTATION LAW II: A detailed study of the procedure of appearing and presentment of cases before the Interstate Commerce Commission is made by the student. The various causes of action arising in violation or application of the law are studied. This course is designed to assist the student in passing the ICC practitioners examination. P.R. BUS 4354 or consent of department head. (3 - 0) 3
- BUS 4356 HIGHWAY TRANSPORTATION MANAGEMENT: The student will analyze the motor carrier administration including organization, management principles, and policy formulation for direction and control. Case problems are studied. P.R. BUS 3350. (3 - 0) 3
- BUS 4364 LAND USE PLANNING AND ZONING: This course is designed to acquaint real estate students with the functions of the Planning and Zoning Commission, focusing on the legal and procedural aspects of zoning ordinances. P.R. BUS 4452 or current N.C. Real Estate License and consent of department head. (3 - 0) 3
- BUS 4365 REAL ESTATE SALES: The primary objective is to acquaint the student thoroughly with real estate sales techniques and sales management. The student will further analyze the role of consumer motivation. P.R. BUS 3465 or current N. C. Real Estate License and consent of department head. (3 - 0) 3
- BUS 4366 REAL ESTATE FINANCE: Upon satisfactory completion of this course, the student should be able to: (1) identify the sources, terms and conditions of financing for local residential property; (2) advise a seller concerning the different ways (financially) his residence can most probably be purchased, and the price and terms for each that would most probably net him the same amount, with supporting information and details; (3) qualify a buyer (financially) prior to showing him selected residences which he is capable of buying, and advise him concerning total initial purchase costs and subsequent periodic payments with supporting information and details; and (4) assist the buyer in obtaining appropriate financing and closing the purchase transaction. P.R. BUS 3465 or current N.C. Real Estate License and consent of department head. (3 - 0) 3

BUS 4367 INCOME REAL ESTATE APPRAISAL I: This course introduces the student to the income approach to valuation. The student will learn how to apply the capitalization of projected net income to estimating value for 100%-equity situations and the effects of interest, depreciation, appreciation, and capitalization rates. The student will also analyze gross income and net income potential and operating expenses and learn to use compound interest tables. P.R. BUS 3365 or current N.C. Real Estate License and consent of department head. (3 - 0) 3

BUS 4368 INCOME REAL ESTATE APPRAISAL II: The student is further introduced to the product and tools necessary to appraise real estate by the income approach such as mortgage/equity capitalization for financial purchases; effect of ownership period on value; estimating market value and value to a particular investor; evaluation of lease interest; applications of special techniques and mathematics to ownership and investment analysis problems. Upon satisfactory completion of this course, the student should be able to appraise income-producing real estate for market value or "to yield" by professionally-established procedures, to value lease-fee and leasehold interests, and to use these abilities to secure clients and customers. P.R. BUS 4367 or consent of department head. (3 - 0) 3

BUS 4374 REAL ESTATE INVESTMENT: This course is designed to give the student a thorough guide to the fundamentals of successful real estate investment. The student will learn how to weigh the factors of location, timing, financing and the like, as well as when to invest during the development process, what to purchase and how the purchase should be made. P.R. BUS 3465 and 4365 or current N.C. Real Estate License and consent of department head. (3 - 0) 3

BUS 4375 INDUSTRIAL REAL ESTATE: This course is designed especially for the student who desires to specialize in the brokerage of industrial properties. The successful student will be able to utilize the following in his business: site selection, development, marketing, leasing, financing, appraising, industrial parks, rehabilitation, investment, management, zoning and tax factors. P.R. BUS 3465 or current N.C. Real Estate License and consent of department head. (3 - 0) 3

BUS 4376 REAL ESTATE LAW: Upon completing this course successfully, the student will have an understanding of the legal phases and actions undertaken from the time of the original listing of the property to the closing of the escrow. P.R. BUS 3465 or current N.C. Real Estate License and consent of department head. (3 - 0) 3

BUS 4394 INDIVIDUAL STUDY -- BUSINESS ADMINISTRATION: This course provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor, department head and appropriate Vice-President is required. (3 - 0) 3

BUS 5200 SHOP MANAGEMENT: The student is introduced to the business system and to the activities involved in starting and operating a business enterprise. Upon completion of the course the student will have a basic knowledge of the workings of a free enterprise system, business law, ownership, supervision and management. (2 - 0) 3

CHE 3100 CHEMISTRY SEMINAR I: After succeeding in the course the student will be able to: (1) list a minimum of six typical duties of a chemical technologist and; (2) list a minimum of ten employers of Chemical Technicians in the Charlotte area. P.R. None. (1 - 0) 1

CHE 3101 CHEMISTRY SEMINAR II: A course for students of Chemical Technology. Field trips in industrial Laboratories and speakers from the chemical industry give the student an ability to know where he's going. The student will be able to list several analytical and physical tests often performed in the area as well as several instruments often employed. P.R. None. (1 - 0) 1

CHE 3404 PHYSICAL CHEMISTRY: Upon completion of this course the student will be able to: (1) state many of the fundamental relationships of chemistry; (2) solve numerous problems concerning gases and solution equilibria; (3) assemble a wheatstone bridge; (4) make solution conductivity measurements. P.R. CHM 1506. (2 - 4) 4

CHE 4200 INDEPENDENT LAB STUDY: Students develop initiative in the performance of a variety (six) of analyses. (0 - 4) 2

CHE 4455 TEXTILE COLORING AND TESTING: Upon completion of this course the student should be able to: (1) dye fibers and fabrics of cotton, wool, acetate, nylon and polyester in the laboratory; (2) describe large scale dyeing and finishing of some of these materials in area industries. P.R. CHM 1505 or equivalent. (2 - 4) 4

CHE 4804 CHROMATOGRAPHY: Upon completion of this course the student should be able to: (1) describe techniques of physical separation of complex mixtures; (2) enumerate conditions favorable to differential migration of sample components in a chromatographic separation; (3) make separations of mixtures employing paper, thin layer, liquid and gas chromatography. P.R. CHM 1505. (3 - 8) 7

CHE 4905 OPTICAL METHODS OF INDUSTRIAL CHEMICAL ANALYSTS: Upon completion of this course the student should be able to: (1) perform analyses employing such optical instruments as the polarimeter, refractometer, colorimeter, fluorimeter, infrared spectrophotometer and atomic absorption spectrophotometer; (2) enumerate most of the theoretical relationships upon which the operation of these instruments are based. P.R. CHM 1506. (3 - 10) 8

CHE 4₉₄ INDEPENDENT STUDY: This course is designed to provide students with the opportunity to develop special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and program director is required prior to enrollment. P.R. None. (1 - 5 Credits)

CHEMISTRY

CHM 1500 INTRODUCTORY CHEMISTRY I: A introductory course with laboratory experiences designed for the student with little or no background and no great prior interest in Chemistry. The topics integrates chemical principles with environmental applications. Upon successful completion of this course, the student will be able to demonstrate an understanding of some basic chemical concepts and their applications through discussions and laboratory experiences on topics of contemporary interest. (3 - 4) 5

CHM 1501 INTRODUCTORY CHEMISTRY II: Presents the principles of basic chemistry and biochemistry with laboratory, emphasizing practical applications. Upon successful completion of this course the student demonstrates an understanding of basic chemical principles of inorganic and organic compounds as they relate to the study of biological systems. P.R. High School Chemistry or CHM 1500. (3 - 4) 5

CHM 1502 INTRODUCTORY CHEMISTRY III: A continuation of CHM 1501 with laboratory experiences. Upon successful completion of this course, the student will be able to demonstrate an understanding of the chemistry and metabolism of carbohydrates, enzymes, lipids, nucleic acids, proteins, vitamins and hormones. P.R. CHM 1501 or consent. (3 - 4) 5

CHM 1504 GENERAL CHEMISTRY I: A study of the fundamental principles and laws of chemistry with emphasis on the relationship of atomic structure to physical and chemical properties of the elements. Individualized lab experiments deal with the verification of chemical laws and the development of problem-solving skills. Applications of chemical principles will be made in the area of environmental problems such as energy and pollution. After completing this course the student should be able to (1) apply the scientific method in problem solving (2) demonstrate the basic laboratory techniques which will enable him to successfully and safely conduct chemical experiments (3) solve problems and demonstrate an understanding and appreciation of certain chemical laws, principles, concepts and theories such as: metric system, atomic structure, laws of chemical combinations, stoichiometry, gas laws, kinetic molecular theory, theory of chemical bonding and simple nomenclature (4) relate the knowledge of chemistry to the real world such as identifying specific societal problems created and/or solved by the science of chemistry. The following students should take the 1504, 1505, 1506 sequence: students with major emphasis in forestry, agriculture, dentistry, optometry, para-medics, medicine, pharmacy, nursing (B.S. degree), geography, textiles, chemical technology, geology, biology, and any other areas of science and math. P.R. MAT 9310 or two years of high school algebra and/or one of the following: C.R. MAT 1504, MAT 1514, MAT 3504 or consent. (3 - 4) 5

CHM 1505 GENERAL CHEMISTRY II: A continuation of CHM 1504, with emphasis on chemical equilibrium, kinetics, solution stoichiometry, acid-base theories, and electrochemistry. Some chemical application will be made in the areas of environmental problems, biological systems and industrial processes. After completing this course the student should be able to (1) solve problems dealing with systems in equilibrium, (2) solve solution problems, (3) recognize and apply various acid-base theories to chemical equations (4) demonstrate an understanding of such things as redox potentials, reactions kinetics, and colligative properties of solutions. P.R. CHM 1504 or consent. (3 - 4) 5

CHM 1506 GENERAL CHEMISTRY III: A continuation of CHM 1505 with emphasis on ionic equilibrium and relating chemical properties to atomic and molecular structures. Includes introduction to organic chemistry. Both qualitative and quantitative analysis, with the use of some instrumentation, are included. Applications are made to biological systems and to environmental problems. After having completed this course the student should be able to demonstrate an understanding of ionic equilibrium by solving various problems dealing with PH, hydrolysis, K_{sp}, buffers, redox titration and acid base titrations. He should be able to relate chemical and physical properties of common elements and ions to the periodic table and show well-developed lab techniques in experiments involving weighing filtering and titrating. P.R. CHM 1505 or consent. (3 - 4) 5

CHM 2304 SPECIAL PROBLEMS: An advanced problem course of independent study in which a student and advisor select an appropriate topic for both laboratory and library research in the field of chemistry. After completing this course the student should be able to successfully conduct a relatively simple library and lab research project in chemistry and present the results in proper written form. P.R. CHM 1506 or consent. (1 - 4) 3

CHM 2604 QUANTITATIVE CHEMICAL ANALYSIS: Emphasizes a variety of industrial analytical methods. Students successful in this course will be able to make analyses accurately using both volumetric and gravimetric methods. He will also perform well in the use of the calorimeter, potentiometer, and infrared spectrophotometer. P.R. CHM 1506 or consent. (3 - 6) 6

CHM 2614 ORGANIC CHEMISTRY I: A systematic study of the theories, principles, and techniques of organic chemistry and their application to reactions of aliphatic and aromatic compounds and natural products. Reaction mechanisms are emphasized. Some chemical applications are made to environmental problems and to industrial processes. Laboratory work includes purification, characterization and synthesis of organic compounds with emphasis on the improvement of scientific problem-solving skills. After having completed this course the student should be able to (1) name the common members of the

families of organic compounds studied and describe their chemical and physical properties, (2) demonstrate a working knowledge of organic synthesis of the compounds studied based on reaction mechanisms, (3) perform common organic lab experiments in a reasonably safe manner using proper techniques, (4) recognize and/or describe simple chemical tests for certain functional groups. The following students should take the CHM 2614-CHM 2615 sequence: students with major emphasis in dentistry, optometry, medicine, para-medics, engineering, (chemical, petroleum, sanitation, environmental) pharmacy, textiles, chemical technology, chemistry and biology, P.R. CHM 1506 or consent.

(4 - 4) 6

CHM 2615 ORGANIC CHEMISTRY II: A continuation of CHM 2614 with a greater emphasis on instrumental analysis in the laboratory. Introduction to biochemistry is included. After completing this course the student should be able to identify some unknown organic compounds using NMR, UV, IR, and mass spectra. The student should be able to recognize the chemical properties of the common functional groups and should have well developed lab techniques as demonstrated in the identification and synthesis of certain organic compounds. P.R. 2614 or consent.

(4 - 4) 6

CHM 3200 CHEMISTRY FOR HORTICULTURE: Emphasizes the proper use of fertilizers and pesticides. The successful student will be able to list special soil & fertilizer needs of numerous plants as well as to recognize many plant food deficiencies. He will also be able to recommend the proper use of many pesticides and to recognize their need.

(4 - 0) 2

CHM 3500 FIRE SCIENCE CHEMISTRY: An individualized course oriented to students in the Fire Science Technology curriculum. Matter, atomic theory and structure of elements as related to their properties and position in the periodic chart are emphasized. Any student who is successful in the course will be able to solve simple problems in energy transitions. He will also be able to use reference materials in locating fire-hazard and toxicity information for specified chemicals.

(3 - 4) 5

CHM 5300 BASIC CHEMISTRY: An introductory course in chemistry designed for use of students in related vocational curricula. Upon successful completion of this course, the student will be able to describe a chemical reaction in terms of changes of both matter and energy. He will be able to follow simple written laboratory experiment procedures and then report the results in an understandable way.

(2 - 2) 3

CHM 9500 INTRODUCTION TO CHEMISTRY: A fundamental chemistry course designed to meet the needs of students who will enroll in the Health and Fire Science Programs and those who have an interest in learning basic chemistry. Instruction is individualized with socialized multi-media study aides. Upon completion of CHM 9500, the student should be able to identify and classify inorganic and organic compounds as to formula, structures and substances. The student will also be able to balance chemical equations, to convert Fahrenheit-Centigrade temperatures and perform English-metric conversions.

(10 - 0) 5

CIV 3100 INTRODUCTION: CIVIL ENGINEERING TECHNOLOGY: Upon completion of this course the student should be able to: (1) identify the types of jobs available to a civil engineering technician; (2) differentiate between sizes and types of construction industries; (3) associate the role the curriculum plays in training future engineering technicians. P.R. None.

(0 - 2) 1

CIV 3324 PLAIN CONCRETE: Upon completion of this course the student should be able to: (1) explain the process and ingredients used in the manufacturing of Portland Cement; (2) explain the effects on Portland Cement Concrete of admixtures; (3) describe the characteristics of coarse and fine aggregates suitable for use in Portland Cement Concrete; (4) design a concrete mix based on strength and durability requirements; (5) conduct tests for compressive strength on concrete cylinders; (6) describe the effect on strength of concrete of various curing methods; (7) recognize the proper methods for placing and finishing quality concrete. P.R. None.

(2 - 3) 3

CIV 3404 ARCHITECTURAL ENGINEERING MATERIALS AND METHODS: Upon completion of this course the student should be able to: (1) identify construction materials and their physical properties; (2) discuss the manufacturing processes used to produce common building materials; (3) identify types of construction equipment and their applications; (4) explain the methods used to assemble building components; (5) through site visitation evaluate the actual application of construction techniques. P.R. None.

(3 - 3) 4

CIV 3504 SURVEYING I: Upon completion of this course the student should be able to: (1) measure distances with a surveyor's tape or an electronic distance measuring device; (2) apply geometric principles to correct a taped distance for a standardized measurement; (3) perform the calculations and field operations for differential and profile leveling; (4) lay out cross-sections of roadways and from the sections compute earthwork quantities; (5) set slope stakes; (6) use a transit for the measurement of horizontal and vertical angles; (7) perform a transit and tape survey. C.R. MAT 3504, ARC 3434. P.R. None.

(3 - 6) 5

CIV 3505 SURVEYING II: Upon completion of this course the student should be able to: (1) adjust a triangulation net of a chain of triangles and compute lengths of unmeasured distances; (2) run a stadia traverse, reduce the field notes and plot a map locating physical features within the traverse; (3) run a traverse and locate physical features using a plane table; (4) balance a closed traverse for which angles are measured with a theodolite and distances measured with either a surveyor's tape or an electronic distance measuring device using the compass rule; (5) compute areas of traverses by both the coordinate method and the double meridian distance method; (6) adjust a dumpy level and a transit. P.R. CIV 3504.

(3 - 6) 5

CIV 3514 STATICS: Upon completion of this course the student should be able to: (1) identify and differentiate between various systems of forces; (2) solve problems involving the effects of forces acting on bodies at rest; (3) solve either graphically or analytically for the magnitude, direction, sense, and point of application of unknown forces to maintain static equilibrium; (4) apply the fundamentals of static friction; (5) locate centroids of composite areas; (6) compute the rectangular moment of inertia of an area about various axis. P.R. MAT 3504. (4 - 2) 5

CIV 3524 STRENGTH OF MATERIALS: Upon completion of this course the student should be able to: (1) identify types of stresses that develop in structures; (2) compute deformation and strain in bodies due to stress systems acting on the body including torsional as well as axial, (3) construct shear and bending moment diagrams of beams; (4) solve for stresses caused by tension, bending and shear; (5) compute the deflection in beams; (6) calculate stresses due to combined axial and bending loads; (7) analyze and design welded, bolted and riveted connections; (8) apply Euler's equation to columns. P.R. CIV 3514 or MEC 4508. (4 - 2) 5

CIV 4300 CODES CONTRACTS AND SPECIFICATIONS: Upon completion of this course the student should be able to: (1) State the basic principles and methods most significant in contract relationships; (2) recognize the implication of a contract and match legal terms to proper meaning; (3) demonstrate an ability to interpret and outline construction specifications; (4) use the state and local building codes as a reference for design and construction; (5) demonstrate an understanding of the implication of code requirements. P.R. ARC 3435. (2 - 3) 3

CIV 4304 CONSTRUCTION PLANNING (CPM): Upon course completion the student should be able to: (1) define the operations comprising a construction project; (2) establish time estimates for each operation; (3) determine the proper sequence of operations and coordination of building trades; (4) apply manually and using a computer the critical path method (CPM) to construction planning and scheduling; (5) allocate resources and level manpower; (6) analyze time-cost relationship. P.R. CIV 3404. (2 - 3) 3

CIV 4324 FOUNDATION CONSTRUCTION: Upon completion of this course the student should be able to: (1) list the techniques of subsurface soil investigation; (2) apply earth pressure theories for bearing capacity and principles of foundation action; (3) determine lateral earth pressure both analytically and graphically; (4) analyze and design, using ultimate strength method, reinforced concrete wall footings, individual column footings, combined footings, pile foundations and retaining walls; (5) design excavation bracing, including sheet piling. P.R. CIV 4527, CIV 4534. (2 - 3) 3

CIV 4404 STRUCTURAL DRAFTING AND DESIGN: Upon completion of this course the student should be able to: (1) design and detail the component parts of steel structures including riveted, bolted and welded connections; (2) analyze continuous beams; (3) design composite construction floor systems with the use of the AISC Manual; (4) analyze and detail the component parts of reinforced concrete structures; (5) design and draw layouts of timber concrete forms for both lateral pressures and gravity loads. P.R. CIV 4527, ARC 3435, C.R. CIV 4534. (2 - 4) 4

CIV 4444 CONSTRUCTION OF ROADS AND PAVEMENTS: When a student completes this course he should be able to: (1) classify a sample of soil based on the Unified Classification System; (2) perform and interpret the results of the Liquid Limit, Plastic Limit, Standard Proctor and the California Bearing Ratio Tests; (3) construct a Mass Diagram from a set of cross-section notes and compute average haul and limit of economic haul; (4) compute run-off from drainage area; (5) determine culvert and ditch sizes; (6) determine the thickness of flexible and rigid types of highway surfaces. P.R. CIV 4304, CIV 3524, CIV 4506. (3 - 3) 4

CIV 4454 CONSTRUCTION ESTIMATES AND COSTS: Upon completion of this course the student should be able to: (1) use his knowledge to check contract documents for complete package necessary for the estimate of a job; (2) determine equipment and methods necessary for construction; (3) discuss the various bid terms as they affect construction; (4) complete quantity surveys on commercial, residential and roadway construction; (5) apply pricing to quantity surveys; (6) use approximate methods for determination of building costs; (7) submit simulated bids for a bid opening and evaluate the results of a bid opening. P.R. ARC 3435, CIV 3404. (2 - 6) 4

CIV 4506 SURVEYING III: Upon course completion the student should be able to: (1) use the County Register of Deeds Office records to research property records and state the requirements for filing of property maps and deeds; (2) perform a property survey including the preparation of record documents; (3) calculate and stake out horizontal and vertical roadway curves; (4) apply the methods of lines and grades to a roadway design problem; (5) lay out foundations and give lines and grades for construction of a building; (6) discuss basic theory of photogrammetry and its application. P.R. CIV 3505 (3 - 6) 5

CIV 4527 STEEL AND TIMBER DESIGN: Upon completion of this course the student should be able to: (1) analyze and design steel beams, tension members, columns, members involving combined axial and bending stresses, continuous spans, riveted, bolted and welded connections; (2) use the latest American Institute of Steel Construction Manual and specifications; (3) Analyze and design timber members and their connections. P.R. CIV 3524 (4 - 2) 5

CIV 4534 REINFORCED CONCRETE DESIGN: Upon completion of this course the student should be able to: (1) analyze and design, by means of the ultimate strength method of the latest ACI Building Code, reinforced concrete rectangular beams, T-Beams, continuous members, columns, and floor systems composed of one-way and two-way slabs; (2) use the latest CRSI Design Handbook; (3) calculate the basic stresses of prestressed concrete beams.
P.R. CIV 3324, CIV 3524. (4 - 2) 5

CIV 4 94 INDEPENDENT STUDY: This course is designed to provide students with the opportunity to develop special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and program director is required prior to enrollment. P.R. None. (1 - 5 Credits)

COM 1305 ENGLISH COMPOSITION II: Upon successful completion of COM 1305, the student will be able to analyze the ideas in the short story and the novel and synthesize these ideas in his/her own compositions. P.R. COM 1314 or consent of department head. (3 - 0) 3

COM 1306 ENGLISH COMPOSITION III: Upon successful completion of COM 1306, the student will be able to use basic research techniques to write a formally documented research paper. The student will also be able to write critically and objectively about ideas expressed in drama and poetry. P.R. COM 1305 or consent of department head. (3 - 0) 3

COM 1314 INTRODUCTION TO COMMUNICATION: Upon successful completion of COM 1314, the student will be able to write a multi-paragraph expository theme which has a clear beginning, a substantial middle, a finite end, and is free of grammatical constructions that may be impediments to communication. In addition, the student will be able to indicate the main idea and the chief supporting ideas and be able to distinguish between fact and opinion and between the informative and affective nature of language in a brief essay and in a lecture. P.R. Placement examination or consent of department head. (3 - 0) 3

COM 1324 CREATIVE WRITING: The craft of writing is practiced in a range of assignments: prose, fiction, fantasy, exposition of a literary theme, autobiography, and the informal essay. Student papers are read in class, and discussion probes the practical aspects of techniques and development. P.R. COM 1305 or COM 3305 or consent of department head. (3 - 0) 3

COM 1325 ADVANCED CREATIVE WRITING: Upon successful completion of COM 1325, the student will be able to prepare and submit for publication a sample of his/her creative work. This course is offered to provide vigorous writing experiences for the serious student. The emphasis will lie in revising and polishing student writing. P.R. Consent of department head. (3 - 0) 3

COM 2390 INDIVIDUAL STUDY: This offering is made to provide students with the opportunity to develop a special program of studies to meet a particular need not met by other offerings of the department. Objectives will be determined by the student and the sponsoring instructor. P.R. Approval of the sponsoring instructor and the department head. (3 - 0) 3

COM 3305 COMMUNICATIONS II: Upon successful completion of COM 3305, the student will be able to demonstrate application of the basic principles of English by developing adequate sentences, paragraphs, and whole compositions. P.R. COM 1314 or consent of department head. (3 - 0) 3

COM 3306 COMMUNICATIONS III: Upon successful completion of COM 3306, the student will be able to develop a technical report pertaining to his/her chosen curriculum and will be able to prepare various types of business communications including letters, memoranda and resumes. P.R. COM 3305 or COM 3690 or consent of department head. (3 - 0) 3

COM 3690 THE COMMUNICATIONS COURSE: This course analyzes both effective methods of communicating and barriers to communication. It utilizes films, discussions, and planned interpersonal situations. Weekly conferences provide needed help in writing. (6 - 0) 6

COM 5301 COMMUNICATIONS SKILLS I: Upon successful completion of COM 5301, the student will be able to identify some of the major barriers to communications, use basic research procedures and produce a properly documented library paper, correctly spell 150 of the most frequently misspelled words in business correspondence and be able to write business letters free from major mechanical errors. P.R. COM 5500 or consent of department head. (3 - 0) 3

COM 5500 COMMUNICATIONS SKILLS: Upon successful completion of COM 5500, the student will be able to pronounce, spell, and define words directly related to his/her technical or trade area; write job-related letters and a personal resume; discuss a given topic both orally and in writing; demonstrate familiarity with periodicals in his/her trade field. (5 - 0) 5

CSC 3500 INTRODUCTION TO CORRECTIONS: Upon completion of this course the student should be able to: (1) demonstrate a broad overview of corrections, probation and parole; (2) discuss modern correctional concepts; (3) understand the rights of convicted criminals; (4) understand correctional administrative functions; (5) discuss various job positions and classifications common to State and Federal Agencies and institutions devoted to corrections. P.R. None. (5 - 0) 5

COMMUNICATIONS

CORRECTIONAL SCIENCE

CSC 3514 CONTEMPORARY CORRECTIONAL INSTITUTIONS: Upon completion of this course the student should be able to: (1) discuss concepts and standards in the development of modern Correctional institutions; (2) understand and discuss the differentiation of adult and juvenile systems and difference between the two; (3) discuss organization, administration and manpower need within the Correctional programs (State and Federal); (4) implement the aspects of offender classification; (5) evaluate community based Correctional operations; (6) understand the role of volunteers in Corrections. P.R. CSC 3500. (5 - 0) 5

CSC 3524 PROBATION/PAROLE: Upon completion of this course the student should be able to: (1) discuss the origins of probation from common law through the present statutes; (2) discuss the legal rights of prisoners in all aspects; (3) understand how ordinary political or civil rights may be taken away as a result of criminal conviction and how they may be restored; (4) understand parole revocation procedures from arrest, to hearing, through Judicial review; (5) discuss the types and kinds of conditions of probation; (6) discuss group treatment of juveniles; (7) understand the various community resources available for the probationer and paroles. P.R. CSC 3500.

CSC 4390 INDEPENDENT STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3 - 0) 3

CSC 4504 CORRECTIONS/NOW & FUTURE: Upon completion of this course the student should be able to: (1) evaluate correctional system performance; (2) develop and evaluate correctional statistical data; (3) define and evaluate correctional treatments and community resources; (4) identify sources of resistance to correctional reform; (5) research ethical and legal issues involved with offender populations; (6) submit periodic position papers. P.R. None. (4 - 2) 5

CSC 4514 CORRECTION/COMMUNITY BASED PROGRAMS: Upon completion of this course the student should be able to: (1) develop a concept (at least one page) of integration and acceptance of community programs within Corrections/community based program; (2) develop methods of identifying and coordinating community resources; (3) develop methods of identifying and coordinating community responsibilities; (4) develop and coordinate inmate involvement in community programs; (5) conduct and indept study of alternatives to incarceration. P.R. None. (4 - 2) 5

DENTAL ASSISTANT DEA 5204 DENTAL ASSISTANT SEMINAR: A study of personal responsibilities as a practitioner, including employee-employer relations, opportunities for continued development as a person and as a health worker, and evaluation of clinical experience. P.R. Fourth quarter standing in Dental Assisting Curriculum. (2-0-0) 2

DEA 5300 ANATOMY AND PHYSIOLOGY: Upon completion of this course the student should be able to: (1) recognize, recall facts and specifies regarding general anatomy of the body and basic concepts of the normal functions of body systems; (2) utilize knowledge and understanding of the basic structure surrounding the teeth; (3) designate formation of primary and permanent dentition, basic anatomy of individual teeth and the application of these to the carving of restorative patterns. C.R. DEA 5304 and DEA 5600. (3-0-0) 3

DEA 5302 INTRODUCTION TO DENTAL ASSISTING: Upon successful completion of this course the student should: (1) know purpose, history and progress of dentistry; (2) understand and begin to abide by laws and ethics governing the dental profession; (3) identify members of dental health team, their education, training, function and respective professional conduct, personal hygiene and dental terminology; (5) be able to operate equipment in dental clinic; (6) be able to receive, prepare for operation and dismiss patients properly. C.R. DEA 5600 and DEA 5304. (2-0-3) 3

DEA 5304 PRECLINICAL SCIENCE I: Upon completion of this course the student should be able to: (1) demonstrate how bacteriology and dental health are related; (2) designate techniques for successfully coping with the bacteriological problems which arise in the dental office; (3) use knowledge of diet and nutrition as applied to dentistry. C.R. DEA 5302 and DEA 5300. (3-0-0) 3

DEA 5305 PRECLINICAL SCIENCE II: Upon completion of this course the student should be able to: (1) recognize and explain fundamental concepts of the more common diseases and disease processes in the oral cavity; (2) state dosage, methods of administration and storage of common drugs and medicaments used in the dental office; (3) perform dental first aid and emergency care for the patient in the dental office. P.R. DEA 5300 and DEA 5304. (3-0-0) 3

DEA 5344 DENTAL OFFICE PRACTICE I: An introduction to practice in the dental office or dental clinic. Emphasis is on the role of assisting in the operatory in a variety of limited dental procedures. P.R. Third quarter standing in the Dental Assisting Curriculum. (0-0-9) 3

DEA 5390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3 - 0) 3

DEA 5414 DENTAL ROENTGENOLOGY: Lectures, demonstrations and clinical practice teach the dental assistant student the techniques of exposing, processing and mounting intraoral roentgenograms. The student also learns the various types, speeds and methods of protection of films used in dentistry. Radiation hazards and safety measures, as well as the proper operation of the dental x-ray machine, as studied. P.R. DEA 5300, DEA 5600. (2-0-6) 4

DEA 5424 CLINICAL PROCEDURES I: The identification of dental equipment and dental instruments for general dentistry and specialized areas. An introduction to chairside procedures. P.R. DEA 5300, DEA 5302, DEA 5600, DEA 5304. (2-0-6) 4

DEA 5525 CLINICAL PROCEDURES II: A continuation in chairside procedures and techniques from DEA 5424, with emphasis placed on the eight specialities in dentistry. P.R. Third quarter standing in the Dental Assisting Curriculum. (4-0-3) 5

DEA 5534 DENTAL OFFICE MANAGEMENT: Principles and procedures related to management of the dental office, including maintenance of inventories, ordering of supplies, financial records, clinical records, cavity classification and nomenclature, making appointments, telephone technique and establishing favorable patient relations. P.R. Third quarter standing in the Dental Assisting Curriculum. (4-0-3) 5

DEA 5600 DENTAL MATERIALS: A study of the composition and source of materials employed in dentistry and the behavior of these materials under various treatments. The dental assistant learns through lectures, demonstrations and laboratory exercises to identify and prepare these materials for any of the routine dental procedures in the general practice of dentistry and in the specialities of the dental profession. C.R. DEA 5300. (3-9-0) 6

DEA 5845 DENTAL OFFICE PRACTICE II: Practice in the dental office or dental clinic, assignments are rotated to encompass experience in office management, the dental laboratory and the operatory. Emphasis is on the role of assisting in the operatory in a variety of limited dental procedures. P.R. Fourth quarter standing in Dental Assisting Curriculum. (0-0-24) 8

DEN 3214 PREVENTIVE DENTISTRY I: On completion of Preventive Dentistry I, the student will be able to: understand the dental needs of individual patients and to provide a basic outline of principles and techniques for certain phases of dental hygiene case and instruction; describe the composition and etiological factors governing a variety of dental deposits, such as stain, dental plaque, dental calculus and materia alba; apply principles governing the use of various toothbrushing techniques and auxiliary plaque control methods when presented with hypothetical situations; gain basic knowledge of the following; the history of dental hygiene and the professional association; and the duties of a dental hygienist in patient education and prevention of dental diseases. P.R. None. (2-0-0) 2

DEN 3224 HEAD AND NECK ANATOMY: The student will know the bones of the skull, their location and landmarks. In addition, the knowledge of the muscles, their blood and nerve supply will be required and demonstrated by the student. P.R. None. (2-0-0) 2

DEN 3305 DENTAL ANATOMY II: The successful student will be able to draw and carve any tooth in the permanent or deciduous dentition. The student will exhibit an awareness of comparative morphology of the teeth including root formation. In addition the student will demonstrate the ability to chart and record oral conditions of the human dentition. P.R. DEN 3504. (0-6-0) 3

DEN 3324 DENTAL HYGIENE I: Through practice on manikins and eventually upon each other the student will demonstrate the ability to record, plan and execute a dental prophylaxis maintaining aseptic conditions without traumatizing hard and soft tissues. A familiarity with the instruments and their use is required. P.R. None. (1-0-6) 3

DEN 3504 DENTAL ANATOMY I: Upon completion of the subject the student will recall specific anatomical structures of the dentition and will carve or draw to scale any anterior tooth. The student will also demonstrate a familiarity with dental terminology, a knowledge of gross oral anatomy, a recollection of the eruption succession of the teeth and the ability to classify occlusion. (2-6-0) 5

DEN 4104 CLINICAL THEORY I: The student will demonstrate to the instructor the application of principles and theories as learned in the classroom to the dental patient. Clinical rounds will be made and each student will be required to present interesting cases to the class for discussion. P.R. None. (1-0-0) 1

DEN 4105 CLINICAL THEORY II: A continuation of DEN 4104. The student will demonstrate to the instructor the application of principles and theories as learned in the classroom to the dental patients. Clinical rounds will be made and each student will be required to present interesting cases to the class for discussion. P.R. None. (1-0-0) 1

DEN 4106 CLINICAL THEORY III: A continuation of DEN 4105. The student will demonstrate to the instructor the application of principles and theories as learned in the classroom to the dental patients. Clinical rounds will be made and each student will be required to present interesting cases to the class for discussion. P.R. None. (1-0-0) 1

DENTAL HYGIENE

- DEN 4114 BASICS OF PERIODONTICS: The student will be able to differentiate between normal and abnormal periodontal conditions and clinically perform the less complicated treatment. In addition the student will educate patients in the prevention and control of periodontal disease. P.R. None. (1-0-0) 1
- DEN 4200 OFFICE EMERGENCIES: The student will be able to detect, prevent or administer to the needs of the patient who presents an emergency condition. P.R. None. (2-0-0) 2
- DEN 4204 PHARMACOLOGY: Students will demonstrate a knowledge of pharmacological nomenclature and terms, sources of drugs, fundamental types of pharmacologic action, patient reaction to drugs and treatment of adverse reactions. Types and classes of drugs will be enumerated. The student will write a general outline for a prescription and indicate a knowledge of the laws dealing with drugs. P.R. None. (2-0-0) 2
- DEN 4301 ROENTGENOLOGY: The student will know the theory and basic fundamentals in the production of xrays. The student will be held responsible to know the safety precautions to be utilized and the legal implications involved in radiologic exposure. The successful student will be adept in taking radiographs first on manikins, next on each other and finally on clinical patients. The student will recognize and distinguish between good and bad radiographic technics. P.R. None. (2-0-3) 3
- DEN 4304 PATHOLOGY: The student will become familiar with the general principles of pathology and then will distinguish pathological conditions especially those appearing in the oral cavity or its vicinity. Extensive slide identification is a requirement for successful completion of this subject. P.R. None. (3-0-0) 3
- DEN 4314 PRACTICE ADMINISTRATION: The student will be required to exhibit proficiency in the basic procedures and forms utilized in the dental office in regard to the utilization of time, money, personnel, space, equipment and supplies. In addition the student will know the code of ethics and the jurisprudence pertaining to dentistry. P.R. None. (3-0-0) 3
- DEN 4315 PREVENTIVE DENTISTRY II: On completion of Dental Health Education, the student will be able to: explain a variety of personality types and adapt a good program for teaching effective patient education to individual personality traits; develop effective teaching aids for patient education which are adapted to a variety of age groups. The aids the student must develop are as follows: posters, bulletin boards, table clinics and flannel boards. Teach patient education to special groups such as public kindergartens, schools and civic organizations and adapt their programs to accommodate the age levels. P.R. None. (3-0-0) 3
- DEN 4316 PREVENTIVE DENTISTRY III: Successful conclusion of this subject insures that an overall ability will be evidenced by the student to survey population groups by the use of various indices to determine types of people, needs, motivational and educational needs; the student will compare private and public health vocations, she will demonstrate an awareness of community health problems and the structure of the public health system within the state. P.R. None. (3-0-0) 3
- DEN 4390 INDIVIDUAL STUDY: This is a subject geared to the individual needs of the student and may encompass any review material or refresher material to assist in the successful completion of the national boards. P.R. None. (3-0-0) 3
- DEN 4425 DENTAL HYGIENE II: The student will accomplish a complete satisfactory dental prophylaxis on a number of selected adult clinical patients evincing an ability to discriminately use desensitizers. A home care program for the individual patient will be developed along with accurate periodontal and dental charting. The ability to sharpen instruments will be developed. P.R. DEN 3324. (1-0-9) 4
- DEN 4426 DENTAL HYGIENE III: The student daily performs a complete prophylaxis on adults including root planing, homecare, charting and necessary x-ray pictures. Proficiency is required in the use of ultrasonic scaling devices, the polishing of restorations and motivating the patient to proper home care. The student will acquire minor dental assistant capability. Week long assignments to dental clinics of various hospitals will be mandatory. P.R. DEN 4425. (0-0-12) 4
- DEN 4500 DENTAL MATERIALS: Upon completion of this subject the student must know the composition and properties of materials employed in dentistry and their behavior under different treatments. The student must be able to mix various materials to be used by the dentist. She must evince a knowledge of the proper storage of dental materials. Many of these attainments are met by extensive use of the laboratory. P.R. None. (3-4-0) 5
- DEN 4504 EMBRYOLOGY AND ORAL HISTOLOGY: The student will be able to describe the embryological development of the head and neck with specific emphasis placed upon oral structures such as teeth, glands, tongue, etc. Recognition of oral defects including dental defects due to irregular development and their clinical significance will be evaluated by the student. The student must relate the knowledge gained from this subject with the clinical patient. P.R. None. (4-2-0) 5
- DEN 4527 DENTAL HYGIENE IV: The student will continue to gain experience in providing patients with dental hygiene care. The student will provide nutritional counseling, will remove non-functioning over-hanging restorations, and will continue to visit extramural clinics. P.R. 4526. (0-0-15) 5

DEN 4628 DENTAL HYGIENE V: The student will develop speed in accomplishing a dental prophylaxis to prepare for entrance into the work market. The student will make office visits to acquaint her with the variety of services available in different types of practices. P.R. DEN 4527.

(0-0-18) 6

DFT 3404 TECHNICAL DRAFTING I: Upon completion of this course the student should be able to: (1) use drafting equipment and instruments; (2) letter words and numbers in Gothic; (3) draw orthographic and pictorial freehand sketches; (4) layout geometric constructions; (5) execute orthographic drawings by use of instruments; (6) dimension drawings and apply notes to drawings; (7) reproduce, file, and store drawings; and (8) execute simple "working" drawings. P.R. None. (2 - 4) 4

DRAFTING

DFT 3405 TECHNICAL DRAFTING II: Upon completion of this course the student should be able to: (1) apply orthographic projection principles to more complex drafting problems including those with various kinds of holes; (2) read and draw the conventions of line elimination and revolving out of position; (3) read, draw, and dimension the various kinds of sectional views; (4) read and draw pictorial views of oblique and isometric and (5) read, draw, and dimension auxiliary views. P.R. DFT 3404. (2 - 4) 4

DFT 3406 DESCRIPTIVE GEOMETRY: Upon completion of this course the student should be able to: (1) analyze and solve graphically, space problems which involve points, lines and planes; (2) verify solutions to problems analytically when appropriate; (3) relate these problems to problems in Engineering Design; and (4) visualize the field problem which is shown on paper. P.R. DFT 3405. (2 - 4) 4

DFT 4254 ENVIRONMENTAL SYSTEMS DRAWING I: Upon completion of this course the student should be able to: (1) use scales (2) letter properly (3) draw orthographic projections (4) draw sections (5) dimension (6) show isometric pictorial (7) duct drafting and (8) electrical drafting. All examples will be applied to the air conditioning, heating and refrigeration discipline. (1 - 2) 2

DFT 4_94 INDEPENDENT STUDY: This course is designed to provide students with the opportunity to develop special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and program director is required prior to enrollment. P.R. None. (1 - 5 Credits)

DFT 5300 BLUEPRINT READING & SKETCHING: Upon completion of this course the student should be able to: (1) visualize a three-dimensional object; (2) relate the shape and size correctly and accurately to a pictured object; (3) read and understand drawing conventions, symbols, and notations; (4) interpret the proper operations and shop procedures needed to produce objects shown on simple prints; and (5) communicate shape and size of simple objects through sketches. P.R. None. (3 - 0) 3

DFT 5304 BLUEPRINT READING & DRAWING: Upon completion of this course the student should be able to: (1) read and interpret more complex drawings than those in DFT 5300; (2) apply some of the basic drafting practices common in the machine trade; and (3) draw simple details and assemblies. P.R. DFT 5300. (3 - 0) 3

DFT 5400 BLUEPRINT READING & SKETCHING: Upon completion of this course the student should be able to: (1) read the more complex orthographic prints; (2) read and sketch detail and simple assembly drawings; and (3) read and sketch some of the symbols of the welding industry. P.R. DFT 5300. (3 - 2) 4

DRA 1300 INTRODUCTION TO DRAMA. The student will study the theater; the nature of the drama; principles of play analysis; and the fundamentals of technical production. (3 - 0) 3

DRAMA

DRA 1301 STAGECRAFT: This course is a study of the theater building and its equipment, working drawings, and scene shop organization. The student will receive practice in scenery construction and painting. Participation on technical crews of the college theater production required. (Does not satisfy humanities requirement.) (1 - 4) 3

DRA 1302 SCENE DESIGN: This course entails practical research and development of scene designs for a variety of presentation styles and theater stages. The student will study current productions for design practice whenever possible. (Does not satisfy humanities requirement.) (1 - 4) 3

DRA 1303 ACTING: The student will acquire practice in developing and controlling the voice and body as instruments of expression with emphasis on theater speech and movement. The student will be encouraged to free and use imaginative resources and critical faculties through controlled practice. (Does not satisfy humanities requirement.) (1 - 4) 3

DRA 1310 ONE-ACT PRODUCTION: The student will study basic practices and principles governing the staging of one-act plays. The laboratory consists of the rehearsing and presenting of one-act plays for the student body, the public, and interschool exchange. (Does not satisfy humanities requirement.) (0 - 6) 3

DRA 1311 COMEDY/DRAMA PRODUCTION: The student will study basic practices and principles governing the staging of a full-length comedy or drama. The laboratory consists of rehearsing and presenting a full-scale production of a comedy or drama for the student body, the public and interschool exchange. (Does not satisfy humanities requirement.) (0 - 6) 3

DRA 1312 MUSICAL THEATER PRODUCTION: The student will study the basic practices and principles governing the staging of musicals. The laboratory consists of rehearsing and presenting a full-scale production of a musical for the student body, the public, and interschool exchange. (Does not satisfy humanities requirement.) (0 - 6) 3

DRA 2204 SPECIAL PROBLEMS IN DRAMA: An advanced problems course of guided studies involving laboratory and library work. P.R. Approval of instructor. (1 - 3) 2

DRA 2414 MOVIES: Medium of the Imagination: Through discussions and film screenings, the student should be able to develop a critical appreciation for the elements of film and should be able to formulate a critical response to the film medium in writing and in conversation, demonstrating an intelligent reaction to any film.

(3 - 2) 4

DIESEL ENGINE MECHANIC DSL 5300 DIESEL FUNDAMENTALS: Upon completion of this course the student should be able to: (1) recognize the advantages of supercharging and aftercooling as it affects basic engine design and performance; (2) recognize the advantages of direct and indirect fuel injection; (3) demonstrate a basic knowledge of four types of fuel injection metering systems; (4) recognize the advantages of mechanical and hydraulic limiting speed and variable speed engine governors; (5) demonstrate the use of basic measuring instruments used to determine engine component serviceability; (6) demonstrate proper use of a nozzle tester; and (7) perform basic operation and maintenance of pump calibration stand. P.R. None.

(2 - 3) 3

DSL 5304 HYDRAULICS AND PNEUMATICS: Upon the completion of this course the student will demonstrate by a post-test, a basic knowledge of hydraulic fundamentals. The student will have disassembled, inspected and reassembled the following hydraulic and pneumatic components: (1) vane type pump or motor; (2) gear pump or motor; (3) piston pump or motor; (4) pressure or flow control valve; (5) brake application valve; (6) limiting, quick release valve; (7) relay, quick release valve; (8) air compressor; (9) tractor protection valve. P.R. None.

(2 - 2) 3

DSL 5404 CATERPILLER DIESELS: Upon completion of this course the student should be able to: (1) determine the serviceability of a Caterpillar engine's components as compared to tolerances and wear limits published in the engine manual; (2) install an injection pump and run the engine; (3) use the proper test equipment to test and adjust the scroll type injection pump and differential type nozzles; (4) check injection timing using the fuel flow method. P.R. PME 5401, DSL 5300.

(2 - 6) 4

DSL 5405 CUMMINS DIESELS: Upon completion of this course the student should be able to: (1) determine the serviceability of a Cummins engine's components as compared to tolerances and wear limits published in the engine manual; (2) use the timing fixture to set injection timing; (3) set valves and injectors by the dial indicator method and by the torque method; (4) use the proper test equipment to test and adjust the PT pump; (5) check rail pressure and adjust high and low idle. P.R. PME 5401, DSL 5300.

(2 - 6) 4

DSL 5406 DETROIT DIESELS: Upon completion of this course the student should be able to: (1) determine the serviceability of a Detroit engine's components as compared to tolerances and wear limits published in the engine manual; (2) do a complete tune-up in the proper sequence of adjustments; (3) use the proper test equipment and check engine pressures; (4) assemble a blower and set the clearances to specifications; (5) use the proper test equipment to test a unit injector for serviceability. P.R. PME 5401, DSL 5300.

(2 - 6) 4

DSL 5407 MACK DIESELS: Upon completion of this course the student should be able to: (1) determine the serviceability of a Mack engine's components as compared to tolerances and wear limits published in the engine manual; (2) clean and test an injector nozzle; (3) evaluate the condition of an engine cylinder with the aid of a compression tester; (4) evaluate the condition of a turbocharger's shaft bearings; (5) set injection timing by the fuel flow method; (6) test the operation and fuel delivery of an APE American Bosh injection pump and governor. P.R. PME 5401, DSL 5300.

(2 - 6) 4

ECONOMICS ECO 2304 ECONOMICS I (MACRO): Students will learn to apply economic concepts to basic and current national problems. The course will trace the development of economic philosophies as they relate to traditional, command, and market economies. Learners will be able to evaluate the role of federal programs in the areas of GNP, monetary and fiscal policy, and business cycles. Each student will be able to demonstrate his ability to use primary sources in understanding economic problems.

(3 - 0) 3

ECO 2305 ECONOMICS II (MICRO): This course will enable the student to understand and apply the theory of our pricing system to the competitive firm as well as to those business organizations in imperfect competition.

(3 - 0) 3

ECO 2306 ECONOMICS III (MAGNA): The student will develop an economic approach concerning contemporary problems and issues. He will examine the problems of growing world population along with rising consumption and how each of these relates to such items as world trade, ecology, comparative economic systems and current issues.

(3 - 0) 3

ECO 3301 AMERICAN ECONOMIC HISTORY: The student will study those concepts that have contributed to the nation's economic productivity from Colonial times to the present. Emphasis is placed on areas that have facilitated our nation's growth in transportation, trade and finance. The broad spectrum of America's economy is evaluated.

(3 - 0) 3

ECO 3302 LABOR ECONOMICS: The historical growth of labor unions, theories of labor and the development of effective labor and wage policies will be studied. The student will use this knowledge to participate in the discussion and resolution of current labor questions and the problems arising from man's working environment.

(3 - 0) 3

ECO 3303 ECONOMICS OF TRANSPORTATION: The student will be introduced to the development of our different modes of transportation (rail, water, highway, pipeline and air); the economic importance of each and the part each best plays transporting goods in commerce; the development of federal and

state regulations; and coordination and integration of different modes of transport to meet the needs of our expanding economy. (3 - 0) 3

ECO 3310 COMMODITIES OF COMMERCE: In studying the principal commodities of commerce, the student will become familiar with primary sources, history of extraction, and their flow through development as finished goods in domestic and international exchange. The problems of commodity scarcity and national self-sufficiency are stressed. Major changes projected for industrial nations and the third world are analyzed. (3 - 0) 3

EDN 4200 INTERIOR DECORATING FOR THE HOME OWNER: The student, upon completion of this course, should be able to plan a personal home interior improving on the following areas: convenience, comfort and beauty, furniture and furnishings arrangements. (1 - 2) 2

EDN 4201 COLOR SCHEMES FOR INTERIOR DESIGN: The student will work from home plans in solving everyday color problems. The emotional, thermal and optical effects of color arrangements for interiors will be studied. The student should be able to plan and develop a color scheme for his/her own interior, working with existing colors or working out a completely new color scheme. (1 - 2) 2

EDN 4202 THESIS: The student will plan and execute, with the help and approval of his major advisor, a project reflecting original concepts relating to the student's interests and field of specialization. The project will integrate experience in the program and will reflect conditions the student will encounter upon employment. The student will also prepare a portfolio. P.R. EDN 4415. (0 - 4) 2

EDN 4203 PERIOD FURNITURE AND FURNISHINGS: The student will study period styles in chronological order from Egyptian through American furniture and furnishings and will learn to recognize the influence of these styles. The student should be able to identify the major period styles currently popular today. (2 - 0) 2

EDN 4210 ANTIQUE FURNITURE AND FURNISHINGS: The student will study antique English and American furniture and furnishings and will explore their use in contemporary interiors. The student will be exposed to antiques from a consumer's point of view and will develop basic evaluating skills that can be used to determine a personal value of antiques in general. (2 - 0) 2

EDN 4300 SURVEY OF INTERIOR DESIGN: The student will acquire a general understanding of the nature and scope of interior design as a profession, contrasting and comparing different specializations within the field of interior design. (3 - 0) 3

EDN 4301 PRACTICAL PROBLEMS IN INTERIOR DESIGN I: The student will become acquainted with problems the interior designer confronts today and should be able to make complete presentations similar to those submitted by an interior designer to a client. P.R. EDN 4200. (2 - 2) 3

EDN 4307 SURVEY OF MATERIALS: The student will survey natural and man-made fibers and materials currently available and should be able to select the proper material for a specific application using the following criteria: over all quality, price, durability, color and material from which the product is constructed. Materials covered are rugs and carpets, furniture, ceramic tile, paint, wallpaper and wall coverings, hardware, textile products, glass, and building materials. P.R. EDN 4414. (1 - 4) 3

EDN 4314 SURVEY OF PAINTING, SCULPTURE, AND INTERIOR DESIGN I: The student will survey art history including painting, sculpture, and interior design. The student will be able to define and compare the major areas of art from classical periods to the Twentieth Century. (3 - 0) 3

EDN 4315 SURVEY OF PAINTING, SCULPTURE AND INTERIOR DESIGN II: The student will continue to study the major areas of art and will learn to recognize major art movements and interpret their influence on interior design. P.R. EDN 4314. (3 - 0) 3

EDN 4400 PROFESSIONAL PRACTICES AND PROCEDURES: The student will study current business practices in the field of interior design. Upon completion of this course, the student should be able to write and design an initial contact form, a letter of agreement, prepare a purchase order, figure wholesale discounts, and do simple job estimating. P.R. EDN 4415. (2 - 4) 4

EDN 4404 INTERIOR PRESENTATION: The student will develop technical skill in rendering elements that compose the exterior and interior environment: fabric, furniture, rock, masonry, foliage, etc. The student will make presentations of designs in simulated designer-clientele relationships and should be able to construct and present simple interior design projects in a professional manner, preparing fabric and material collages and room layouts in ink and color. P.R. VCO 3316. (2 - 4) 4

EDN 4406 CONTEMPORARY INTERIORS: The student will study current techniques in designing interiors for residential, commercial and industrial buildings and will learn to recognize and anticipate changing needs. The student should be able to analyze and make recommendations concerning interior design solutions befitting Twentieth Century life styles in residential and contract interiors. P.R. EDN 4415. (2 - 4) 4

COMPUTER SCIENCE

EDN 4414 APPLIED PROBLEMS STUDIO I: The student will explore fundamentals of interior design in space planning, convenience, function, and effective visual effects and will complete planned problems to achieve workable and practical solutions to current needs, ranging from the single dwelling to the business and recreational complex. The student will prepare graphic solutions in two and three dimensional form. P.R. VCO 3326, DFT 3404, or DFT 3325. (2 - 4) 4

EDN 4415 APPLIED PROBLEMS STUDIO II: The student will apply knowledge and skills from EDN 4414 to advanced solutions to special space problems, preparing presentations and complete specifications. P.R. EDN 4414. (2 - 4) 4

EDN 4416 APPLIED PROBLEMS STUDIO III: The student will investigate, plan, and execute interior designs for a cross-section of current interiors and should be able to solve actual complex interior design problems including accurate specifications and construction details. P.R. EDN 4415. (2 - 4) 4

EDP 1404 COMPUTER FUNDAMENTALS AND FORTRAN PROGRAMMING: Upon completion of this course the student should be able to: (1) define selected terms pertaining to computer systems and programming; (2) write programs in the FORTRAN language that: (a) read and write with and without formatting; (b) perform arithmetic calculations; (c) uses control logic; (d) generates reports with headings and totals; (e) perform operations with one dimensional arrays; (3) prepare data for testing a FORTRAN program. P.R. None. (3 - 2) 4

EDP 1405 FORTRAN PROGRAMMING: A continuation of EDP 1404. Upon completion of this course the student should be able to write FORTRAN programs for problem solutions requiring: (1) two dimensional arrays; (2) functions and subroutines; (3) alphabetic data; (4) input/output from tape and disk files. P.R. EDP 1404, MAT 1505, MAT 1514, or consent. (3 - 2) 4

EDP 2306 COMPUTER PROGRAMMING I: Upon completion of this course the student should be able to: (1) prepare data cards for packaged programs and interpret output; (2) construct basic COBOL programs to solve simple business problems; (3) verify the accuracy of program output; (4) construct basic flowcharts; (5) identify business problems which can be solved with a computer. P.R. EDP 3300 or consent. (2 - 2) 3

EDP 2307 COMPUTER PROGRAMMING II (Business): A continuation of EDP 2306. Upon completion of this course the student should be able to: (1) develop program logic and write COBOL programs for solving sample business problems; (2) utilize utility programs to manipulate data files; (3) prepare input data for canned programs and interpret the output; (4) incorporate programming techniques and procedures for magnetic tape and disk processing. P.R. EDP 2306. (2 - 2) 3

EDP 2308 COMPUTER SYSTEMS AND ASSEMBLY LANGUAGE I: Upon completion of this course a student should be able to: (1) translate from one numbering system to another and perform arithmetic in various numbering systems; (2) describe computer storage presentation and addresses for decimal and alphabetic fields; (3) write simple programs using declare, arithmetic, data transfer, compare, branch, and I/O assembly language instructions; (4) identify I/O device storage characteristics and file organization capabilities; (5) trace the data flow through a computer system identifying hardware functions and characteristics encountered from input to output. The educational computer system used by CPCC is used for instruction in these various areas. P.R. EDP 1405 or EDP 2306. (2 - 2) 3

EDP 2309 COMPUTER SYSTEM AND ASSEMBLY LANGUAGE II: A continuation of EDP 2308. Upon completion of this course a student should be able to: (1) write basic programs using declare, arithmetic, data transfer, compare, branch, table storage and I/O assembly language instruction; (2) trace the compilation and execution of a job through a multi-programming computer system environment and name software programs involved; (3) code JCL statements necessary to execute assembly language programs using sequential files and certain file utilities; (4) define an operating system listing advantages. P.R. EDP 2308. (2 - 2) 3

EDP 2514 STATISTICAL AND NUMERICAL PROGRAMMING: Upon completion of this course the student should be able to write a program to do: (1) the inverse of a Matrix in solving a set of simultaneous equations; (2) Newton's forward interpolation; (3) numerical intergration; (4) simplex method; (5) two-way analysis of variance; (6) series expansion. P.R. EDP 1405, MAT 2504. (4 - 2) 5

EDP 3300 INTRODUCTION TO COMPUTER CONCEPTS: Upon completion of this course the student should be able to: (1) trace the history of computers; (2) identify various computer usages; (3) list several computer manufacturers as related to its origin and computer systems; (4) list the job descriptions and qualifications of computer personnel; (5) list and define functional units of a computer; (6) list and give characteristics of unit I/O devices and magnetic storage devices; (7) identify the seven basic steps in programming; (8) identify different programming language and their usual applications; (9) define terms relating to computer hardware and software; (10) distinguish between characteristics of business data processing and scientific data processing. P.R. None. (3 - 0) 3

EDP 3302 AUTOMATED SURVEY IN MEDICAL FACILITIES: The Medical Office Assistant in many offices and clinics will be confronted with automated procedures using computers for accounting and patient record keeping rather than a manual procedure. This course is designed to better prepare a student for such a computer environment. Upon completion of this course the student should be able to: (1) discuss computer applications in the medical field; (2) define computer and data processing terms; (3) compile, keypunch and verify input for selected computer programs; (4) sort, reproduce and interpret data. P.R. None. (3 - 0) 3

EDP 3303 AUTOMATION SURVEY IN FOOD FACILITIES: Upon completion of this course a student should be able to: (1) diagram the functional organization and data flow of a computer system; (2) define certain terms pertaining to computers and electronic data processing; (3) prepare data and interpret reports according to input/output formats for selected computerized applications; (4) list and explain typical applications and computer usage in the food service area. P.R. None.

(3 - 0) 3

EDP 3305 MINICOMPUTERS: Upon completion of this course a student should be able to: (1) identify minicomputers or microprocessors by hardware and/or software characteristics in respect to other computer system; (2) define functional units of a computer system; (3) trace data flow from input to output in a typical commercial or scientific application using standard I/O devices or control signal interfaces; (4) describe data storage techniques and formats for primary memory using a binary coded scheme and pure binary; (5) list steps in program compilation and execution; (6) distinguish between machine, assembly and problem oriented languages; (7) write simple programs in machine, assembly and FORTRAN language for a particular system; (8) define and state the purpose of an operating/monitor/executive system. P.R. Consent.

(3 - 0) 3

EDP 3310 DATA PROCESSING FUNDAMENTALS: Upon completion of this course the student should be able to: (1) operate unit record equipment such as the keypunch, verifier, reproducing punch, sorter, collator and interpreter; (2) set up coding systems for data; (3) design card layouts; (4) use fundamental principles of data collection, recording, interpreting and processing to execute lab problems; (5) interpret sample computer output with multi-level control breaks. P.R. None.

(2 - 2) 3

EDP 3404 ASSEMBLY LANGUAGES: Upon completion of this course the student should be able to: (1) perform arithmetic operations in the hexadecimal and binary numbering systems; (2) interpret machine language instructions and read hexadecimal dumps; (3) write assembly language programs using techniques ranging from reading of cards through address modification, loops, editing, and sorting of 1-level tables; (4) use the following assembly language instructions: MVC, MVI, CLC, CLI, PACK, UNPK, MVZ, MVN, ZAP, AP, SP, MP, DP, CP, BAL, BALR, ST, L, B, BNZ, Etc, AR, SR, MR, DR, LR, D, M, CVB, CVD, ED, EDMK, MVO, GET, PUT, OPEN, CLOSE, AH, SH, MH, USING; (5) explain at a rudimentary level how the assembler translates from assembly language code to machine language code. P.R. EDP 3414 or consent.

(3 - 2) 4

EDP 3414 COMPUTER LANGUAGE I: Upon completion of this course the student should be able to: (1) analyze given problem definitions and develop solutions from a programming viewpoint at a fundamental level; (2) construct a flow chart for a problem solution; (3) write and execute COBOL programs for business problems involving data input, basic calculations, code checking, decision making, iterations, headings, and summary totals; prepare test data and verify results of executing a COBOL program; (5) correct syntax and logical errors in a COBOL program. P.R. None.

(3 - 2) 4

EDP 3415 COMPUTER LANGUAGE II: Upon completion of this course the student should be able to: (1) write programs to handle one and two level tables of data, iterative processing, multi-level totals, sort files, multiple file processing and disk and tape I/O; (2) flowchart, code, test, debug and document sample problems; (3) write code which conforms to published departmental standards; (4) analyze error messages and use reference manuals to find solutions; (5) demonstrate efficiency techniques in coding programs such as fields, packed and binary fields and modular structure. P.R. EDP 3414 or consent.

(3 - 2) 4

EDP 4314 SYSTEMS AND PROCEDURES: Upon completion of this course the student should be able to: (1) summarize the state of the art in information systems design; (2) prepare and explain a coding system for business forms; (3) design a business form to user specifications; (4) prepare project plan and status report; (5) prepare information oriented flowchart with an appropriate narrative; (6) draw feasibility conclusions; (7) prepare a multiple card layout form; (8) prepare a computer print chart from a report specification and a data element. P.R. BUS 1604 or consent.

(3 - 0) 3

EDP 4315 APPLIED BUSINESS SYSTEMS: Upon completion of this course the student should be able to: (1) determine optional storage requirements for specific files and its related accessibility; (2) estimate hardware, software and person requirements for a specific business application; (3) relate the various business statements (ex. balance sheet, income, cost of goods sold) to the data base; (4) analyze business problems and submit probable solutions; (5) prepare a feasibility study including cost of hardware, programming and systems analysis (cost factors are supplied), personnel requirements, and a purchase vs. lease option. P.R. EDP 4314 or consent.

(3 - 0) 3

EDP 4390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None.

(3 - 0) 3

EDP 4417 DATA PROCESSING APPLICATIONS I: Upon completion of this course the student should be able to: (1) program and document techniques for editing input data; (2) design report formats; (3) program multi-level control breaks and update of a sequential file; (4) create an index sequential file and process the file sequentially and randomly; (5) calculate days between dates and check digits, (6) program for selected accounting/business applications involving single and multi program (7) design input and file record layouts; (8) prepare JCL for compilation and execution of programs written; (9) write programs and document systems according to standards; (10) include error messages in programs. P.R. EDP 3415, EDP 4425 or consent.

(3 - 2) 4

EDP 4418 DATA PROCESSING APPLICATION II: Upon completion of this course the student should be able to: (1) work on a programming team in programming a complete business application; (2) fully organize and document a business application; (3) use utilities as needed in an application; (4) design input, master, and report formats; (5) use structured code in coding COBOL programs; (6) write programs for business applications using such things as tables, check-digit routines, exception files, variable length records, and various file organizations; (7) use source, object, and procedure library in project implementation; (8) make decision regarding file organization to use, number and scope of programs in a particular business application, and others in designing a business system; (9) use a report oriented language to generate a report; (10) use manuals to debug programs and utilities. P.R. EDP 4417, BUS 4435 or consent. (3 - 2) 4

EDP 4425 COMPUTER SYSTEMS I: Upon completion of this course the student should be able to: (1) use utility manuals to code the JCL and control statements for certain utilities; (2) code DD statements for sequential files; (3) code JCL for compilation and execution of COBOL and WATBOL programs; (4) create PDS, store and execute object modules; (5) list physical and storage characteristics of disk and tape; (6) calculate storage requirements for a file on disk or tape; (7) trace the job flow from input to output identifying software programs involved for a multi-programming computer system for compilation and execution of programs; (8) diagram the program and data flow in a multiprogramming computer including channels and interrupts; (9) define an operating system and discuss IPL, SYSGEN and other selected terms; (10) code parameters of a Job and Execute card; (11) define selected communication terms dealing with lines connecting a terminal to a computer system. The educational computer system used by CPCC is used for instruction in these various areas. P.R. EDP 3415 or consent. (3 - 2) 4

EDP 4434 INTRODUCTION TO OPERATIONS RESEARCH: Upon completion of this course the student should be able to: (1) trace history, development, and use of O.R. techniques; (2) perform manipulative skills necessary for solution of linear programming (simplex), transportation model, CPM, selected simulation and queuing; (3) analyze problem definitions and apply appropriate model for solution; (4) prepare input data and interpret output for certain O.R. models using a computer. P.R. MAT 3505, MAT 2514, EDP 3414 or consent. (3 - 2) 4

EDP 4435 COMPUTER SYSTEMS II: Upon completion of this course the student should be able to: (1) store, modify and execute source modules from PDS in COBOL and WATBOL; (2) code DD statements for index sequential and random files and define processing procedures and modes; (3) create and store procedures in a procedure library; (4) catalogue files; (5) establish and use generation group files; (6) code COBOL statements for index sequential and random files; (7) use utility manuals for execution of selected utilities; (8) state purpose of and list some typical access method programs; (9) state the programming environment under TSO; (10) use message codes listings to determine errors occurring in running sample labs; (11) discuss programming problems when memory is limited. The educational computer system at CPCC is used for instruction in these various areas. P.R. EDP 4425 or consent. (3 - 2) 4

EDP 4437 COMPUTER LANGUAGE SURVEY: A study of one particular computer language or a study and comparison of various computer languages. The language(s) studied is based on current request. Upon completion of this course a student should be able to write basic programs in the language(s) studied. P.R. Consent. (3 - 2) 4

EDP 4444 RPG PROGRAMMING: Upon completion of this course the student should be able to: (1) define various fields on the RPG specification forms; (2) explain general logic of execution cycle; (3) use indicators; (4) code, debug and execute RPG programs using multiple files, matching records, total levels and group indication, table look-ups and creating and accessing disk files; (5) correct compiling and logical errors. P.R. EDP 3415 or consent. (3 - 2) 4

EDP 4524 APPLICATION PROJECT: This course allows the student and instructor to select an individual project for each student giving the student an opportunity to initiate and carry out a complete computer application project. This course places the responsibility upon the student to solve a significant problem with a minimum of assistance from the instructor. The students selected project should require him to: (1) design a system with at least one master file; (2) determine the information required in the file and the way it is to be laid out; (3) write programs to build (with editing) and maintain (update) the master file; (4) design a system that generates at least three reports of various types from the data contained in the master file(s) and write programs to prepare these reports; (5) code JCL requirements which may include file cards, copying from libraries, back-up data sets, sorts, merges, etc.; (6) design two forms to be used by the user in preparation of input data or output reporting; (7) prepare a system flowchart; (8) prepare input/output record layouts; (9) document for implementation. P.R. Consent. (3 - 4) 5

EDP 5100 COMPUTER OPERATION SEMINAR: A weekly seminar in which there will be programs on topics of particular interest to students in the Computer Operators Program. Guest lecturers, product demonstrations, and special reports on technical changes affecting these trades will be presented. P.R. None. (1 - 0) 1

EDP 5314 INTRODUCTION TO COMPUTER SYSTEMS: Upon completion of this course the student should be able to: (1) describe the functional components of a computer system; (2) list the operator's duties in the operation of card read/punch, line printer, magnetic tape, disk and console typewriter; (3) list the characteristics of the above devices; (4) with a minimum of experience operate the above devices. P.R. or C.R. EDP 3300, EDP 3310. (3 - 0) 3

EDP 5390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3 - 0) 3

EDP 5404 OPERATION PROJECT: A co-operative endeavor between Central Piedmont Community College and industry to give the student on-the-job training experience. In some situations the student will acquire full-time employment, this full-time employment, upon approval, may be used as CO-OP equivalent. In some instances a student may not be able to fulfill the requirements in a CO-OP environment, then special projects may be assigned in the EDP Lab to complete the work experience project. Also, EDP 5615 may be taken in lieu of EDP 5404. Never register for EDP 5404 without checking with an instructor in the Computer Science Department. P.R. Consent. (0 - 20) 4

EDP 5424 PROGRAMMING I: Upon completion of this course the student should be able to: (1) write short COBOL Programs that will generate business reports with headings and simple arithmetic operations performed on input data; (2) analyze listings of COBOL programs to determine such things as: (a) file, record and field names, (b) input/output record layouts, (c) input/output devices; (3) list the steps and describe JCL involved in compilation and execution of a COBOL program as handled under an operating system. P.R. EDP 3300, EDP 3310. (3 - 2) 4

EDP 5425 PROGRAMMING II: Upon completion of this course the student should be able to: (1) trace the logic of an elementary COBOL program; (2) describe the steps in compilation of a program; (3) describe the steps in storing and executing an object program in a library; (4) use OS utility to determine the entries in a program library; (5) code COBOL program using sequential I/O files/READ/WRITE/IF/ARITHMETIC/GO TO/PERFORM statements; (6) discuss programming consideration such as blocking records, I/O devices, disk or card system and memory size. P.R. EDP 5424. (3 - 2) 4

EDP 5514 COMPUTER OPERATIONS I: Upon completion of this course the student should be able to: (1) convert decimal, binary and hexadecimal numbers from one system to another; (2) execute selected console procedures; (3) write operational commands for the console; (4) schedule jobs for a standard operational batch environment; (5) demonstrate program execution on the "inhouse" computing system; (6) list purpose and types of JCL cards for OS; (7) use utility manuals to code JCL and execute selected utilities on computer system at CPCC; (8) operate standard unit record equipment. P.R. EDP 3300, EDP 3310, EDP 5314. (3 - 4) 5

EDP 5515 COMPUTER OPERATIONS II: Upon completion of this course the student should be able to: (1) describe concepts for computer system utilization; (2) diagram data organization of a direct access storage device; (3) use a procedure book; (4) list and describe the five major software modules contained in an operating system; (5) use major OS utilities for operational maintenance; (6) define elements of file management. P.R. EDP 5514. (3 - 4) 5

EDP 5516 COMPUTER OPERATIONS III: Upon completion of this course the student should be able to: (1) utilize selected technical manuals as needed in computer operations; (2) use utility manuals for preparing JCL and executing certain OS utilities; (3) identify JCL parameters in OS for a multi-programming environment; (4) interpret machine accounting information; (5) explain selected error and recovery procedures. P.R. EDP 5425, EDP 5515. (3 - 4) 5

EDP 5524 GENERAL DATA PROCESSING APPLICATIONS: Upon completion of this course the student should be able to: (1) discuss the structure of various business enterprises; (2) define the roles of Data Processing personnel; (3) compile data for certain business applications; (4) process data in batches and use check digits; (5) verify results of computer runs; (6) describe differences between sequential and random processing; (7) relate input, output and master files in selected application involving several programs. P.R. EDP 5514, EDP 5424, BUS 1400, FIN 3314. (3 - 4) 5

EDP 5615 PERIPHERAL EQUIPMENT OPERATION: Upon completion of this course the student should be able to: (1) explain and utilize the unit record equipment maintained in the data processing lab; (2) describe through written procedures the IBM 1419 document reader; (3) correctly operate the Terminal currently in lab; (4) Align special forms on the 1443 printer; (5) present a written description of audio response peripheral equipment; (6) present a written description of computer output micro-filming; (7) present a written description of data preparation hardware for a financial institution. P.R. EDP 3300, EDP 3310. (5 - 2) 6

EDU 2500 INTRODUCTION TO EDUCATION: A first course in education surveying the history, development and present status of education in American society with attention given to the objectives of democratic education and the role of the teacher in their implementation. (Does not satisfy the Social Science requirement) (5 - 0) 5

ELN 3100 ELECTRICAL-ELECTRONICS SEMINAR: Upon successful completion of this course the student should be able to: (1) show evidence of increased awareness of the role electronics plays in all aspects of our life; (2) show evidence of enhanced perception of the wide range of employment possibilities in the electronics field; (3) show evidence of exposure to topics of current interest in the electronics field; and (4) identify with a group who have similar career interests. P.R. None. (1 - 0) 1

ELN 3101 ELECTRICAL-ELECTRONICS SEMINAR. A continuation of ELN 3100. P.R. None. (1 - 0) 1

ELN 3102 ELECTRICAL-ELECTRONICS SEMINAR: A continuation of ELN 3100. P.R. None. (1 - 0) 1

ELN 3304 ELECTRONIC INSTRUMENTS AND MEASURES: Upon completion of this course the student should be able to: (1) use Ammeters, Voltmeters, and Ohmmeters, (2) calculate the values of shunts and multipliers to extend the range of meters; (3) manipulate the controls of signal generators and oscilloscopes to present a visual trace of an electrical signal for wave shape observation, frequency comparison, time frequency and voltage measurement, and phase angle determination; (4) measure power with the Wattmeter and; (5) make precise resistance measurements with a wheatstone bridge. P.R. None. C.R. ELN 3514. (1 - 6) 3

ELN 3404 ACTIVE ELECTRONIC ELEMENTS: Upon completion of this course the student should be able to: (1) select and/or determine component values required to predict class A linear amplifier operation. Prediction will be in terms of all D.C. signal voltages and currents for a triode tube and transistor circuit. (2) construct in the laboratory a triode tube and transistor class "A" linear amplifier circuit, measure all circuit voltages and currents using ammeters, voltmeters, audio generators and oscilloscope. P.R. ELN 3515. (3 - 3) 4

ELN 3414 INDUSTRIAL INSTRUMENTATION: Upon completion of this course the student should be able to: (1) specify appropriate input transducer to be used in an electronic control system to measure temperature, pressure, flow, light and pH; (2) specify appropriate output transducer and/or device for recording, display and process control; and (3) integrate input and output transducers or devices with electronic process control systems. P.R. ELN 3515, PHY 3404. (3 - 3) 4

ELN 3514 BASIC ELECTRICITY (DC): Upon completion of this course the student should be able to: (1) calculate voltage, current, resistance and power of series, parallel and combination DC resistive circuits using Ohm's law, Kirchoff's law and the power law when given sufficient data; (2) measure these circuit parameters with suitable instruments and obtain data to prove the laws of electricity; (3) interpret passive circuit diagrams and symbols; (4) interconnect components shown on standard circuit diagrams to produce functioning circuits; (5) calculate and predict the instantaneous values of voltage, current, charge and energy stored in R-C and R-L time constant series, parallel and combination circuits and measure these parameters in the laboratory; and (6) calculate equivalent circuit values of series, parallel and combination connections of either inductance or capacitance and measure actual circuit parameters. C.R. MAT 3504. (3 - 6) 5

ELN 3515 BASIC ELECTRICITY (AC): Upon completion of this course the student should be able to: (1) select values of R, C and L required to produce any desired voltage, current and impedance in AC circuits; (2) analyze R, C and L series, parallel and combination circuits and draw vector diagrams representing voltage, current, impedance, resistance, reactance and reciprocal quantities; (3) calculate L-C values required in resonant circuits and recognize this condition in functioning circuits; (4) correct power factor when required and calculate true power, apparent power and reactive power in AC circuits; and (5) select proper transformers in low frequency circuits for impedance matching, voltage step up or step down and test for proper operation in these circuits. P.R. ELN 3514, MAT 3504. (3 - 6) 5

ELN 3717 ELECTRONIC CIRCUITS: Upon completion of this course the student should be able to: (1) recognize, (2) reproduce, (3) specify component characteristics for, (4) assemble, (5) test the following electronic circuits; rectifiers, passive filters, controlled power switching circuits, push-pull and other large signal amplifiers, oscillators, and power supply regulators. P.R. ELN 4524. (5 - 6) 7

ELN 4102 ELECTRICAL-ELECTRONICS SEMINAR: A continuation of ELN 3100. P.R. None. (1 - 0) 1

ELN 4103 ELECTRICAL-ELECTRONICS SEMINAR: A continuation of ELN 3100. P.R. None. (1 - 0) 1

ELN 4104 ELECTRICAL-ELECTRONICS SEMINAR: A continuation of ELN 3100. P.R. None. (1 - 0) 1

ELN 4300 PLANNING ELECTRICAL INSTALLATIONS: Upon completion of this course the student should be able to: (1) have an understanding of and appreciation for the value of the Underwriters Laboratories and the National Electrical Code; (2) use the N.E.C. to determine safe standards for planning electrical installations; (3) calculate heat loss and gain for electrical heating and cooling; (4) calculate for and plan lighting installations. P.R. ELN 3515. (0 - 9) 3

ELN 4304 RADIOTELEPHONE OPERATION: Upon completion of this course the student should be able to: (1) pass the Federal Communications Commission examination for second class radiotelephone operators license; (2) be ready for continued self study to prepare for the first class examination. P.R. ELN 4414. (3 - 0) 3

ELN 4307 SYSTEM CORRECTION PROCEDURES: Upon completion of this course a student should be able to: (1) diagnose defects in Electrical/Electronic circuits and systems given appropriate diagrams and operational specifications; (2) locate defective components with the effective application of VOM, EVM, A-C ammeter, wattmeter, oscilloscope, audio generator, R.F. generator or frequency meter; (3) select appropriate replacement component as required to restore circuit or system to acceptable performance; and (4) perform alignment and or adjustments as required by equipment performance specifications. P.R. ELN 3717. (1 - 6) 3

ELN 4326 ELECTRICAL-ELECTRONICS RESEARCH PROJECT: Upon successful completion of this course the student should be able to demonstrate proficiency in the selection, circuit design, layout design, component procurement, assembly, testing and documentation of an electrical/electronic device or system. P.R. ELN 4524, ELN 3717, COM 3305. (1 - 6) 3

ELN 4400 PRACTICAL ELECTRICITY: Upon completion of this course the student should be able to: (1) recognize and choose safe electrical appliances and devices; (2) apply the National Electrical code to an electrical installation and locate most of the more dangerous errors in installation; (3) determine the proper size fuse or circuit breaker to protect a circuit, or an appliance; (4) tell the difference in an electrical open, short, or ground; (5) select the proper wire size for a circuit; (6) make proper electrical connections; and (7) select proper components and assemble the circuit for a number of appliances including lighting and motors. (May not be used to satisfy specialty elective in E/E curriculum.) P.R. None. (3 - 3) 4

ELN 4404 MEDICAL ELECTRONICS: Upon completion of this course the student should be able to: (1) predict equipment response when given appropriate bioelectric equivalent signal; (2) verify proper patient to equipment, electrode and transducer interface; (3) measure with conventional test devices the leakage currents associated with the safety of medical equipment; (4) diagram the human cardiovascular circulation system; and (5) select the appropriate electrode or transducer as required to obtain a given biomedical parameter. P.R. ELN 4524. (3 - 3) 4

ELN 4405 ELECTRIC MOTOR CONTROL: Upon successful completion of this course the student should be able to: (1) determine, select, and evaluate overload and short circuit protective devices for optimum motor protection; (2) design, select, compare performance and evaluate the following AC and DC motor control circuits: (a) full voltage starting; (b) reduced voltage starting; (c) definite time starting; (d) current limit starting; (e) reversing; (f) jogging; (g) plugging; (3) determine and evaluate significant voltage/current levels and waveforms in the triggering and power circuits of various solid state (SCR) DC motor controllers; (4) determine and evaluate significant voltage/current levels and waveforms in triggering and power circuits of solid state AC motor controllers (rectifier-inverters); (5) demonstrate knowledge of solid state motor controllers in the areas of components, selection, and applications; and (6) assemble, wire, operationally test and evaluate in the laboratory, the performance of each of the above motor control circuits. P.R. ELN 4525. (3 - 3) 4

ELN 4414 RECEIVERS AND TRANSMITTERS: Upon completion of this course the student should be able to: (1) apply the appropriate test, measuring equipment to effect measurements on transmitters that will result in proof of performance as required by the FCC; and (2) apply the appropriate test, measuring equipment to determine and/or make LC resonance adjustments to receivers as required by performance specifications. P.R. ELN 3717, ELN 4524. (3 - 3) 4

ELN 4427 INTEGRATED CIRCUITS: Upon completion of this course the student should be able to: (1) read logic diagrams, relate diagram to hardware, identify IC package types and fabrication technique used; (2) use manufacturers specifications to determine operating characteristics and functions for digital and analog devices; (3) express a Boolean expression using logic gate circuits such as AND, OR, NAND, NOR and inverters; and (4) Set up working laboratory digital and analog circuits and systems such as counters, decoders, shift registers, operational and differential amplifiers and predict proper operation. P.R. 4524. (3 - 3) 4

ELN 4434 SWITCHING LOGIC: Upon completion of this course the student should be able to: (1) reduce binary expressions using the laws and theorems of Boolean algebra; (2) draw the logic symbols used in digital electronics; (3) construct a switching circuit and verify the results; (4) assemble digital circuits using integrated circuit technology; (5) design sequential circuits and implement them in the laboratory. P.R. ELN 4427. (3 - 3) 4

ELN 4504 ULTRA HIGH FREQUENCY TECHNIQUES: Upon completion of this course the student should be able to: (1) accurately measure UHF frequency of magnetron or klystron; and (2) apply Smith chart calculations to antenna, waveguide and attenuators. P.R. ELN 3717, ELN 4544. (3 - 6) 5

ELN 4524 TRANSISTOR CIRCUIT ANALYSIS AND DESIGN: Upon completion of this course the student should be able to: (1) design proper DC bias for class "A" transistor amplifiers; (2) analyze small signal transistor amplifier circuits using hybrid equivalent circuits and parameters; (3) design proper DC bias for JFET and MOSFET amplifiers; (4) design transistor push pull amplifiers and power transistor circuitry with transformer output; (5) calculate the proper resistive and capacitive circuitry for transistor bistable, monostable and astable multivibrators; and (6) experimentally prove the above circuits in the laboratory. P.R. ELN 3404, C.R. ELN 4544. (3 - 6) 5

ELN 4525 ELECTRICAL MACHINES I: Upon successful completion of this course the student should be able to: (1) specify the factors required to induce a voltage in simple generators and develop a force in simple motors; (2) show visually the physical relation and polarities of the above factors; (3) calculate induced voltage in generators; (4) calculate developed force and torque in motors; (5) calculate the electrical quantities of current, voltage, power, power factor, phase angle, voltage regulation, efficiency and the physical quantities of torque, speed, and horsepower for: (a) DC generators; (b) DC motors; (c) transformers; (d) alternators; (e) three-phase motors; (f) single-phase motors; and (6) select and wire motor, generator, transformer, meter, and load circuits in the laboratory as required to obtain operational data and evaluate performance of the above. P.R. PHY 3404, ELN 3515 or PHY 3406. (3 - 6) 5

ELN 4526 ELECTRICAL MACHINES II: Upon successful completion of this course the student should be able to: (1) calculate the electrical quantities of current, voltage, power, power factor, phase angle, voltage regulation, and the physical quantities of torque, speed and horsepower for the following: (a) synchronous motors; (b) alternators in parallel; (c) specialized transformers; (d) specialized motors, and (e) three-phase transformers; (2) calculate motor and generator efficiency data without applying any physical load to the machine; (3) demonstrate knowledge of solid state AC motor controllers (rectifier-inverters), in the areas of components, selection, applications, circuit current/voltage levels and waveforms; and (4) select and wire motor, generator, transformer, meter, load and solid state controller circuits in the laboratory, as required, to obtain operational data and evaluate performance of the above. P.R. ELN 4405, ELN 4525. (3 - 6) 5

ELN 4544 NETWORK ANALYSIS: Upon completion of this course the student should be able to: (1) determine series and parallel equivalent circuits using Kirchoff's law; (2) simplify electrical circuits to Thevenin's or Norton's equivalent; (3) calculate electrical properties of network circuits using superposition, mesh and nodal analysis; (4) transform delta equivalent circuits to wye and wye to delta; and (5) experimentally prove the above in a laboratory setting. P.R. ELN 3515, MAT 3505. (3 - 6) 5

ELN 4 94 INDEPENDENT STUDY: This course is designed to provide students with the opportunity to develop special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and program director is required prior to enrollment. P.R. None. (1-5 credits)

ENGLISH ENG 9500 EFFECTIVE SENTENCE WRITING: An individualized, self-paced course designed to meet the needs of any student who does not have the necessary English grammar background to take college transfer, technical, or trade English and to meet the needs of any student who expresses an interest in sentence writing. When a student has completed ENG 9500, he should be able to write clear, concise, and correctly punctuated sentences. (Placement: Cooperative English Score) (10 - 0) 10

ENG 9501 ENGLISH FOR FOREIGN STUDENTS: An individualized, self-paced course designed to meet the needs of foreign-born students for whom English is a second language. The course includes group and individual activities that enable the student to communicate in English. Upon completion of ENG 9501, the student should be able to demonstrate his ability to read English language newspapers, government forms, and business forms and directions. He will demonstrate his ability to understand spoken English directions and his ability to speak English by giving a short talk to the class on a topic of his choosing. (5 - 0) 5

ENG 9505 SPELLING AND VOCABULARY: An individualized self-paced course designed to meet the needs of students who are lacking in the study of sound patterns in the English language and exploration of words. At the completion of ENG 9505 the student should be able to produce English speech sounds, to pronounce words, and to spell them correctly. (5 - 0) 5

ENG 9510 FUNDAMENTALS OF WRITING: An individualized, self-paced course designed to meet the needs of students who are not adequately prepared to enter college transfer or technical communication courses; however, any student may enroll in the course. Upon successful completion of ENG 9510, the student should be able to demonstrate that he has developed the necessary skills by writing and proofreading paragraphs and themes. (Prerequisite: ENG 9500 or Cooperative English Score) (5 - 0) 5

FINANCE FIN 3314 BUSINESS MATHEMATICS I: Each student after completing the required objectives of this course will be able to add, subtract, multiply and divide whole numbers, fractions and decimals as applied in business; calculate business problems containing fractions with the aid of aliquot parts; manipulate and apply per cent, markup, trade discounts and cash discounts to business situations; compute earned wages and deductions for hourly, piece work, and commission payroll; reconcile a bank statement with check stubs and complete the following forms with given data. W-2, W-4, 941 Federal and 1040A Federal tax. (3 - 0) 3

FIN 3315 BUSINESS MATHEMATICS II: Each student after completing the required objectives of this course will be able to compute simple, compound, mortgage and installment interest from given formulas, short cuts (6% - 60) and tables; calculate depreciation, bank discounts and insurance premiums from given formulas; analyze a balance sheet and an income statement using vertical and horizontal methods; draw charts and graphs from given data and determine the arithmetic mean, median and mode; complete a 1040 Federal tax form from given data and answer basic questions on stocks and bonds. (3 - 0) 3

FIN 3330 REAL ESTATE ARITHMETIC: Upon completion of this course, the student will have demonstrated competency in applying basic arithmetical processes for solving problems in real estate including the following: geometric diagrams, commissions, profits and losses, appreciation and depreciation, interest, financial packages, taxes, insurance, capitalization, investments. (3 - 0) 3

FIN 4317 FINANCIAL STATEMENT ANALYSIS: This course is a study of the fundamentals of the major financial statements used in accounting with particular emphasis on the balance sheet and income statement. The student will be able to demonstrate satisfactory competency in the use of various techniques of analysis to determine financial position and to interpret operating results. (3 - 0) 3

FIN 4334 BUSINESS FINANCE I: Upon completion of this course, the student will have demonstrated satisfactorily a basic understanding of the financing of corporations and other business entities. The student will study the various types of capital including common stock, preferred stock, bonds, bank loans, leasing and special term loans. Methods of determining the cost of capital and the use

of leverage are considered along with other aspects of managing the firms capital structure.

P.R. ACC 1604.

(3 - 0) 4

FIN 4335 BUSINESS FINANCE II: In this continued study of the techniques of business finance, the student will be able to define and describe the procedural aspects and solve problems using the techniques of investment analysis, profitability analysis, performance analysis, financial planning, liquidity management, capital budgeting, capital readjustments, expansion, and investment decision making. P.R. FIN 4334.

(3 - 0) 3

FIN 4336 FINANCIAL MANAGEMENT: This course of study covers finance functions related to buying, selling and operating a business. Emphasis is placed on problem solving and the development of analytical skills rather than on theory. The case method is used to develop and reinforce problem solving skills. The student will demonstrate the ability to: (1) solve case problems related to these functions, (2) define and explain the principles of valuation, financial ratios, the use of capital budgeting as a planning tool, as well as various techniques for managing working capital, inventories and other business assets.

(3 - 0) 3

FIN 4350 PERSONAL MONEY AND FINANCIAL MANAGEMENT I: A consumer oriented course designed to enable the student to become a better consumer. When completed the student will have demonstrated his knowledge of: consumer laws, protection, and remedies; family budgeting and financial planning; housing needs; transportation needs; and uses of credit and its related problems. Awareness on the part of the student to consumer rights and responsibilities are emphasized throughout the course.

(3 - 0) 3

FIN 4390 PERSONAL MONEY AND FINANCIAL MANAGEMENT II: A consumer oriented course designed to enable the student to become a better consumer. Long range planning is the major emphasis here. Upon completion of the course the student will be able to: make a long range financial plan for the family; determine insurance needs, understand retirement income planning; understand estates, wills, trusts and their uses; and determine his need for professional help from lawyers, accountants, bankers, etc. in his future planning.

(3 - 0) 3

FIP 3301 FIRE PREVENTION PROGRAMS & PUBLIC RELATIONS: Upon completion of this course the student should be able to: (1) list and discuss the principles and applications of fire prevention related to the community and industrial plants; (2) discuss the development and maintenance of fire prevention programs, educational programs and inspection programs; (3) apply related disciplines to fire prevention problems. P.R. None.

(3 - 0) 3

FIP 3302 FIRE PROTECTION - SECURITY: Upon completion of this course the student should be able to: (1) list fire causes, fire hazards, types of fires, sources of ignition; (2) state the purpose of the Occupational Safety and Health Act; (3) be familiar with the National fire codes; (4) list and describe flammable liquids, solids, gasses, combustible metals, dusts, and explosives; (5) list the storage, handling and transportation of flammable materials; (6) know the 704M system; (7) describe the operation of portable and fixed chemical extinguishing systems; (8) list the major sprinkler systems; (9) discuss personnel protective clothing; (10) list the different types of breathing apparatus. P.R. None.

(3 - 0) 3

FIP 3303 FIRE PROTECTION I: Upon completion of this course the student should be able to: (1) state the duties and obligations of fire service; fire protection and safety personnel; (2) identify general fire hazards and causes, fire protection principles; (3) demonstrate skill in applying these principles in the elimination or reduction of the fire hazards and causes; (4) compare current trends and federal legislation in fire protection to early fire protection developments. P.R. None.

(3 - 0) 3

FIP 3304 FIRE PROTECTION II: Upon completion of this course the student should be able to: (1) discuss fire department organization and personnel management in relation to other city departments; (2) evaluate public fire protection needs, financial factors, records and reporting systems. P.R. FIP 3303.

(3 - 0) 3

FIP 3306 ARSON DETECTION AND INVESTIGATION: Upon completion of this course the student should be able to: (1) identify fire causes of an accidental and incendiary nature; (2) identify points of origin of fire; (3) identify and preserve physical evidence of fire; (4) construct and execute court cases; (5) identify motives for and methods of fire setting. P.R. None.

(3 - 0) 3

FIP 3504 CHEMISTRY OF FLAMMABLE MATERIALS: Upon completion of this course the student should be able to: (1) list and describe theories of combustion and extinguishment; (2) analyze flammable materials and describe the nature of extinguishing agents; (3) list the properties of matter affecting fire behavior; (4) discuss the use, storage, and disposal of flammable solids, liquids, gasses and dusts, using the laws and principles of chemistry and physics as a basis for discussion. P.R. CHM 3500.

(3 - 4) 5

FIP 4304 FIRE PROTECTION LAW: Upon completion of this course the student should be able to: (1) list and discuss pertinent laws and ordinances and codes of fire protection and the responsibilities and powers of the individual or organizations concerning enforcement; (2) discuss liability of fire protection personnel when making inspections, recommendations, fighting fires and other tasks; (3) discuss specific court cases including torts, terms and contracts. P.R. None.

(3 - 0) 3

FIP 4314 TRAINING PROGRAMS & METHODS OF INSTRUCTION: Upon completion of this course the student should be able to: (1) discuss purposes of fire service drills and training programs; (2) discuss

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the development and operation of Charlotte-Mecklenburg training programs; (3) list and describe facilities and necessary equipment for modern training; (4) discuss the selection and training of instructional staff and appropriate methods of instruction. P.R. SPH 1300. (3 - 0) 3

FIP 4324 CONSTRUCTION, CODES, AND MATERIAL RATING: Upon completion of this course the student should be able to: (1) list and discuss building codes applicable to fire prevention; (2) list and describe the principles and practices used in various types of building construction; (3) discuss fire resistant tests and rating of materials. P.R. None. (2 - 2) 3

FIP 4403 HYDRAULICS FOR FIRE PROTECTION: Upon completion of this course the student should be able to: (1) describe the flow of fluids through fire hoses, nozzles, appliances, pumps and other devices; (2) describe the designs, uses and testing of nozzles, appliances and pumps; (3) accurately measure fluid flow using appropriate methods of determining quantities of water available through fire systems. P.R. MAT 9302. (3 - 2) 4

FIP 4404 WATER DISTRIBUTION SYSTEMS: Upon completion of this course the student should be able to: (1) identify and describe sources of water, water storage, measurement of fluid flow and methods of determining quantities of water available from a distribution system. P.R. FIP 4403. (3 - 2) 4

FIP 4405 SPRINKLER & STANDPIPE SYSTEMS: Upon completion of this course the student should be able to: (1) identify and describe the various types of sprinkler and standpipe systems; (2) list and discuss system devices and their operations to include advantage of sprinkler systems, codes, governing installation, water supply requirements, testing, inspection and maintenance. P.R. None. (3 - 2) 4

FIP 4414 INSPECTION PRINCIPLES AND PRACTICES: Upon completion of this course the student should be able to: (1) list fundamentals of fire inspection including standards, techniques of evaluation of hazards by degrees and practical recommendations; (2) inspect buildings and write reports on each building, to include maps and sketches of each building, location of hazards, and recommendations for safe practices and improvements. P.R. FIP 4324. (2 - 4) 3

FIP 4423 PORTABLE & FIXED EXTINGUISHING SYSTEMS: Upon completion of this course the student should be able to: (1) list and describe the various types of portable and fixed extinguishing systems, their operation, application, installation and maintenance; (2) demonstrate skill in operating portable and fixed extinguishing systems. P.R. FIP 3504. (3 - 2) 4

FIP 4424 AUTOMATIC ALARM SYSTEMS: Upon completion of this course the student should be able to: (1) list and describe the types of standard and special fire alarm and fire detection systems to include discussion of their operations, installation requirements, testing, inspections and maintenance. (3 - 2) 4

FIP 4434 CHEMICAL AND RADIATION HAZARDS: Upon completion of this course the student should be able to: (1) list and describe the hazards encountered in chemical and petroleum industries; (2) list and describe radiation hazards, effects of radiation on humans, exposure control, radiological instruments, operational and decontamination procedures; (3) list and describe common uses of radioactive materials, their transportation and storage; (4) demonstrate skills of chemical and radioactive inspections. P.R. FIP 3504. (3 - 2) 4

FIP 4444 FIRE FIGHTING STRATEGY: Upon completion of this course the student should be able to: (1) list and describe tactics and strategy in extinguishing fires; (2) list and describe pre-fire plans, fire flow calculations, techniques of using available equipment and manpower, conflagrations, techniques of predicting fires and fuel analysis; (3) demonstrate appropriate responses to simulated crisis. P.R. None. (3 - 2) 4

FRENCH FRE 1300 TRAVEL FRENCH: Oral approach to comprehending and communicating in French. Upon successful completion of FRE 1300, the student should be able to use basic communication in terminals, shops, restaurants, hotels, and other places. Tapes, filmstrips, movies, and extensive conversation in the classroom. (Elective credit only.) (Does not satisfy humanities requirement.) (3 - 1) 3

FRE 1600 ELEMENTARY FRENCH I: Basic elements of French in conversation, reading, and writing for beginning students. Filmstrips and tapes used in classroom and laboratory instruction. (Does not satisfy humanities requirement.) (5 - 2) 6

FRE 1601 ELEMENTARY FRENCH II: Continuation of FRE 1600 in basic elements of conversation, reading, and writing. P.R. FRE 1600 or consent. (Does not satisfy humanities requirement.) (5 - 2) 6

FRE 2320 SPECIAL TOPICS: An advanced course in which the students and the instructor select topics for independent study. Class meetings for oral reports and discussion. P.R. FRE 2600 or consent. (3 - 0) 3

FRE 2600 INTERMEDIATE FRENCH I: Intensive review of basic grammar and vocabulary combined with study of idiomatic forms and grammatical structures in selected readings. P.R. FRE 1601 or two high school units or consent. (5 - 2) 6

FRE 2601 INTERMEDIATE FRENCH II: Readings in French with emphasis on people and events that have determined the destiny of France from the beginnings to the present. Selections from French literature include poetry, drama, and fiction, supplemented with filmstrips, slides, and movies. P.R. FRE 2600 or consent. (FRE 2600 or 2601 combined will satisfy humanities requirement.) (5 - 2) 6

FSO 3300 INTRODUCTION TO FOOD SERVICE TECHNOLOGY: In this introductory course in food service technology, the student will learn the sanitation rules of Charlotte and the state code of North Carolina. In addition, the student will gain the knowledge of the difference between a chain restaurant, corporation hotel, country club operation, cafeteria and coffee shoppe and will recognize the proper chain of command. Upon completion of the course the student will understand the basic function of each department existing in an entire food service operation. (3 - 0) 3

FSO 3305 TABLE COOKERY: Upon successful completion of the course, the student will have the necessary knowledge to become a competent head waiter, maitre d', or wine steward. The student will also learn the various dishes that are appropriate for table cookery, including desserts. Practical knowledge will be acquired in salad making and the correct temperatures wines are served. P.R. FSO 3804. (2 - 3) 3

FSO 3505 FOOD PREPARATION AND DINING ROOM SERVICE II: Upon successful completion of the course the student will have acquired advanced skills necessary to be a competent cook, waiter or waitress. The student will become more familiar with the finer arts of the methods and preparation of American and European cookery, acquiring the skills necessary to prepare and cook different sauces, egg, and cheese dishes. In addition to learning weights and measures used in cooking, the student will also learn the difference between American and European dining room service. P.R. FSO 3804. (2 - 9) 5

FSO 3506 FOOD PREPARATION AND DINING ROOM SERVICE III: The student will learn to identify and prepare soups, consommés, creams, purees, chowders, potages, royals and the techniques used in preparing garnishes. The student will gain an understanding of the value of showmanship needed in presenting fancy foods as well as learning the value of menu technology. P.R. FSO 3505. (2 - 9) 5

FSO 3804 FOOD PREPARATION AND DINING ROOM SERVICE I: The student will acquire skills essential to becoming a competent cook, waiter or waitress, including the fundamentals of cooking. In the lab, the student will participate in activities which are of value in understanding present-day food service establishments and dining room technology. The student will also gain meaningful insight in opportunities for individual advancement in the industry. (3 - 10) 8

FSO 4304 FOOD AND LABOR COST CONTROLS: The student will gain information concerning food costs and skills necessary for setting food cost objectives. The value of establishing standard portions will be stressed. Purchasing methods, the importance of a weekly inventory, the necessity of food issuing forms and the value of comparative buying will also be learned. Upon completion of the course, the student will be able to direct personnel to the fullest advantage. P.R. ACC 3434. (3 - 0) 3

FSO 4314 GARDE MANGER I: This introductory course will enable the student to learn basic skills in meat cutting and salad preparation. The student will learn the showmanship necessary in creating fancy meat platters and the skills required in ice carving and tallow sculpturing. (2 - 3) 3

FSO 4407 BAKING I: This introductory course will provide the student with the opportunity to learn the principles of baking and the skills necessary to make breads, rolls, cakes, etc. In addition, the student will learn the importance of correct measurements and the proper use of various baking tools and equipment. (2 - 6) 4

FSO 4408 BAKING II: In this course the student will learn methods of mixing, defining the function of each ingredient. The student will demonstrate the ability to handle and roll basic dough and will be able to recognize the differences in the pastry unit, baking unit and ice cream unit. P.R. FSO 4407. (2 - 6) 4

FSO 4409 BAKING III: Upon completion of the course, the student will be able to decorate cakes; identify ingredients used in French and Danish Pastries and various icings; and will be able to create flaming desserts. P.R. FSO 4408. (2 - 6) 4

FSO 4415 GARDE MANGER II: The student will learn the techniques of processing and dressing meats, including poultry and seafood. The student will also be able to construct various sandwiches; will identify ingredients used in numerous salad dressings; and will recognize color, flavor, and texture combinations used in aspics and glazes for show pieces. P.R. FSO 4314. (2 - 6) 4

FSO 4416 GARDE MANGER III: Upon completion of this course, the student will demonstrate a better technique of boning beef, veal, lamb and pork and will be able to understand the grading of meat and the rudiments used in purchasing. The student will be able to prepare fancy salads, special sandwiches, and a classic chaud froid show piece. In addition, the student will learn the various nutritive values associated with fresh fruits and vegetables and will know how to maintain these nutrients during preparation and cooking. The student will be able to differentiate the responsibilities of the Garde Manger Section. P.R. FSO 4415. (2 - 6) 4

FSO 4506 FOOD PREPARATION AND DINING ROOM SERVICE IV: In this course the student will learn how to saute, fry, roast, braise, stew and broil meats in addition to learning how to carve different cuts of meat. The student will also acquire skills necessary to purchase provisions and groceries; to select proper wines; and to set up special banquets and parties. P.R. FSO 3506. (2 - 9) 5

FSO 4507 FOOD PREPARATION AND DINING ROOM SERVICE V: The student will gain knowledge in composing a menu with the correct combination and price structure. In addition to learning the importance of setting up stations and dining room service, the student will know how to work in the hot

stations and the garde-manger section as well as being able to perform the duties of the maitre d' or hostess in the dining room. P.R. PSO 4506. (2 - 9) 5

FSO 4508 WORK EXPERIENCE SEMINAR: The student will acquire work experience under the guidance of a chef in the community, assisting in all phases of the food service operation. The Executive Chef of the establishment to whom the student is assigned will evaluate the individual's progress. P.R. FSO 4507. (2 - 9) 5

GEOLOGY

GEL 1604 PHYSICAL GEOLOGY: An introductory course in geology with emphasis on the presence of geology in the student's surroundings. Upon satisfactory completion of this course the student should be able to demonstrate knowledge in the following areas: common minerals & rocks, development of major landforms & the economical use of geological resources. (5 - 2) 6

GEL 2605 HISTORICAL GEOLOGY: An introductory course in the historical sequence of the earth's history. Upon satisfactory completion of this course the student should be able to demonstrate knowledge in the areas: recognition of major fossils and associated rock strata, appreciation of the age of many geological formations, and how historical geology aids in finding natural resources. (5 - 2) 6

GEOGRAPHY

GEO 1614 INTRODUCTION TO PHYSICAL GEOGRAPHY: A study of the basic physical elements of geography aimed at understanding man's physical environment. Upon successful completion of this course, the student will be able to demonstrate a basic understanding of the earth's geographic grid system, earth-sun relations and their phenomena, basic concepts of cartography, meteorology, hydrology, and geomorphology. (5 - 2) 6

HEALTH EDUCATION

HED 1100 HEALTH EDUCATION I: A study of selected health areas in personal health. The student will be able to select specific self-instructional units that are of special interest. At the end of the course the student should be able to implement basic health measures for use in maintaining personal health and should be able to utilize health education in improving daily living. (1 - 0) 1

HED 1101 HEALTH EDUCATION II: Continuation of HED 1100. Special emphasis in community health. Upon completion of this course the student will be familiar with community health resources and should be able to identify the role an individual can play in improving community health. (1 - 0) 1

HED 1102 HEALTH EDUCATION III: Continuation of HED 1101. Specific emphasis on family health. Upon successful completion of this course the student will be able to describe the factors contributing to family health, relate various health problems encountered by different age groups in a family and be able to list community resources for family health. (1 - 0) 1

HED 1103 SPECIAL HEALTH PROBLEMS: Selected health problems are chosen for study. The student is presented a subject area and should be able to identify the problem areas and will have the opportunity to suggest possible solutions to these problems. (1 - 0) 1

HED 1200 PUBLIC HEALTH AND SANITATION: The student will become acquainted with general information about the various aspects of public health. The student will become familiar with the health concerns of adults and children and should be able to identify various public health problems and environmental health problems upon successful completion of the course. (2 - 0) 2

HED 1201 SPECIAL HEALTH PROBLEMS: Selected health problems are chosen for study. The student is presented a subject area and should be able to identify the problem areas and will have the opportunity to suggest possible solutions to these problems. (2 - 0) 2

HED 1202 DRUGS AND RELATED ISSUES: A study of drugs and drug use in contemporary American society. Upon completion of the course the student should be able to identify decision making and communication skills as they relate to drug use. A discussion of alternatives to drug use will be included. (2 - 0) 2

HED 1203 CARDIOPULMONARY RESUSCITATION (CPR): The student is instructed in Emergency First Aid and CPR procedures that should enable the student to give care to the injured and/or perform emergency procedures when cardiac arrest occurs. (2 - 0) 2

HED 1204 FIRST AID I: The purpose of First Aid Training is to acquire knowledge and skill to enable the student to provide emergency care for the sick and injured until medical help arrives. The Red Cross Standard First Aid and Personal Safety certificate will be awarded the student upon successful completion of the course. (2 - 1) 2

HED 1205 FIRST AID II: Continuation of First Aid I. Successful completion of this course will qualify the student as a Red Cross Instructor of Standard First Aid and Personal Safety. P.R. HED 1204. (2 - 0) 2

HED 1301 SPECIAL HEALTH PROBLEMS: Selected health problems are chosen for study. The student is presented a subject area and should be able to identify the problem areas and will have the opportunity to suggest possible solutions to these problems. (3 - 0) 3

HIS 1300 AFRO-AMERICAN HISTORY I: Upon completion of this course the student should be able to analyze significant events and identify patterns in the political, socio-economic, religious, intellectual, and cultural developments of the Afro-American from 3000 B.C. to 1830 A.D.; and to evaluate major historical interpretations of Afro-American History to 1830. (3 - 0) 3

HIS 1301 AFRO-AMERICAN HISTORY II: The Abolition Movement of the 1830's to the Great Depression (1930). Upon successful completion of this course the student should be able to analyze significant events and identify patterns in the political, socio-economic, religious, intellectual, and cultural developments of the Afro-American from 1830 to 1930; to analyze and evaluate the philosophies of the major black leaders from 1830 to 1930; and to evaluate major historical interpretations of Afro-American history from 1830 to 1930. (3 - 0) 3

HIS 1302 AFRO-AMERICAN HISTORY III: The Black Revolt, 1930 to the present. Upon completion of this course the student should be able to analyze significant events and identify patterns in the political, socio-economic, religious, intellectual, and cultural developments of black Americans from 1930 to the present; to analyze and evaluate the philosophies of major black leaders during this period; and to evaluate major historical interpretations of Afro-American history from 1930 to the present. (3 - 0) 3

HIS 1320 AMERICAN HISTORY I: Upon completion of this course the student should be able to analyze significant events and identify patterns in the political, socio-economic, religious, intellectual, and cultural developments in America from the Colonial Period to 1850; and to evaluate major historical interpretations of this period of American history. (3 - 0) 3

HIS 1321 AMERICAN HISTORY II: Upon completion of this course the student should be able to analyze significant events and identify patterns in the political, socio-economic, religious, intellectual, and cultural developments in American history from 1850 to 1920; and to evaluate major historical interpretations of this period of American history. (3 - 0) 3

HIS 1322 AMERICAN HISTORY III: Upon completion of this course the student should be able to analyze significant events and identify patterns in the political, socio-economic, religious, intellectual, and cultural developments in the United States from 1920 to the present, thus giving context for understanding present United States society. (3 - 0) 3

HIS 1500 WORLD CIVILIZATION I: This course involves a study of man's developments from the pre-historic period to the seventeenth century. Upon successfully completing this course the student should be able to analyze significant events and identify patterns in man's early political, socio-economic, religious, intellectual, and artistic developments in Europe, Asia, and Africa, making relationships between past events and relating these to contemporary problems. (5 - 0) 5

HIS 1501 WORLD CIVILIZATION II: This course involves a study of man's development from the seventeenth century to the present. Upon successfully completing this course the student should be able to analyze significant events and identify patterns in man's recent political, socio-economic, religious, intellectual, and artistic developments in Europe, Asia, Africa, and the Americas, thus giving context for understanding the present world order. (5 - 0) 5

HIS 2104-2504 SPECIAL TOPICS IN HISTORY: This designation allows students individually or in groups to investigate in greater detail certain special topics of particular interest not covered in regular departmental offerings. The specific objectives will vary with each course. (1 to 5 hrs class/week) (1 to 5 hrs Credit)

HIS 2500 NORTH CAROLINA HISTORY: Upon completion of this course the student should be able to examine the major historical, geographical, and governmental developments in North Carolina from the colonial era to the present. Through field trips and special projects the student will evaluate the cultural developments and socio-economic contributions of the state. (5 - 0) 5

HIS 2510 SURVEY OF LATIN AMERICAN HISTORY: Upon successful completion of this course, the student should be able to:

1. Explain basic political, socio-economic, religious, and cultural developments in Latin American history from the beginnings of European colonization to the present.
2. Identify significant persons, events, and ideas in the above mentioned area and period of study.
3. Learn independently from written materials.
4. Organize and present, orally and/or in writing, coherent reports or relevant topics.
5. Demonstrate comprehension that contemporary social, economic, and political problems are rooted in the past.
6. Demonstrate appreciation that causal explanation in history is necessarily complex. (5 - 0) 5

HIS 2520 SURVEY OF ASIAN HISTORY: Upon completion of this course, the student should be able to:

1. Explain basic political, socio-economic, religious, and cultural developments in the history of East, Southeast, South, and West Asia from the earliest times to the present.
2. Identify significant persons, events, and ideas in the above mentioned area and period of study.
3. Learn independently from written materials.
4. Organize and present, orally and/or in writing, coherent reports on relevant topics.
5. Demonstrate comprehension that contemporary social, economic, and political problems are rooted in the past.
6. Demonstrate appreciation that causal explanation in history is necessarily complex. (5 - 0) 5

HOR 3200 INTRODUCTION TO HOUSEPLANTS: Upon completion of this course the student should be able to: (1) describe the characteristics to look for in houseplants and plant shops; (2) discuss the importance of selected tools, supplies, and containers to proper houseplant care; (3) discuss the effects of selected environmental factors important to houseplants; (4) identify thirty (30) selected houseplants; (5) identify and give control measures for twelve (12) selected pest problems of houseplants. P.R. None. (2 - 0) 2

HOR 3300 LANDSCAPE PLANTS I: Upon completion of this course the student should be able to: (1) identify by sight the eighty-six (86) selected plants; (2) list the physical characteristics, cultural requirements, and landscape uses of these plants; (3) identify any special remarks regarding these plants. P.R. None. (3 - 0) 3

HOR 3301 PLANT PROPAGATION: Upon completion of this course the student should be able to: (1) perform the following types of asexual propagation: (a) layering; (b) cuttings; (c) grafting; (d) budding; (e) dividing; (2) perform sexual (seed) propagation of ornamental plants; (3) select, use, and maintain equipment and supplies used in plant propagation; (4) choose the correct propagation method for a variety of ornamental plants. P.R. None. (2 - 3) 3

HOR 3302 LANDSCAPE GRAPHICS AND MEASUREMENTS: Upon completion of this course the student should be able to: (1) execute measurements commonly used in landscaping; (2) read "working" landscape plans and specifications; (3) prepare basic "working" landscape plans and specifications; (4) reproduce landscape plans. P.R. None. (2 - 3) 3

HOR 3303 NURSERY TECHNOLOGY: Upon completion of this course the student should be able to: (1) perform the day to day operations used to grow, maintain and harvest both container and field grown nursery stock; (2) select, use and maintain nursery equipment and supplies; (3) discuss the various kinds of nurseries; (4) discuss marketing of nursery products and services. P.R. None. (2 - 3) 3

HOR 3305 GROUNDS MAINTENANCE II: Upon completion of this course the student should be able to: (1) explain the purpose of and list sources of the major, minor, and trace nutrient elements; (2) identify deficiency symptoms of nutrient elements; (3) perform simple soil tests for nutrient content and PH; (4) select and apply correct fertilizers to selected ornamentals; (5) identify and execute preventive and corrective controls of selected insect pests of ornamentals; (6) identify and execute preventive and corrective controls of selected disease pests of ornamentals; (7) select, use, and maintain equipment items and materials used in the above operations. P.R. None (2 - 3) 3

HOR 3307 LANDSCAPE YOUR OWN HOME: Upon completion of this course the student should be able to: (1) analyze the outdoor needs of the family and the environment factors affecting the property; (2) allot space for landscape uses; (3) choose the proper plant material and outdoor architectural features to enhance their property; (4) discuss and construct basic landscape construction features. P.R. None. (3 - 0) 3

HOR 3310 TURF MANAGEMENT: Upon completion of this course the student should be able to: (1) identify at least seven (7) selected turf grasses; (2) list the cultural requirements for each of the seven (7) selected turf grasses; (3) establish turf grasses by four (4) different methods; (4) maintain turf grass by being able to select and use turf equipment and supplies; (5) identify and control common turf pests. P.R. None. (2 - 3) 3

HOR 3404 LANDSCAPE PLANTS II: Upon completion of this course the student should be able to: (1) identify by sight the one hundred twenty (120) selected plants; (2) list the physical characteristics, cultural requirements and landscape used of these plants; (3) identify any special remarks regarding these plants. P.R. HOR 3300. (3 - 3) 4

HOR 3504 GROUNDS MAINTENANCE I: Upon completion of this course the student should be able to: (1) identify problems of and execute preventive and corrective controls of weed problems common to ornamentals; (2) select and apply mulches for usual maintenance situations; (3) identify and execute preventive and corrective controls of water problems in grounds maintenance; (4) prune all plants on a selected list of ornamentals; (5) select, use, and maintain equipment items used in the above operations. P.R. None. (3 - 4) 5

HOR 3505 LANDSCAPE GARDENING: Upon completion of this course the student should be able to: (1) analyze the landscape potential of a landscape project area; (2) prepare detailed landscape plans, plant lists, and planting specifications; (3) install a landscape planting; (4) perform basic landscape construction. P.R. HOR 3302, HOR 3404. (3 - 4) 5

HOR 3804 PRACTICAL FIELD WORK: A seven week clinical training session in cooperation with various local businesses of the horticulture industry. P.R. Enrollment in last quarter of Horticulture program. (0 - 40) 8

HOR 4 94 INDEPENDENT STUDY: This course is designed to provide students with the opportunity to develop special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and program director is required prior to enrollment. P.R. None. (1 - 5 Credits)

- HPE 1100 INDIVIDUAL ACTIVITY: These are exploratory courses taught on a temporary basis for possible inclusion in the regular curriculum. Approved by the Health, Physical Education and Recreation Department for a particular student. P.R. consent. (0 - 3) 1
- HPE 1101 ARCHERY: The student will be taught the fundamentals in using the bow and arrow and point-of-aim, and will examine other methods used in archery. (0 - 3) 1
- HPE 1102 WEIGHT LIFTING: The student will be introduced to a systematic program of body conditioning, including the proper techniques of weight lifting: exercise in sets; demonstration and practice of overhand grip; underhand grip and combination of both. Safety hints will be emphasized. The student will also be introduced to the two-arm curl; press behind neck and reverse curl; and the two-hand military press: split style and squat style. (0 - 3) 1
- HPE 1103 WATER SKIING: An introduction to the sport of water skiing. The student will learn care of equipment, safety procedures and development of fundamental skills of water skiing. P.R. Demonstrated swimming proficiency and consent. (0 - 3) 1
- HPE 1104 FENCING-BEGINNING: Introduction to the art of fencing. The student will learn elementary foil technique and be introduced to competitive fencing. (0 - 3) 1
- HPE 1105 FENCING-INTERMEDIATE: This course is a continuation of beginning fencing. The student will learn advanced foil techniques such as the balastra, the fleche, the croise, taking the blade and competitive fencing. P.R. HPE 1104 or equivalent. (0 - 3) 1
- HPE 1106 FENCING-ADVANCED: In this advanced course the student will execute elementary sabre techniques, the on guard position; the lunge; the cut at head, crest and flank; various parries; more advanced foil techniques; and engage in advanced competitive fencing. P.R. HPE 1105 or equivalent. (0 - 3) 1
- HPE 1107 SELF-DEFENSE and PHYSICAL CONDITIONING - BEGINNING: The first in a series of three courses designed to promote physical well-being and increased self-confidence through the acquisition of skills in self-defense. Upon completion of the course the student should be able to demonstrate stances; blocks; punches; walking and kicks - skills needed in attaining a white belt in self-defense. (0 - 3) 1
- HPE 1108 SELF-DEFENSE and PHYSICAL CONDITIONING - INTERMEDIATE: A continuation of the beginning course in which the student will learn pre-arranging and will start first forms and katas - skills used in attaining a yellow belt in self-defense. P.R. HPE 1107 or equivalent. (0 - 3) 1
- HPE 1109 SELF DEFENSE and PHYSICAL CONDITIONING - ADVANCED: The student will review skills learned in the intermediate course and will learn advanced new techniques and skills in free fighting and defense against weapons. The course entails learning skills necessary for the student to attain a green belt in self-defense. P.R. HPE 1108 or equivalent. (0 - 3) 1
- HPE 1110 CAMPING, TRAILER: For the beginner. The student will be able to do basic hook-ups; do-it-yourself maintenance and be able to utilize information on camping and trailering. (0 - 3) 1
- HPE 1111 SCUBA DIVING: An introduction to the sport of scuba diving. The student will be introduced to the use of the face mask, snorkle, fins, and other scuba gear. P.R. Demonstrated swimming proficiency and consent. (0 - 3) 1
- HPE 1114 SNOW SKIING-BEGINNING: Instruction in the proper fundamentals of skiing, safety and etiquette. The student will receive instruction in skiing, parallel turns, christies, basic jump and introductory wedelin. (0 - 3) 1.
- HPE 1115 SNOW SKIING - INTERMEDIATE: In this second course in snow skiing, the student will progress to longer skis, concentrating on improving traverse and side slip; expand on angulation, pole plant and unweighting; and engage in an intermediate exercise program in order to handle more advanced terrain. P.R. HPE 1114 or equivalent. (0 - 3) 1
- HPE 1116 SNOW SKIING - ADVANCED: In this advanced course in snow skiing, the student will be introduced to Slalom and Giant Slalom techniques, elementary downhill techniques, trick skiing and jumping. P.R. HPE 1115 or equivalent. (0 - 3) 1
- HPE 1117 ICE SKATING - BEGINNING: The student will be introduced to basic ice skating maneuvers such as forward and backing; stroking one foot glide; cross overs; arabesque; and backward wiggle - giving solid foundation to build in future ice skating activities. (0 - 3) 1
- HPE 1118 ICE SKATING-INTERMEDIATE: This second course in ice skating will provide the student with opportunities to learn and exhibit advanced maneuvers such as backward stroking; backward scooters; forward outside and inside eights; backward arabesque; and right-left forward inside mohawk followed by backward-outside mohawk. P.R. HPE 1117 or equivalent. (0 - 3) 1
- HPE 1119 ICE SKATING-ADVANCED: This advanced course in ice skating will provide further opportunities for the student to learn and exhibit advanced maneuvers including two foot spin; forward-backward chasses in four dance positions; the Dutch Waltz; Cross Rolls in dance position; and Waltz and Ballet Jump. P.R. HPE 1118 or equivalent. (0 - 3) 1

- HPE 1126 SOCIAL DANCE - BEGINNING: A course in the development and successful performance of dance skills with an accent on social and recreational values. The student will be introduced to the Fox Trot, Waltz, Lindy, Cha-Cha, and Rumba. (0 - 3) 1
- HPE 1127 SOCIAL DANCE-ADVANCE BEGINNER: The basic dance student will learn to perform more difficult steps and types of dance including the Tango, Samba, Polka and the Discotheque. P.R. HPE 1126 or equivalent. (0 - 3) 1
- HPE 1128 SOCIAL DANCE-INTERMEDIATE: This is a continuation of HPE 1127 with the addition of more difficult steps to the dances learned in that course. The student will learn to perform basic steps in the Charleston. P.R. HPE 1127 or equivalent. (0 - 3) 1
- HPE 1129 SOCIAL DANCE-ADVANCED: This is an advanced study of popular social dances designed to instruct the experienced student in advanced steps and to polish the dancer's technique. The student will learn to perform basic steps in the Merengue and the Bossa-Nova. P.R. HPE 1128 or equivalent. (0 - 3) 1
- HPE 1130 CLOGGING: The basic techniques of clogging are presented. The student will gain an understanding of dance routines used by clogging teams and will improve rhythm. (0 - 3) 1
- HPE 1134 BASIC COURSE OF AMERICAN SQUARE DANCING: A course consisting of the first 50 of the basic fundamental movements of square dancing. The course stresses the importance of dancing well and emphasis is placed on smoothness in the dance. (0 - 3) 1
- HPE 1135 EXTENDED BASIC COURSE OF AMERICAN SQUARE DANCING: This is the second or intermediate phase of the Square Dance Program. The student will be introduced to Couple Right Hand Star, Ladies Chain Left and Right, Ocean Wave, Clover Leaf and other popular movements on this level. P.R. HPE 1134 or equivalent. (0 - 3) 1
- HPE 1136 ADVANCED BASIC COURSE OF AMERICAN SQUARE DANCING: This is the third or advanced phase of the Square Dance Program. The student will be introduced to Allemande "O", Spin The Top, Dixie Style Ocean Wave and other advanced basic steps. P.R. HPE 1135 or equivalent. (0 - 3) 1
- HPE 1137 EXPLORATORY SQUARE DANCE CLASS: This is a continuing or "terminal" class for students who have completed the basic, extended basic and advanced basic courses. The student will explore new and experimental basic movements as they are developed and introduced into Modern Square Dancing such as Sashay Turn, Dixie Daisy, Fan the Top, Divide the Star Hero and others. P.R. 1136 or equivalent. (0 - 3) 1
- HPE 1144 GOLF-BEGINNING: The student is introduced to the fundamentals of the golf swing, game rules and etiquette. Emphasis is placed on learning to swing properly, hitting the ball, and putting these skills into practice on the golf course. (0 - 3) 1
- HPE 1145 GOLF-INTERMEDIATE: The student will review basic fundamentals of the golf swing with emphasis on short game (chipping and putting) and lowering golf scores, plus practical playing experience. P.R. HPE 1174 or equivalent. (0 - 3) 1
- HPE 1146 GOLF-ADVANCED: The student will be introduced to advanced instruction on special shots such as deliberate hook or slice, sand shots, playing in the wind, tips to lower scores, etc; and playing lessons on the golf course to teach putting all the shots together. P.R. HPE 1145 or equivalent. (0 - 3) 1
- HPE 1147 TENNIS-BEGINNING: The student is introduced to elementary skills for ground strokes including the introduction of the serve, volley, smash and lob. Rules and the elementary strategy for singles and doubles are also taught. (0 - 3) 1
- HPE 1148 TENNIS-INTERMEDIATE: This course continues the development of the student's skill to a higher level of play. The introduction of different types of shots and the basic strategy of singles and doubles are presented. P.R. HPE 1147 or equivalent. (0 - 3) 1
- HPE 1149 TENNIS-ADVANCED: In this advanced course the student will utilize advanced shots, spins, pace and strategy. P.R. HPE 1148 or equivalent. (0 - 3) 1
- HPE 1154 TAP DANCING-BEGINNING: Students will become familiar with elemental constructions, motions and patterns in tap dancing. (0 - 3) 1
- HPE 1155 TAP DANCING-INTERMEDIATE: The course utilizes basic principles from Beginner tap in studies of more complex patterns. Self-choreography and extensive exercise discipline are introduced. The student will begin individual style development. P.R. HPE 1154 or equivalent. (0 - 3) 1
- HPE 1156 TAP DANCING-ADVANCED: This advanced course allows the student freedom for self expression and style. Attention is given to detail in tap construction. P.R. HPE 1155 or equivalent. (0 - 3) 1
- HPE 1157 JAZZ DANCE-BEGINNING: The student will study Jazz Dance art forms which connect to other art forms through observation, participation and commentary. Participation will include working drums, cymbals, rhythm sticks, etc. Various sections of the course will be geared to different age groups. (0 - 3) 1

- HPE 1158 JAZZ DANCE-INTERMEDIATE: The student will utilize principles of jazz dance at the beginner level in developing self-disciplined standards in exercising, learning self-choreography and performance. P.R. HPE 1157 or equivalent. (0 - 3) 1
- HPE 1159 JAZZ DANCE-ADVANCED: This is an open end seminar class to provide the student with variable content and an experimental atmosphere. The student will prepare independent programs for evaluation. Field trips will be scheduled to encourage civic awareness of dance. P.R. HPE 1158 or equivalent. (0 - 3) 1
- HPE 1164 YOGA-BEGINNING: The student will become acquainted with basic disciplines of Yoga, including physical postures, proper breathing techniques, attitudes of positive thinking and confident self-awareness, and techniques to improve relaxation and mental concentration. (0 - 3) 1
- HPE 1165 YOGA-INTERMEDIATE: A continuation of the beginning course in which the student will acquire more detail on physical postures, breathing, relaxation and mental concentration. P.R. HPE 1164 or equivalent. (0 - 3) 1
- HPE 1166 YOGA-ADVANCED: The student will learn advanced types of breathing and concentration using sounds. Difficult physical postures such as headstands are presented. P.R. HPE 1165 or equivalent. (0 - 3) 1
- HPE 1167 RHYTHMIC EXERCISE: The student will become familiar with exercises designed to improve posture, tone and limber the body. These exercises are performed with music. (0 - 3) 1
- HPE 1168 RHYTHMIC EXERCISE-INTERMEDIATE: This is a continuation of the beginner course. The student will learn the usage of zills and veil, more complex movements and steps. P.R. HPE 1167. (0 - 3) 1
- HPE 1169 RHYTHMIC EXERCISE-ADVANCED: In this advanced course in rhythmic exercise, emphasis is on coordination and concentration with more strenuous and complex variation. The student will improvise and create steps and movements. P.R. HPE 1168 or equivalent. (0 - 3) 1
- HPE 1170 AEROBICS: The student will learn physical conditioning by use of movement with music. Students will participate in vigorous exercise for cardiovascular endurance and calisthenic exercise for toning and firming muscles. (0 - 3) 1
- HPE 1174 MOUNTAINEERING I: A course to introduce the novice climber to fundamental mountaineering techniques. Students will use techniques included in such areas as mountain travel, basic climbing and rappelling bivoacs, knots and equipment. (0 - 3) 1
- HPE 1175 MOUNTAINEERING II: This is a course designed for advanced students in perfecting their skills in the following areas: general climbing, lead climbing, party climbing, and summit expeditions. P.R. HPE 1174 or equivalent. (0 - 3) 1
- HPE 1176 OUTDOOR SKILLS I (Basic): Students will gain a basic understanding of hiking, back-packing, and camping. Each of these efforts are supported by classes in group dynamics, fire building, shelter construction, equipment management, map and compass reading, land navigation and First Aid. (0 - 3) 1
- HPE 1177 OUTDOOR SKILLS II: The student will combine the practical application of planning and execution of all techniques necessary to accomplish a 24-48 hour trip into a wilderness area. P.R. HPE 1176 or equivalent. (0 - 3) 1
- HPE 1178 HORSEBACK RIDING-BEGINNING: Students will learn the fundamental skills and etiquette of riding. Instruction will include walking, trotting, cantering and jumping. (0 - 3) 1
- HPE 1179 HORSEBACK RIDING-ADVANCED: The student will continue development of skills in the art of riding and handling horses such as riding with double reins on pelham, using direct and indirect rein; working on saddle seat for form and equitation; and riding and schooling a green horse. P.R. HPE 1178 or equivalent. (0 - 3) 1
- HPE 1184 SWIMMING-BEGINNER: For non swimmers and beginners who need more confidence in the water. This course is based upon the American Red Cross programs of instruction. Upon successful completion of this course the student should be able to demonstrate back float, crawl stroke-20 yards and safety skills. (0 - 3) 1
- HPE 1185 SWIMMING-ADVANCED BEGINNER: For the beginner swimmer who needs to increase skills for full confidence in deep water. Based upon American Red Cross programs of instruction. Student should be able to demonstrate treading water, survival floating, elementary backstroke and crawl stroke. P.R. HPE 1184 or equivalent. (0 - 3) 1
- HPE 1186 SWIMMING-INTERMEDIATE: To perfect the four basic strokes (breast stroke, sidestroke, crawl stroke and back crawl). The student should be able to demonstrate scissors kick, breast stroke kick, and underwater swim. This course is based upon the American Red Cross programs of instruction and is the prerequisite for the swimmer and/or Life Saving courses. P.R. HPE 1185 or equivalent. (0 - 3) 1

HPE 1187 SWIMMING-SWIMMER: For the swimmer who wants to perfect his strokes leading to the American Red Cross Water Safety Instructor Certificate. Student should be able to swim the breast stroke-100 yards; sidestroke-100 yards; crawl stroke-100 yards; back crawl-50 yards; and swim 10 minutes. P.R. HPE 1186. (0 - 3) 1

HPE 1188 SWIMMING-ADVANCED LIFESAVING: A prerequisite course for the American Red Cross Water Safety Instructor Certificate. Basic requirements for Life Guard Duty. The student should be able to demonstrate front and rear approaches, cross chest carry, and resuscitation. P.R. HPE 1186. (0 - 3) 1

HPE 1189 SWIMMING-WATER SAFETY INSTRUCTOR: For the student desiring to teach swimming and/or Life Saving and/or Life Guard Duty. The student should be able to demonstrate beginner skills, swimming strokes, and lifesaving skills. P.R. HPE 1188. (0 - 3) 1

HPE 1194 SLIMNASTICS-BEGINNING: A program of exercise in physical conditioning which will result in firming muscles thus improving coordination and posture. The student will be presented information on correct exercises to perform. (0 - 3) 1

HPE 1195 SLIMNASTICS-INTERMEDIATE: A continuation of the beginning course. The student will receive extensive knowledge for personal growth and understanding of the relationship between fitness and health, life style, increased movement and body contour. P.R. HPE 1194 or equivalent. (0 - 3) 1

HPE 1196 GYMNASTICS-BEGINNING: A course designed for teaching the student the fundamentals of gymnastics on the mats, parallel bars, side horse, and trampoline. (0 - 3) 1

HPE 1197 GYMNASTICS-INTERMEDIATE: The student will review the basic skills in gymnastic tumbling and apparatus and be introduced to intermediate skills such as vaulting skills, side horse and parallel bars for men; free floor exercises, DGWS intermediate routine on uneven parallel bars and balance beam routine for women. Men and women's stunts on the trampoline are presented. P.R. HPE 1196 or equivalent. (0 - 3) 1

HPE 1198 BOWLING-BEGINNING: The student will be instructed in skills, rules and strategy through films with an opportunity of participation at the bowling lanes. (0 - 3) 1

HPE 1199 BOWLING - INTERMEDIATE: In this second course in bowling, the student will demonstrate types of thrown balls; hook, curve, etc.; will learn lane etiquette, bowling terms, scorekeeping, and will gain practice in spot bowling for spares, timing, and correcting individual faults. P.R. HPE 1198 or equivalent. (0 - 3) 1

HRM 3104 SPEAKER SEMINAR I; Upon completion of this course the student will have been exposed to the day to day task of managing a modern hotel or restaurant through guest speakers and will become acquainted with the problems and solutions experienced speakers will be able to share with the students. (1 - 0) 1

HRM 3105 SPEAKER SEMINAR II: A continuation of Speaker I, with particular emphasis placed on guest speakers from national chain hotels and restaurants. Management contracts for future employment will also be discussed. (1 - 0) 1

HRM 3300 INTRODUCTION TO HOTEL/RESTAURANT MANAGEMENT: Upon completion of this course the student will be able to: compare the present day operations of inns and restaurants to those of the past; define the different types of restaurant and food services; identify the positions within hotels and restaurants; compare the departments within a hotel and restaurant; distinguish between franchise and individually owned properties; assess his future in a challenging and rewarding career within the hospitality industry. (3 - 0) 3

HRM 3301 FINANCIAL AND LEGAL ASPECTS OF INNKEEPING: Upon completion of this course the student will be able to: assemble and organize a system to prevent law suits and losses costly to today's inns; relate local, state and federal regulations to operations of a modern inn; describe different instruments of finance that are used in the operation of a modern inn. (3 - 0) 3

HRM 4300 HOTEL/RESTAURANT MARKETING: Upon completion of this course the student will be able to: organize a marketing schedule for future use; assemble positive sales ideas; prepare property and market analysis; prepare a sales forecast and develop a sales promotion for a particular property. (3 - 0) 3

HRM 4301 HOUSEKEEPING PROCEDURES: Upon completion of this course the student will have demonstrated his ability to: plan an organized area for the housekeeping department; implement a time study and procedures standard for cleaning a motel room; identify hazards in a motel; develop standards and procedures for purchasing and inventory controls; implement procedures for the reporting of repairs and preventive maintenance needs. (3 - 0) 3

HRM 4302 HUMAN RELATIONS AND WORK RELATED PROBLEMS: Upon completion of this course the student will be able to: compare circumstances of hotel/restaurant operations to everyday work situations; institute a workable plan to control and maintain good employee morale; and write and identify standards of dress and conduct. Through role playing and analysis the student will become familiar with actual situations in which he/she will be exposed to in future employment. (3 - 0) 3

HOTEL-RESTAURANT MANAGEMENT

HRM 4804 WORK EXPERIENCE SEMINAR I: Upon completion of this course the student should be able to exhibit positive work attitudes and write job descriptions on the departments within the hotels/motels assigned during clinical experience. Lab or clinical experience will consist of on the job training within the following areas: Housekeeping, Superintendent of Transportation and Service, Maintenance and Front Office. (3 - 15) 8

HRM 4805 WORK EXPERIENCE SEMINAR II: A continuation of Work Experience Seminar I with continued emphasis on work attitudes and job descriptions. The student will be assigned to the restaurant of a hotel/motel and will cover the following areas: Dishwashing Department, Salad Department, Cooks Helper, Chef's Assistant, Dining Room-Busboy, Dining Room-Waiter/Waitress and Bar/Lounge-Bartender. (3 - 15) 8

HRM 4806 WORK EXPERIENCES SEMINAR III: A continuation of Work Experience Seminar II. Emphasis in this course will be placed on the student becoming familiar with the following areas: Accounting-Auditors Office, Credit Department, Personnel Department, and General Manager. Students will be assigned to hotels/motels within the Charlotte area to complete their clinical experience. A week of analysis and evaluation is included to assist the graduate in ascertaining his job opportunities in the hospitality industry. (3 - 15) 8

HSA 3200 ORIENTATION TO THE HUMAN SERVICES: Upon completion of this course the student should be able to: (1) list the six (6) core courses of the Human Services Program, correctly describing the content and rationale for inclusion as a core course of each; (2) list and describe the five (5) specialty areas; (3) name at least three (3) community agencies related to specialty areas and the types of clients referred to these agencies; (4) list an expected salary range and write job descriptions for Human Service workers; (5) describe the departmental procedure for Internship application; (6) submit a completed and approved contract for an initial field placement before the conclusion of the class. (2-0-0) 2

HSA 3300 AGING IN CONTEMPORARY SOCIETY: Upon completion of the course the student should be able to: (1) prepare a written and/or recorded case study of an older adult preferably over the age of 75 years of age and will be able to comment in detail on the following areas as they relate to the subject: demography, historical aspects, psycho/social processes, biological and intellectual aspects, role of and effect of job career changes, retirement, leisure activities and the aspects of death, dying and bereavement. P.R. Permission from instructor. (3-0-0) 3

HSA 3301 GERONTOLOGY I - THE OLDER ADULT IN YOUR COMMUNITY: Upon completion of this course the student should be able to: (1) prepare a written and/or recorded case/observation study of an older adult and be able to comment on the following areas as they relate to the subject of his study, supplemented, if he wishes, by photograph and short recorded comments from subject or relevant persons: demography, biological and psychological aspects, psycho/social and societal aspects. P.R. None. (3-0-0) 3

HSA 3302 SIGN LANGUAGE: Upon completion of this course the student should be able to: (1) demonstrate communication skills on a non-technical level with members of the general deaf population; (2) be able to interact with deaf persons on a one to one basis; (3) be able to demonstrate an awareness and relate to the difficulties of a deaf person growing up in a hearing society; (4) be able to discuss the psychological and sociological aspects of deafness. P.R. None. (3-0-0) 3

HSA 3303 HELPING RELATIONSHIPS AND THE OLDER ADULT: Upon completion of this course the student should be able to: (1) describe the various forms of non-verbal communication which are cues to personality and needs of a helpee; (2) describe particular needs and behaviors of the older adult; (3) demonstrate effective and appropriate interviewing skills; (3A) demonstrate his ability to use appropriate leads, responses, and questions; (4) demonstrate effective helping skills in a problem oriented helping relationship; (4A) demonstrate pre-helping skills, attending skills, and appropriate responses. P.R. None. (3-0-0) 3

HSA 3310 EXCEPTIONAL CHILD: Upon completion of this course the student should be able to: (1) identify and discuss characteristics of developmental variations who require modification in activities; (2) recognize developmental exceptionalities and typical behavior in children who are in need of professional help; (3) identify community and state resources available to provide help for families with exceptional children; (4) to identify a variety of activities appropriate for children who are exceptional in personality and/or physical development; (5) identify ways exceptional children use materials, supplies, and equipment differently from other children; (6) work with parents to help lessen their apprehensions about their child's condition; (7) refer a child for special services. P.R. None. (3-0-0) 3

HSA 3311 MATERIALS & ACTIVITIES FOR PRE-CHILD: Upon completion of this course the student should be able to: (1) identify raw art materials, their potential and use with pre-school children; to incorporate these media into planned learnings in the pre-school curricula; (2) identify techniques of language development; develop a repertoire of finger plays, stories to tell, word games; develop a file of pictures for story telling; develop flannel board story; (3) discuss dramatics in the pre-school program; be able to construct appropriate props; construct and use puppets and puppet theater; (4) identify resources and selection of children's music; learn at least five new children's songs and be able to reach them; set up and use a "Sound Center"; (5) use rhythm instruments, and discuss sound in the pre-school program; (6) discuss the use of manipulative toys, homemade games and inexpensive equipment; (7) discuss teacher's role in the classroom in fostering and guiding children's creative ability. P.R. None. (3-0-0) 3

HSA 3312 EDUCATION OF YOUNG CHILD: Upon completion of this course, the student should be able to: (1) understand recent trends in the education of the young child and formulate ones own philosophy of education; (2) discuss the role of the teacher as a facilitator of learning, as a model for children, and as a care giver of children; (3) implement guidelines for planning, organizing, and assessing appropriate programs for various levels of children's development; (4) discuss how the young child learns best and discuss experiences, facilities, media, and techniques which promote optional development. P.R. None. (3-0-0) 3

HSA 3321 HELPING AND BEHAVIORAL STRESS: Upon completion of this course the student should be able to: (1) discuss major principles of human behavioral development relating to stress, to include: (a) definition of psychology; (b) comparison of various approaches for studying psychology; (c) identification of basic psychological, social, and physiological aspects of human growth and discussion of their interaction in the development of the whole person; (2) define and discuss the relevance to crisis/stress of the following aspects of behavior: (a) defense mechanisms; (b) roles, games, and masks; (c) values; (3) develop his own framework for self-expression and communication as a person and as a helper; (4) identify and define human emotions and behaviors resulting from crisis; (5) identify measures of psychological helping for persons in crisis and the appropriateness of such measures to specific behavioral problems; (6) demonstrate appropriate intervention skills in dealing with common stress behaviors. P.R. None. (3-0-0) 3

HSA 3322 HUMAN SEXUALITY IN THE HELPING SKILLS: Upon completion of this course the student should be able to: (1) demonstrate effective skills in a helping situation concerning sexuality; (2) identify major sexual behaviors and needs found within each client group; (3) list the psychological and sociological factors culminating in variation of sex role behaviors in males and females, i.e., masculine role and behavior, feminine role and behavior; (4) demonstrate self awareness and personal growth by formulating a philosophy of interpersonal sexuality applicable to the student's work situation. (3-0-0) 3

HSA 3500 HUMAN SERVICES AIDE I: Upon completion of this course the student should be able to: (1) identify and discuss social behavior and levels of human communication; (2) develop a keener sense of self awareness including personal development and openness in interpersonal relationships; (3) develop skills for interacting and self disclosing with/to others; (4) identify personal insights into his/her own "self" and his/her relationships with others; (5) make a commitment to continuous personal growth in terms of perception, self awareness, self-concept and human encounters. P.R. None. (3-0-6) 5

HSA 3504 HUMAN SERVICES AIDE II: Upon completion of this course the student should be able to: (1) identify major client groups and problems and the effects of these problems on individuals and society; (2) identify and discuss specific problems of disabled individuals; (3) identify and discuss the various techniques used to help individuals to adjust to their disabilities. P.R. None. (3-0-6) 5

HSA 3505 HUMAN SERVICES AIDE III: Upon completion of this course the student should be able to: (1) identify and discuss the various techniques used to change behavior and their appropriate relevance to behavioral problems; (2) identify the roles and functions of various therapists, according to the type of therapy used; (3) complete a diagnostic analysis of interviewing and casework methodology. P.R. None. (3-0-6) 5

HSA 3514 INTRODUCTION TO INTERPRETING: Upon completion of this course the student should be able to: (1) demonstrate basic expressive interpreting and translating skills; (2) define and demonstrate ethical demeanor of professional interpreting; (3) discuss deafness and major characteristics of the deaf client group. P.R. HSA 3302. (3-0-6) 9

HSA 4390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval by the sponsor, and department head is required. P.R. None. (3-0-0) 3

HSA 4506 HUMAN SERVICES AIDE IV: Upon completion of this course the student should be able to: (1) effectively interview clients, using appropriate leads and responses; (2) effectively help clients, using appropriate techniques based on behavior observation; (3) effectively lead a group process. P.R. HSA 3505. (3-0-6) 5

HSA 4507 HUMAN SERVICES AIDE V: Upon completion of this course, the student should be able to: (1) describe and discuss operant conditioning theory and techniques of behavior modification within a humanistic framework; (2) demonstrate the application of these techniques to the student's specific internship setting; (3) discuss behavior modification as a facilitation model of growth and self-actualization of the client. (3-0-6) 5

HSA 4608 HUMAN SERVICES AIDE VI: Upon completion of this course the student should be able to: (1) discuss thoroughly the work experience in the student's specialty area; (2) discuss the procedures, treatment methods and service techniques of the agency where the student interns; (3) complete an in-depth research project as a major contribution to the student's human service curriculum, selected in consultation with the instructor; (4) maintain twelve (12) hours of internship per week, documented in a weekly log reflecting the student's experiences in the internship. (2-0-12) 6

HSA 5200 HUMAN RELATIONS: Upon completion of this course the student should be able to: (1) demonstrate self awareness and personal growth by listing five or more new things that they have learned about themselves and five or more ways in which they have changed; (2) identify at least five of the things in life they value; (3) demonstrate skills for effective communication with others, such as listening, empathy; (4) list ten defense mechanisms and discuss the ones each student uses; (5) list five or more goals and decisions they have each made during the course; (6) discuss at least five ways to put into practice on a future job some of the Human Relations skills learned during the course. P.R. None. (2-0-0) 2

HSA 5500 PRACTICAL PROBLEMS ON CHILD CARE: Upon completion of this course the student should be able to: (1) develop a philosophy of early childhood education, including respect for children as individuals with unique growth patterns and the ability to approach each child as a person of worth; (2) identify and discuss the role of the teacher as a facilitator of learning, as a model for children and as a caretaker of children; (3) effectively work with children and interact with parents and staff; (4) discuss the curriculum for the group, and the experiences, media, and facilities which promote optimal development and self-discipline (self-knowledge); (5) identify techniques of presenting both creative media and concept materials (math, science, etc.) to children; (6) identify good children's literature and be able to choose appropriate materials for different age groups. P.R. None. (3-0-6) 5

HSA 5501 CHILD DEVELOPMENT: Upon completion of this course the student should be able to: (1) identify existing interrelationships among all aspects of child development (e.g., social, cognitive, emotional, physical, etc.); (2) list the basic laws and principles of physical and behavioral development and be able to utilize these principles in relating with children; (3) discuss those factors which prevent optimal growth and development and those factors which encourage it; (4) effectively observe, interpret, and record child behavior by administering the Learning Accomplishment Profile to a child; (5) discuss growth and development sequentially from conception to preadolescence by giving the characteristics of children at each age level. P.R. None. (3-0-6) 5

HUM 1304 CURRENT DRAMATIC EVENTS: A study of six selected plays to develop understanding of drama as a performing art. The selections will include current performances in the Charlotte area. Students will have opportunities to discuss these productions with directors, critics, and actors. (3 - 0) 3

HUM 1314 THE NOVEL: A study of five novels selected from American, British, French, Russian, and Spanish literature, with emphasis on idea, technique, and cultural tradition. (3 - 0) 3

HUM 1319 MYTHOLOGY: A study of myths and legends, chiefly Greek, Roman, and Norse. Attention to influence of myths on literature, painting, sculpture, and music. (3 - 0) 3

HUM 1500 HUMANITIES I: RENAISSANCE TO PRESENT: A study of man as revealed in art, literature, music, and philosophy. Beginning with man's search for identity and meaning in this century, the course will explore earlier centuries for comparative study of contemporary problems and contemporary values. (5 - 0) 5

HUM 1501 HUMANITIES II: CLASSICAL AND MEDIEVAL: A study of ideas reflected in the art, literature, music, and philosophy of Classical and Medieval societies. Emphasis on man's assessment of his intellectual and spiritual needs and on his efforts to adjust society and the arts to changing values. (5 - 0) 5

HUM 2320 SPECIAL TOPICS FOR INDEPENDENT STUDY: An advanced course in which the students and the instructor select topics for individual study. Conferences for reports and discussion. P.R. approval of the supervising instructor and the chairman of the department. (3 - 0) 3

ISC 4304 PRODUCTION PLANNING: Upon completion of this course the student should be able to: (1) discuss production control functions, types of productions and control types and procedures; (2) forecast and estimate future manpower, material and machinery needs. (3) institute inventory control procedures; (4) prepare schedules utilizing production control boards; and (5) dispatch and keep production moving. P.R. MAT 3504, MEC 3305 or departmental permission. (2 - 3) 3

ISC 4314 INSPECTION AND QUALITY CONTROL: Upon completion of this course the student should be able to: (1) use nonprecision measuring instruments; (2) use precision measuring instruments; (3) use comparison measuring instruments; (4) use gages, gage blocks, surfaces plates and precision angular measuring instruments; (5) use destructive and non-destructive testing methods to find the physical and mechanical properties of engineering materials; and (6) use statistical methods of quality control. P.R. MEC 3305 or departmental permission. (2 - 3) 3

ISC 4400 TIME AND MOTION STUDY: Upon completion of this course the student should be able to: (1) apply the general problem solving process to work methods design; (2) construct activity charts and man and machine charts; (3) apply the principles of motion economy as related to the use of human body, the work place and to the design of tools and equipment; (4) conduct a time study, determine the rating factor and allowances and develop a time standard; (5) use the MTM method to determine time standards; and (6) conduct work sampling. P.R. None. (3 - 3) 4

ISC 4404 PLANT LAYOUT AND MATERIALS HANDLING: Upon completion of this course the student should be able to: (1) explain the 3 types of classic layouts; (2) design a plant layout, based on the following: (a) size, physical and chemical characteristics, quantity and variety of parts, products and materials, (b) the nature, size and quantity of machines and equipment, (c) the man, waiting

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and service factor, (d) office and employee facilities, (3) select the proper fixed and nonfixed floor or overhead materials handling equipment, to move materials and products efficiently and economically. P.R. DFT 3404 or departmental permission. (3 - 3) 4

ISC 4405 PROCESS PLANNING: Upon completion of this course the student should be able to: (1) perform a dimensional and tolerance analysis of a product print, using tolerance charts; (2) select and plan the process of manufacture and its sequence; and (3) select the machine tool, standard and special equipment and tooling for the most economical manufacturing process. P.R. MEC 3305, DFT 3405 or departmental permission. (3 - 3) 4

PARALEGAL

LEX 3304 PARALEGALISM I: The student will be introduced to the ethical and professional duties and responsibilities as well as the limitations placed on the paralegal. (3 - 0) 3

LEX 3305 PARALEGALISM II: The student will examine the role of the lawyer and the paralegal in modern society and will study the ethical principles and professional practice standards applicable to both lawyers and paralegals. P.R. LEX 3304. (3 - 0) 3

LEX 3400 LEGAL RESEARCH: Upon completion of this course the student will be familiar with a law library and legal research. The student will be capable of using legal texts, treatises, reporters, digests and other standard legal publications as well as being capable of shepardizing cases. Each student will write a memorandum of law. (2 - 4) 4

LEX 3401 NORTH CAROLINA LEGAL SYSTEMS: Each student that successfully completes this course will have a thorough understanding of the State and Federal judiciary within North Carolina. This is accomplished by an indepth study of the U.S. Constitution, North Carolina Constitution and the various statutes affecting the different courts. (3 - 2) 4

LEX 4321 TORT LAW: The student will study the fundamental principles of the law of torts and also the various forms of pleadings used in court actions of tort claims. (3 - 0) 3

LEX 4322 CORPORATE LAW: Upon successful completion of this course the student will be capable of aiding an attorney in the drafting of articles of incorporation, by-laws, minutes, resolutions, stock certificates, partnership agreements and joint venture agreements. The student will also understand the basic concepts of business corporations as compared with partnerships, joint ventures and sole proprietorships. (3 - 0) 3

LEX 4331 LAW OFFICE MANAGEMENT: The student will study the organization of the law office; the compiling and filing of office and legal forms; methods of filing and indexing of legal matters; accounting systems, including accounting for the attorney's time, fees and billing; client relations; office operating procedures; and attorney's professional liability insurance (3 - 0) 3

LEX 4334 TRIAL PREPARATION AND PROCEDURES: This is a thorough study of legal drafting and the rules of procedure. The student that successfully completes this course will be capable of aiding an attorney in the drafting of the various pleadings, motions, interrogatories, etc. which are ordinarily components of civil actions as well as aid the attorney in the preparation of his case for trial. P.R. LEX 3401. (3 - 0) 3

LEX 4400 DOMESTIC RELATIONS LAW: The student that successfully completes this course will be capable of aiding the attorney in the drafting of divorce and support pleadings, separation agreements and confession of judgments as well as the necessary documents for adoptions. The student will study the legal obligations in a marriage contract; defenses to divorce actions; statutory grounds for divorce; and elements of a legal separation by court order or by mutual consent. (3 - 2) 4

LEX 4414 REAL PROPERTY LAW: Through the use of in class study and research projects, the student will examine the law of real property, with emphasis on the common types of real estate transactions and conveyances. The student that successfully completes this course will be able to aid the attorney in drafting deeds, property contracts, leases and deeds of trust. (3 - 2) 4

LEX 4415 TITLE ABSTRACTING: Upon successful completion of this course the student will be capable of understanding the function of various documents and to use the indices and files on public record in various county offices. The student will abstract various titles in Mecklenburg County as well as study various typical problems and errors which may render a title unmarketable. P.R. LEX 4414 or consent of program director and department head. (2 - 4) 4

LEX 4424 WILLS AND TRUSTS: The student will study the preparation and execution of wills, contest of wills, administration and probate of estates, trusts and fundamental principles of law applicable to wills and trusts. (3 - 2) 4

LEX 4425 PROBATE AND TAXATION OF ESTATES: This is a continuation of LEX 4424 with special emphasis in the preparation of inventories, accounts, tax returns and other documents for administration of estates, procedures for administration and review of estate and inheritance taxes applicable to estates. P.R. LEX 4424. (2 - 4) 4

LEX 4431 TECHNIQUES OF INTERVIEW AND INVESTIGATION: The student that successfully completes this course will be trained in the techniques of interviewing witnesses; sketching and diagraming as it relates to explaining and clarifying a situation or presentation; assessing property damage, personal injury and land evaluation. The student will also learn how to obtain medical and other official records. (2 - 4) 4

LIT 2314 CONTEMPORARY LITERATURE: Study of twentieth-century fiction, with emphasis on the short story and the novel in American and British literature. P.R. COM 1306 or consent. (3 - 0) 3

LIT 2320 SPECIAL TOPICS FOR INDEPENDENT STUDY: An advanced course in which the student may pursue topics of interest not covered by other courses in the department. Independent research, written reports, and discussion, varying with the individual student and the particular topics. P.R. approval of the supervising instructor and the chairman of the department. (3 - 0) 3

LIT 2324 THE BIBLE AS LITERATURE: Study of selections that approximate established genres of saga, chronicle, lyric poetry, oratory, short story, biography. Emphasis on Judeo-Christian ideas influencing western literature. P.R. COM 1306 or consent. (3 - 0) 3

LIT 2504 BRITISH LITERATURE I: Selected works of British writers before 1800, with emphasis on Chaucer, Shakespeare, and Milton. P.R. COM 1306 or consent. (5 - 0) 5

LIT 2505 BRITISH LITERATURE II: Selected works of British writers since 1800, including Wadsworth, Coleridge, Byron, Shelley, and Keats from the Romantic period; Browning and Tennyson from the Victorian period; Eliot and Yeats from the Modern period. P.R. COM 1306 or consent. (5 - 0) 5

LIT 2514 AMERICAN LITERATURE I: Selected works of American writers before 1900, including Poe, Hawthorne, Melville, Emerson, Thoreau, Whitman, Dickinson, Twain. P.R. COM 1306 or consent. (5 - 0) 5

LIT 2515 AMERICAN LITERATURE II: Selected works of twentieth-century writers, including Crane, James, Robinson, Frost, O'Neill, Anderson, Dreiser, Hemingway, Wolfe, and Faulkner, with emphasis on their interpretation of the modern era. P.R. COM 1306 or consent. (5 - 0) 5

LIT 2534 EUROPEAN LITERATURE: A study of representative writers, such as Boccaccio, Machiavelli, Rabelais, Cervantes, Rousseau, Goethe, Ibsen, and Tolstoy. Emphasis on ideas and values prevalent in different periods and cultures. P.R. COM 1306 or consent. (5 - 0) 5

MAC 5201 MACHINE SHOP PRACTICES: Upon completion of this course the student should be able to: (1) identify and use the basic hand tools and measuring instruments associated with the metal working trades; (2) perform basic operations using a drill press, lathe, milling machine and grinding machine; (3) describe and use all appropriate safety procedures. P.R. None. (1 - 3) 2

MAC 5300 INTRODUCTION TO NUMERICAL CONTROL PROGRAMMING: Upon completion of this course the student should be able to: (1) demonstrate a basic knowledge of Numerical Control programming; (2) code and punch numerical control tape; (3) demonstrate an understanding of numerical control dimensioning and positioning for point to point operations; (4) write a sequential manuscript for two axis drilling; (5) write a work address manuscript for three axis random and sequential tool selector; (6) operate to specifications a Tape-O-Matic drilling machine. P.R. None. (3 - 0) 3

MAC 5307 MACHINE TOOL APPLICATION I: Upon completion of this course the student should have been able to complete assigned projects using skills learned in pre-requisite courses including the following: (1) planning work for correct machining and ease of operation; (2) using machine tools and hand tools in a proper and safe manner; (3) using proper work habits. P.R. MAC 5311, MAC 5422, MAC 5313, MAC 5424.

MAC 5308 MACHINE TOOL APPLICATION II: (A continuation of MAC 5307) Upon completion of this course the student should have been able to: (1) reinforce and develop additional manipulative skills related to the machine tool trade by producing assigned projects; (2) specialize in one of the four major areas of machine tool operations. P.R. or C.R. MAC 5307. (0 - 9) 3

MAC 5311 BASIC LATHE OPERATIONS: Upon completion of this course the student should be able to: (1) select the proper speeds and feeds for assigned projects; (2) use proper work holding devices; (3) select proper lathe tools; (4) perform operations with prescribed accuracy for straight, turning, knurling, threading (external), boring and tapering; (5) use safe and proper techniques in all procedures. P.R. None. (1 - 6) 3

MAC 5313 LAYOUT, HAND TOOL, AND DRILL PRESS PROCEDURES: Upon completion of this course the student should be able to: (1) properly use hand tool normally used in machine shop work; (2) use layout tools with prescribed accuracy; (3) operate the drill press to drill, ream, countersink, counterbore, machine tap, layout and drill multiple holes; (4) demonstrate the basic operation of the numerically controlled drill press. P.R. None. (1 - 6) 3

MAC 5315 REPAIR AND MAINTENANCE OPERATIONS: Upon completion of this course the student should be able to: (1) demonstrate proper use of hand and machine tools; (2) repair broken and/or worn machine parts; (3) produce parts and perform maintenance procedures in the most economical manner. P.R. MAC 5311 and MAC 5422. (1 - 6) 3

MAC 5390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. (3 - 0) 3

MAC 5422 BASIC MILLING OPERATIONS: Upon completion of this course the student should be able to: (1) demonstrate skill in cutter and speed and feed selections; (2) demonstrate proper and safe techniques with prescribed accuracy in face milling, shoulder milling, fly cutting and horizontal plain milling. P.R. None. (2 - 6) 4

MAC 5424 GRINDING MACHINE OPERATIONS: Upon completion of this course the student should be able to: (1) demonstrate a thorough understanding of grinding machine theory and practice; (2) make proper abrasive selections; (3) select appropriate speeds; (4) demonstrate proper and safe techniques in operating with prescribed accuracy the horizontal surface grinder, cylindrical grinder and the tool and cutter grinder. P.R. MAC 5311, MAC 5422. (2 - 6) 4

MAC 5426 PRODUCTION MACHINE TECHNIQUES: Upon completion of this course the student should be able to: (1) plan methods of production for a given part; (2) write and/or use process sheets; (3) utilize innovative techniques for machine tool set-up; (4) remove metal to specifications using a turret lathe, contour band saw, horizontal milling machine, tape controlled drill press; (5) demonstrate in writing an indepth knowledge of production metal removal. P.R. MAC 5311 and MAC 5422. (2 - 6) 4

MATHEMATICS

MAT 1504 COLLEGE ALGEBRA I: A course in college algebra designed to provide the mathematical background for college work in fields other than mathematics, engineering or physical science. The student will apply basic set operations; state and apply the field properties; solve first degree equalities and inequalities; add, subtract, multiply and divide polynomials and rational expressions; factor; state and apply rules of exponents both integral and fractional; simplify radicals; solve second degree equations in one variable. (Not applicable to mathematics, engineering or science majors.) Credit not given to students already having credit for MAT 1514. P.R. Placement examination or MAT 9510 or consent of the department head. (5 - 0) 5

MAT 1505 COLLEGE ALGEBRA II: A continuation of MAT 1504. The student will solve radical equations; define and recognize relations and functions and draw their graphs; graph quadratic functions - the parabola and circle; solve systems of equations and inequalities; define and apply exponential and logarithmic functions; define and graph a complex number and perform the four fundamental operations on complex numbers; use matrices and determinants to solve systems of equations; find inverses of functions; use the method of proof by mathematical induction. (Not applicable to mathematics, engineering or science majors.) Credit not given to students already having credit for MAT 1514. P.R. MAT 1504 or consent of department head. (5 - 0) 5

MAT 1514 PRECALCULUS MATHEMATICS I: The first of a two course sequence designed to prepare students for the four quarter calculus sequence and additional work in mathematics. The student will use the fundamental concepts of algebra; solve equations and inequalities of first and greater degree; define, graph and apply relations and functions; find composite and inverse functions; define and apply exponential and logarithmic functions; solve systems of equations and inequalities using algebraic, graphic, and matrix methods; perform the basic operations on matrices and find inverses of matrices. P.R. Placement examination or MAT 1504 or consent of the department head. C.R. MAT 9511 or high school geometry or consent of the department head. (5 - 0) 5

MAT 1515 PRECALCULUS MATHEMATICS II: The second of a two course sequence designed to prepare students for the four quarter calculus sequence and additional work in mathematics. The student will define and apply trigonometric and circular functions; state and apply the addition and multiple angle formulas; prove identities; solve circular function equations; find inverses of circular functions; define complex numbers in rectangular and trigonometric form and use the basic algebraic operations on complex numbers; use DeMoivre's theorem and find the nth roots of a complex number; find zeros of polynomial equations using factorization theory and synthetic division. P.R. MAT 1514 or consent of department head. (5 - 0) 5

MAT 1516 INTRODUCTORY CALCULUS: This is a brief treatment of the calculus for non-mathematics or non-science majors. The student will review operations on sets, functions, inequalities, and absolute value. The student will be able to find limits; determine if a function is continuous; find derivatives of algebraic expressions by the definition; find derivatives by using differentiation techniques; differentiate implicitly; find higher order derivatives; apply the derivative to find relative and absolute extrema; determine concavity and points of inflection; find differentials; evaluate definite and indefinite integrals; find areas by integration; differentiate and integrate exponential and logarithmic functions. P.R. MAT 1505 or MAT 1514 or consent of the department head. (5 - 0) 5

MAT 1524 ANALYTIC GEOMETRY AND CALCULUS I: The first of a four course unified sequence of calculus. (This course is recommended for students in engineering, mathematics, the physical sciences, and students who need more than an introduction to calculus.) The student will review inequalities, absolute value, sets, relations, functions and graphs. The student will solve analytic geometry problems of the straight line; find limits and derivatives by definition; determine continuity; differentiate algebraic functions; differentiate implicitly; apply the derivative to find extrema, increasing and decreasing intervals, and concavity; find differentials; and solve related rate problems. P.R. MAT 1515 or consent of the department head. (5 - 0) 5

MAT 2415 STATISTICS II: A continuation of Statistics I. The student will determine probabilities using Bayes' theorem, repeated trials, and conditional probability; draw statistical inferences using Student's t, chi-square, and F distributions, analysis of variance, polynomial and multiple regression, correlation coefficient, and non-parametric methods. Students will select and prepare an individual project. P.R. MAT 2514 or consent of the department head. (4 - 0) 4

MAT 2504 ANALYTIC GEOMETRY AND CALCULUS II: The second of a four course sequence. The student will evaluate definite and indefinite integrals; change variables; find areas, work, and fluid pressure; solve analytic geometry problems of the conic sections; translate and rotate axes; differentiate and integrate trigonometric, inverse trigonometric, logarithmic, and exponential functions; find arc length and curvature; use polar coordinates in graphing, and find derivatives and integrals in polar coordinates. P.R. MAT 1524 or consent of department head. (5 - 0) 5

MAT 2505 ANALYTIC GEOMETRY AND CALCULUS III: The third of a four course sequence. The student will perform operations on vectors in two dimensions; find derivatives of vector functions; find velocity and acceleration; apply techniques of integration to evaluate integrals; find volumes, surface area, and arc length; find centers of mass; solve problems in solid analytic geometry; solve problems in cylindrical and spherical coordinates; operate with three dimensional vectors; find dot and cross product; and find derivatives of vector functions. P.R. MAT 2504 or consent of the department head. (5 - 0) 5

MAT 2506 ANALYTIC GEOMETRY AND CALCULUS IV: The last of a four course sequence. The student will use l'Hopital's rule to evaluate indeterminate forms; determine convergence or divergence of series; find Taylor's series for functions; differentiate and integrate series; find partial derivatives; find directional derivatives and the gradient; calculate line integrals; evaluate multiple integrals; find area, density, mass, moment of inertia, surface area, and volume using double and triple integrals; and evaluate triple integrals in cylindrical and spherical coordinates. P.R. MAT 2505 or consent of the department head. (5 - 0) 5

MAT 2514 STATISTICS I: The student will organize, analyze, and interpret statistical data; calculate measures of central tendency and dispersion; state and apply basic probability laws; draw statistical inferences using random sampling and the binomial, normal, and Poisson distributions; test hypotheses; find linear regression equation; and use index numbers and time series. P.R. MAT 1504 or MAT 3504 or consent of the department head. (5 - 0) 5

MAT 2590 INDIVIDUAL STUDY: This course will provide the student with the opportunity to develop a special program of studies to meet a particular need not met by other offerings of the Mathematics Department. Each student or group of students works under the supervision of a member of the Mathematics Department. P.R. Approval of the sponsoring instructor and the department head. (5 - 0) 5

MAT 3200 MATHEMATICS FOR RESPIRATORY THERAPY: This course includes topics, both concepts and applications, related specifically to respiratory therapy. Students will perform basic arithmetic operations with decimals and fractions; solve problems involving ratio and proportion; convert units related to pharmacology; and manipulate formulae. The student will also use logarithms to find pH and graph functions used in respiratory therapy. (2 - 0) 2

MAT 3314 NUMBERING SYSTEMS AND BOOLEAN ALGEBRA: The student will transform between base two and base ten numbering systems; perform fundamental operations in base two; state fundamental postulates, theorems, and operations of Boolean Algebra and apply them to computer logic designs and switching circuits. The logic of circuit design is considered rather than the electronic components used. (3 - 0) 3

MAT 3500 MATHEMATICS FOR FIREMEN: A technical mathematics course designed to meet the needs of the Fire Science Program. The student will perform basic arithmetic operations on whole numbers, fractions, and decimals; perform basic algebraic operations on real numbers and polynomials; find areas and volumes; solve linear equations; solve problems using ratio and proportion; and find powers and roots. (5 - 0) 5

MAT 3504 TECHNICAL MATHEMATICS I: The student will convert units of measurement from the English system to the metric system and conversely; perform the basic operations on algebraic expressions; define and recognize a function; graph; solve systems of equations; solve systems by determinants; factor; solve quadratic equations; and define and use trigonometric functions. P.R. Placement examination or MAT 9510. C.R. High school credit in geometry or MAT 9511 except data processing students do not need this geometry corequisite. (5 - 0) 5

MAT 3505 TECHNICAL MATHEMATICS II: A continuation of MAT 3504. The student will find vector sums and differences; perform operations on advanced algebraic expressions; add, subtract, multiply and divide complex numbers; apply fundamental laws of logarithms; identify and solve quadratic equations; solve polynomial equations of degree N; express variation statements algebraically; find the sum of arithmetic and geometric progressions; and solve inequalities algebraically. P.R. MAT 3504 (5 - 0) 5

MAT 3506 TECHNICAL MATHEMATICS III: The student will prove trigonometric identities; solve trigonometric equations; evaluate inverse trigonometric functions; solve analytic geometry problems of the straight line; use polar coordinates; find limits; find and apply derivatives; find definite and indefinite integrals; find differentials; and use approximation methods to evaluate integrals. P.R. MAT 3505 (5 - 0) 5

MAT 4507 TECHNICAL MATHEMATICS IV: The student will use calculus to find area, volume, center of mass, work; differentiate and integrate trigonometric, inverse trigonometric, logarithmic, and exponential functions; find integrals by using basic techniques of integration; and use series for expansion of functions. P.R. MAT 3506 (5 - 0) 5

MAT 5304 SHOP MATHEMATICS I: The student will perform the basic arithmetic operations of addition, subtraction, multiplication, and division of whole, mixed, decimal and fractional numbers; find ratios; and determine percentage. (3 - 0) 3

MAT 5305 SHOP MATHEMATICS II: The student will perform the basic operations with signed numbers; manipulate formulas; find square roots; find ratios; find area and volume; and construct geometric figures. P.R. MAT 5304 (3 - 0) 3

MAT 9500 ARITHMETIC: An individualized self-paced course designed to meet the needs of any student who is lacking in the background of basic mathematics. Upon completion of MAT 9500, the student should be able to perform arithmetic operations on whole numbers, fractions and decimals. He will be able to solve problems relating to per cents, metric measurement, and graphs.

(10 - 0) 5

MAT 9502 ALGEBRA I: An individualized, self-paced course designed to meet the needs of any student who has not had beginning algebra, or who needs a review. Upon completion of MAT 9502, the student should be able to perform basic algebraic operations, simplify expressions, and solve equations in the sets of counting number, integers, and rational numbers.

(10 - 0) 5

MAT 9510 DEVELOPMENTAL ALGEBRA: An individualized, self-paced course for a student whose mathematics background is limited to the equivalent of Algebra I or who needs review of algebra before entering college or technical mathematics. Upon completion of MAT 9510, the student should be able to solve inequalities of first degree, solve systems of first degree equations algebraically or graphically, graph inequalities in two variables, factor quadratics, and solve equations involving rational expressions, exponents, radicals or complex numbers. The student can use this course for an equivalent of Algebra II for transcript purposes, enter MAT 3504 if he is in the technical area, or enter MAT 1504 if he is in the college transfer area.

(5 - 0) 5

MAT 9511 MODERN GEOMETRY: A lecture-discussion class for the study of the basic elements of geometry, emphasizing practical applications that relate to everyday life. This course is designed for the student who has not completed high school geometry or who needs a review. Upon completion of MAT 9511, the student should be able to solve problems relating to plane and solid geometry, special right triangles, ratio and proportion. May be taken concurrently with MAT 9502, MAT 9510, MAT 1504, MAT 3504, or MAT 1514.

(5 - 0) 5



MEC 3304 MACHINE PROCESSES I: Upon completion of this course the student should be able to: (1) use nonprecision and precision linear and angular measuring instruments; (2) explain the construction and field of application of the following machine tools: engine lathe, upright drill press, radial drill press, horizontal & vertical milling machine, surface and cylindrical grinders; and (3) perform simple machining operations on the above machines. P.R. None. (2 - 3) 3

MEC 3305 MACHINE PROCESSES II: Upon completion of this course the student should be able to: (1) use the following measuring devices: Sine Bar, Precision Gage Blocks, Optical Flat and Electric Comparator; (2) explain the construction and identify the principal field of application of the following machine tools: Turreth Lathes, Automatic Cycle Lathes, Special Drilling, Boring and Milling Machines and Centerless Grinders; (3) to identify the field of application of the following recently developed techniques in metal working, such as: Chemical Milling, Electrical Discharge Machining, Electrochemical Milling and Numerical Control Machining. P.R. MEC 3304 or departmental permission. (2 - 3) 3

MEC 4304 COMPOUND ANGLES: This course is a special study of solid geometric figures, which involves the relations of angles and sides of triangles that lie in different planes. Upon successful completion of this course the student should be able: (1) recognize and solve problems pertaining to the five basic types of solids; and (2) recognize and solve problems related to angular hole boring, from cutting, grinding, machining of jig and fixture parts and tools and dies on angle plates. P.R. MAT 3505. (3 - 0) 3

MEC 4324 THERMODYNAMICS: Upon completion of this course the student should be able to: (1) state the three laws of thermodynamics; (2) define the technical terms which are commonly used in discussing Thermodynamics; (3) write in both word form, and algebraic form the general energy equation; (4) use these equations to solve problems which are commonly encountered in Thermodynamics. P.R. PHY 3405, MAT 3505 or departmental permission. (3 - 0) 3

MEC 4404 DIE DESIGN: Upon completion of this course the student should be able to: (1) calculate on the basis of theory and empirical data the forces required and therefore the size press required for the three main processes of pressworking sheet metal, namely shearing, forming and drawing; and (2) design and draw largely with the use of manufacturers catalogs, the die sets necessary to manufacture sheet metal items by pressworking methods. P.R. DFT 3405, MEC 4415, CIV 3524 or departmental permission. (2 - 6) 4

MEC 4405 MECHANISMS: Upon completion of this course the student should be able to: (1) solve by graphical methods, and check by analytical methods, problems concerning the motion of machine elements, including the displacement, velocity and acceleration of points and lines within these elements; and (2) design the motion scheme part of Machine Design by graphical methods for cams, belts, pulleys, gears and linkages. P.R. DFT 3405, MEC 4508. (2 - 6) 4

MEC 4414 PHYSICAL METALLURGY I: Upon completion of this course the student should be able to: (1) explain the basic properties of metals and alloys; (2) discuss the structure of metals and alloys; (3) explain atomic structure; (4) discuss nuclear structure and nuclear reactions; (5) explain solid (crystalline) structure; (6) describe methods of designing crystal planes; (7) explain liquid and vapor phases, phase diagrams, and alloy system; (8) do simple metal hardness tests; (9) make and explain a stress-strain curve for tension test, and (10) mount, polish, and make a photomicrograph of a metal sample. P.R. PHY 3404. (3 - 3) 4

MEC 4415 PHYSICAL METALLURGY II: Upon completion of this course the student should be able to: (1) explain the properties of the ferrous metal alloys; (2) discuss the diffusion of carbon in case carburizing; (3) explain the recovery recrystallization, and grain growth of plane carbon and alloy steels; (4) show the effect of time on tempering; (5) demonstrate that thickness is a factor in the heat treating of an object; (6) explain the importance of a quenching medium in hardening an alloy steel; (7) discuss the mechanics of austempering and martempering, and (8) explain the use of powders to make alloys. P.R. MEC 4414. (3 - 3) 4

MEC 4434 HYDRAULICS AND PNEUMATICS: Upon successful completion of this course, the student should be able to do the following: (1) perform certain computations related to hydrostatics, hydrodynamics, and the general gas law; (2) draw hydraulic symbols; (3) make sketches of and explain how the following hydraulic and pneumatic system components work: Fluid power pumps and motors, hydraulic cylinders and rams, fluid reservoirs, plumbing and related components, pressure, flow and directional control valves; (4) design and troubleshoot simple hydraulic circuits. P.R. PHY 3405 or departmental permission. (3 - 3) 4

MEC 4508 APPLIED MECHANICS: Upon successful completion of this course the student should be able to do the following: (1) solve problems pertaining to force systems; (2) calculate the location of centroids and centers of gravity; (3) draw free-body diagrams; (4) analyze forces in simple trusses and frames; (5) calculate friction; (6) compute the moment of inertia of areas and bodies; (7) construct shear and moment diagrams; (8) solve problems related to the kinetics of particles and rigid bodies; (9) apply the laws of force and motion; and (10) perform calculations related to work, energy, and power. C.R. PHY 3405, MAT 3505. (4 - 3) 5

MEC 4604 MACHINE DESIGN: Upon completion of this course the student should be able to: (1) design machine parts on the basis of the function of the part and strength of material calculations; (2) select machine parts for a particular machine function, by use of manufacturers catalogs, manuals and periodicals. P.R. CIV 3524, MEC 4415, DFT 3406. (3 - 6) 6

MEC 4⁹⁴ INDEPENDENT STUDY: This course is designed to provide students with the opportunity to develop special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and program director is required prior to enrollment. P.R. None. (1-5 credits)

MEC 5214 HEAT TREATMENT OF METALS I: The student upon completion of this course should be able to: (1) do hardness tests on metals; (2) make and explain a stress-strain diagram for metals; (3) mount, polish, and produce a photo-micrograph of a metal sample; (4) explain the chemical metallurgy involved in the refining of metals such as copper, aluminum, and magnesium; (5) discuss the various alloys of these metals; (6) identify the alloys which can be age hardened; (7) name alloys that have to be work hardened, and (8) explain phase diagrams of various alloys. P.R. PHY 5304. (1 - 3) 2

MEC 5215 HEAT TREATMENT OF METALS II: Upon completion of this course the student should be able to: (1) explain the refining of iron from its ores in a blast furnace; (2) discuss the reduction of pig iron in an open hearth, Bessemer convertor or electric furnace; (3) discuss the alloying of carbon to form steels; (4) describe the alloying of other elements to increase hardness, strength, and corrosion resistance; (5) explain the heat treating of these steels, and (6) discuss the uses of powder to form alloys that are difficult to make. P.R. MEC 5214. (1 - 3) 2

MED 3304 MEDICAL TERMINOLOGY AND VOCABULARY I: Upon completion of this course the student should be able to: (1) read and understand medical terms; (2) build medical terms from Greek and Latin prefixes, suffixes, word roots and combining forms; (3) spell medical terms efficiently; (4) intelligently use a medical dictionary; (5) use appropriate abbreviations and symbols. P.R. None. (3-0-0) 3

MED 3305 MEDICAL TERMINOLOGY AND VOCABULARY II: Upon completion of this course the student should be able to: (1) pronounce and spell correctly certain medical terms; (2) define medical terms as they pertain to anatomy, physiology and diseases, operations, tumors, drugs and related descriptive terms; (3) demonstrate ability to build medical words and analyze word components. The above objectives will apply to the following systems: (a) skin and breast; (b) musculoskeletal; (c) cardiovascular; (d) blood and blood forming organs; (e) respiratory; (f) digestive. P.R. MED 3304. (3-0-0) 3

MED 3306 MEDICAL TERMINOLOGY AND VOCABULARY III: A continuation of MED 3305 with the objectives applying to the following systems: (a) neurological and psychiatric; (b) urogenital; (c) gynecological and obstetrics; (d) endocrine; (e) sense; (f) geriatrics. P.R. 3305. (3-0-0) 3

MED 3311 MEDICAL OFFICE PROCEDURES: Upon completion of this course the student should be able to: (1) schedule appointments; (2) transcribe brief medical histories and reports; (3) process mail; (4) file materials common to a physician's office; (5) prepare insurance forms; (6) demonstrate a knowledge of the principles of office management. P.R. None. (3-0-0) 3

MED 4302 MEDICAL ETHICS AND LAW: Upon completion of this course the student should be able to: (1) describe the laws that govern the practice of medicine; (2) differentiate between the various medical practice arrangements and their legal implications; (3) describe each medical service available to the public in the community and the way each contribute to comprehensive care; (4) explain the meaning of the A.M.A. Principles of Medical Ethics and discuss how each applies to the physician and/or his staff; (5) carry out good billing ethics; (6) list and define the various types of insurance programs by which medical and hospital expenses are defrayed. P.R. None. (3-0-0) 3

MED 5304 ORIENTATION TO MEDICAL OFFICE ASSISTING: Upon completion of this course the student should be able to: (1) discuss and express an awareness of the history of medicine and a knowledge of the medical practice and its specialties as it exist in society today; (2) evaluate her/his own emotional maturity and personality characteristics as they compare to those necessary for an efficient and effective medical assistant; (3) explain the role of the medical assistant in the physician's office and her/his position on the health team; (4) identify methods of dealing with patients coming into the physician's office using good principles of human relations. P.R. None. (3-0-0) 3

MED 5390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3-0-0) 3

MED 5414 MEDICAL OFFICE ASSISTING SEMINAR: This is a study of the personal and vocational responsibilities of a practitioner in the field of Medical Office Assisting. Upon completion of the course the student should be able to: (1) identify problems that may arise when working as a Medical Assistant; (2) suggest ways to solve these problems in a manner keeping with the professional Medical Office Assistant; (3) express increased knowledge of basic procedures and understanding of the medical practice that she/he has gained by reviewing and sharing oral reports. P.R. Fourth Quarter Standing. C.R. MED 5807. (4-0-0). 4

MED 5604 EXAMINATION ROOM PROCEDURES: Upon completion of this course the student should be able to: (1) efficiently maintain a physician's office in regards to the housekeeping, ordering supplies, keeping equipment in good repair and carrying out medical asepsis; (2) assist the physician with a physical examination; (3) perform and assist with certain diagnostic procedures under the supervision of the physician and/or the trained technician; (4) prepare the equipment and assist with minor surgery and wound dressing; (5) administer medications by the methods commonly used by the medical assistant in the physician's office. P.R. Completion of First Two Quarters. C.R. MED 5614. (3-6-0) 6

MED 5614 LABORATORY PROCEDURES: Upon completion of this course the student should be able to: (1) site the laboratory rules of safety; (2) handle the equipment and reagents in a safe responsible manner; (3) identify the equipment, glassware and supplies by sight and use; (4) demonstrate the basic knowledge of the simple laboratory tests done in a physician's office by performing the test with accuracy, speed, personal integrity and complete honesty. P.R. Completion of First Two Quarters. C.R. MED 5604. (3-6-0) 6

MED 5807 MEDICAL OFFICE PRACTICE: This course is a practicum in Medical Office Assisting. The student is assigned to a physician's office, clinic or out-patient department. Upon completion of this course the student should be able to: (1) perform the duties of the medical assistant as they apply to the office to which she/he is assigned; (2) demonstrate professional and communication skills necessary for the effective care of the patient; (3) express an understanding of the practice of comprehensive health care in the community. P.R. Fourth Quarter Standing. C.R. MED 5214. (0-0-24) 8

MME 5200 MOTORCYCLE TROUBLE SHOOTING: Upon completion of this course the student should be able to: (1) use standard diagnostic test equipment to locate faults in electrical and fuel systems; (2) use a logical sequence of steps to locate the cause of malfunctions; (3) determine the possible cause of failure of broken or worn parts. P.R. MME 5400. (1 - 3) 2

MME 5300 MOTORCYCLE FRAME AND CHASSIS SERVICE: Upon completion of this course the student should be able to: (1) service wheels and tires; (2) service brake systems; (3) service steering and suspension systems. P.R. None. (2 - 3) 3

MME 5301 MOTORCYCLE DRIVE TRAIN SERVICE: Upon completion of this course the student should be able to: (1) service clutches; (2) service transmission assemblies; (3) service chains and sprockets; (4) service shifting mechanisms. The service of these components includes disassembly, inspection, reassembly and adjustment. P.R. None. (2 - 3) 3

MME 5390 INDIVIDUAL STUDY: This is being offered to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other courses. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. (3 - 0) 3

MME 5400 MOTORCYCLE ELECTRICAL AND FUEL SYSTEMS: Upon completion of this course the student should be able to: (1) service common types of ignition systems; (2) service charging systems; (3) service cranking motor systems; (4) service lighting and accessory systems; (5) service carburetors and fuel system components. Service of these systems includes disassembly, inspection, reassembly and adjustment. P.R. None. (2 - 6) 4

MME 5401 MOTORCYCLE ENGINE SERVICE: Upon completion of this course the student should be able to: Service most two or four-stroke motorcycle engines. This service to include: (1) disassembly and reassembly; (2) measuring components for wear; (3) servicing valve systems; (4) resizing cylinders; (5) servicing bearings; (6) servicing crankshafts; (7) installation of engines. P.R. None. (2 - 6) 4

MRT 3204 DIRECTED PRACTICE I: Upon completion of this course, the student should be able to: (1) apply the theory of medical record practices by performing various medical record skills as provided in the general hospital; (2) discuss the major functions of a medical record department; (3) discuss the role of the medical record practitioner as a member of the health care team. P.R. MRT 3405, third quarter standing. C.R. MRT 3414. (0-0-6) 2

MRT 3404 MEDICAL RECORD SCIENCE I: Upon completion of this course, the student should be able to: (1) identify the important men in the history of medicine; (2) trace the historical development of medicine, health care facilities, and medical records; (3) describe the value, uses, and contents of medical records; (4) perform quantitative analysis of the medical record; (5) discuss the organization of the AMRA, its history, and categories of membership; (6) describe various numbering and filing systems; (7) discuss the retention of records. P.R. None. (3-2-0) 4

MRT 3405 MEDICAL RECORD SCIENCE II: Upon completion of this course, the student should be able to: (1) discuss the major functions and organization of the medical record department; (2) describe the other hospital departments; (3) define the purposes of classification systems and nomenclatures; (4) describe the various classification systems used; (5) code and retrieve diagnoses and procedures proficiently by ICDA-8; (6) utilize the principles of SNDO, and other coding systems and nomenclatures; (7) describe various indexes and registers; (8) describe various medical care evaluation techniques. P.R. MRT 3404. (3-2-0) 4

MOTORCYCLE REPAIR

MEDICAL RECORD TECHNICIAN

MRT 3414 MEDICAL RECORD SCIENCE III: Upon completion of this course, the student should be able to: (1) discuss the new trends in the health care delivery system; (2) compute the various hospital statistics and prepare reports; (3) define all terms related to hospital statistics; (4) discuss the procedures for completing vital statistics on births, deaths, and reportable diseases; (5) discuss the sources and uses of health data. P.R. MRT 3405, C.R. MRT 3204. (3-2-0) 4

MRT 4205 DIRECTED PRACTICE II: Upon completion of this course, the student should be able to: (1) apply the theory of medical record practices by performing various medical record skills as provided in the general hospital; (2) discuss the major functions of a medical record department; (3) discuss the role of the medical record practitioner as a member of the health care team. P.R. MRT 3204, fourth quarter standing, C.R. MRT 4304. (0-0-6) 2

MRT 4206 DIRECTED PRACTICE III: Upon completion of this course, the student should be able to: (1) apply the theory of medical record practices by performing various medical record skills as provided in the general hospital; (2) discuss the major functions of a medical record department; (3) discuss the role of the medical record practitioner as a member of the health care team. P.R. MRT 4205, fifth quarter standing, C.R. MRT 4315. (0-0-6) 2

MRT 4304 MEDICAL RECORD SCIENCE IV: Upon completion of this course, the student should be able to: (1) discuss the jurisdiction of the Federal and State courts; (2) describe the laws written by non-governmental bodies which affect the medical record; (3) describe the property rights and ownership of the medical record; (4) discuss the medical record as a legal document; (5) discuss consents, authorizations and releases of medical information; (6) describe statutes and hospital policies which govern the uses of medical records and the information contained in them; (7) discuss current health legislation which affects the medical record practitioner. P.R. MRT 3414, C.R. MRT 4205. (3-0-0) 3

MRT 4305 MEDICAL RECORD SEMINAR: Upon completion of this course, the student should be able to: (1) discuss the various personal and vocational responsibilities of the medical record practitioner. (2) analyze problems which are encountered as a medical record practitioner and discuss solutions. (3) discuss various sources of information and assistance which are available to the practicing medical record professional. P.R. MRT 4315, C.R. MRT 4804. (3-0-0) 3

MRT 4315 MEDICAL RECORD SCIENCE V: Upon completion of this course, the student should be able to: (1) discuss the medical staff, its responsibilities, and committees; (2) describe the role of the medical record practitioner in relationship to the medical staff; (3) discuss accrediting, approving licensing and crediting of various health care facilities with special emphasis on the medical record regulations; (4) discuss the various types of long-term care facilities; (5) describe the medical records used in long-term care facilities; (6) discuss the role of the MRT as a medical record consultant in long-term care facilities; (7) describe and discuss the Problem Oriented Medical Record. P.R. MRT 4304, C.R. MRT 4206. (3-0-0) 3

MRT 4804 DIRECTED PRACTICE IV: Upon completion of this course, the student should be able to: (1) describe the medical record functions as they relate to mental health facilities, long-term care facilities, group practices, rehabilitation centers, specialty hospitals, and neighborhood health centers; (2) discuss the role of the medical record technician in various types of health care facilities; (3) perform the medical record skills as specific to these health care facilities. P.R. MRT 4206, sixth quarter standing, C.R. MRT 4305. (0-0-24) 8

MUSIC MUS 1100 MEN'S CHOIR: Based upon repertorie for male chorus, this performing laboratory will prepare the students for public performance at the end of the session. Emphasis is upon sight-reading, demonstration and use of proper vocal techniques, tonal production and ensemble performance. The student will be given the opportunity to perform representative compositions from the major periods in music. * (0 - 3) 1

MUS 1101 WOMEN'S GLEE CLUB: This performance laboratory is open to all women students with emphasis on literature for female voices, vocal techniques, sightreading, ensemble performance, tone production and interpretation. The student will be given the opportunity to sing in various languages and demonstrate vocal abilities in public performance at the end of the session. * (0 - 3) 1

MUS 1104 CLASS VOICE I: This class involves instruction in the basic principles of voice production through group participation in song literature. The student could be able to recognize correct breathing posture and support for the resonation of vowels. * (0 - 2) 1

MUS 1107 CHAMBER CHÓIR: This is a practical performing laboratory to acquaint the student with the study and performance of choral music from each significant period of the development of choral composition. The program may vary each quarter depending on vocal abilities involved, size of the choir and balance. Emphasis is placed upon correct tonal production, proper vocal techniques, sightreading, ensemble performance and repertorie. Within a given quarter the student will be acquainted with various styles of periods and representative compositions culminating in a public performance at the end of the session. * (0 - 3) 1

MUS 1110 FOLK GUITAR: Upon successful completion of this course the student should be able to read guitar music in the first positions, perform a selected number of guitar solos, single note passages and duets. The student should also be able to play chords in the first position and be able to transpose to other selected keys. * (0 - 3) 1

- MUS 1111 CLASSICAL AND FLAMENCO GUITAR: Upon successful completion of this course the student should be able to read guitar music, play major and minor chords, some seventh chords and perform selected solos by Bach, Beethoven, Torrego, Aguado and Lori. The student should also be able to perform right and left hand classical technique Carcassi studies and right hand studies in the tremolo technique and flamenco strums and rasguados. * (0 - 3) 1
- MUS 1112 ORCHESTRAL STRINGS: The student will study the principles and techniques of playing the violin, viola, cello and double bass. * (0 - 3) 1
- MUS 1114 CLASS PIANO I: In an electronic piano laboratory setting, the student will receive group instruction in the basic principles and techniques of piano playing for the beginning student. Upon successful completion of the course, the students should demonstrate abilities in sightreading, transposition, improvisation and performance of simple two hand compositions. * (0 - 3) 1
- MUS 1115 CLASS PIANO II: A continuation of MUS 1114, the student is further acquainted with major scales, triads and inversions, and more advanced repertorie. The course utilizes the latest techniques and materials for helping the student grasp the skills of playing the piano in a laboratory setting. Emphasis is upon continued development of technique and application of skills at the keyboard. P.R. MUS 1114 or consent. * (0 - 3) 1
- MUS 1116 CLASS PIANO III: A continuation of MUS 1115 consisting of an integrated study of literature and theory. Upon satisfactory completion the student should be able to play - in addition to a number of pieces - the chromatic, whole tone, and minor scales (in tetrachords), to harmonize minor melodies, work with secondary triads and seventh chords, and know the principles of traditional scale fingerings for major keys. P.R. MUS1115 or consent * (0 - 3) 1
- MUS 1117 WIND ENSEMBLE: An organization designed to provide the opportunity for wind instrument students to continue the study of their particular instruments and to become familiar, through ensemble performance, with music of various composers, periods and styles. (Credit cumulative not to exceed three quarter hours. P.R. consent. * (0 - 3) 1
- MUS 1120 MODERN DANCE: Upon successful completion of this course the student should have acquired a knowledge and a certain proficient execution of fundamental dance techniques and be able to express the basic elements of rhythm, design and movement through modern dance. * (0 - 3) 1
- MUS 1127 ORCHESTRA: An organization designed to provide continuing performance opportunity for the student who has already developed some skills on an orchestral instrument. Emphasis will be placed on further development of student's playing ability and an acquaintance with orchestral literature. P.R. Consent * (0 - 3) 1
- MUS 1130 BALLET: Upon successful completion of this course the student should have acquired a knowledge of and a certain proficient execution of elementary classical ballet technique. * (0 - 3) 1
- MUS 1134 CONCERT BAND: An organization designed to provide performance opportunity for the student who has already developed skills on a band instrument. Emphasis is placed on further development of skills on particular instruments as well as acquaintance with concert band literature. P.R. Consent. * (0 - 4) 1
- MUS 1135 APPLIED VOICE: An individualized self-paced course in vocal techniques using English and Italian song literature. The student should be able to improve his own vocal technique and increase his knowledge of vocal repertoire upon successful completion of the course. P.R. MUS 1104 or consent of music faculty. * (1 - 0) 1
- MUS 1144 MODERN DANCE II: A continuation of MUS 1120 with emphasis on techniques requiring a higher level of skill. P.R. MUS 1120 or consent. * (0 - 3) 1
- MUS 1300 INTRODUCTION TO MUSIC I: This course is designed to give the beginning music student a knowledge of the rudiments of music from the standpoint of rhythm and melody. The instrument studied is the recorder. Upon satisfactory completion of the course the student should be able to compose and perform simple rhythms and melodies and should have achieved some facility at playing the recorder in the range of the fifth or the octave. (3 - 0) 3
- MUS 1301 INTRODUCTION TO MUSIC II: This course is a continuation of MUS 1300 and deals with the harmonic aspect of music as realized on the piano and the guitar. Upon satisfactory completion the student should be able to read simple melodies at the piano and harmonize them with I, IV6/4, and V6/5 chords and should be able to read and play single notes on the guitar and the most commonly used chords in a variety of strumming patterns. (3 - 0) 3
- MUS 1304 CHILDREN'S MUSIC I: An introductory study of fundamentals of music. The student will concentrate on development of basic skills in reading and performing (singing, percussion instruments, keyboard). Also included will be a study of children's song literature and observation in the Child Care Training Center. * (3 - 0) 3
- MUS 1305 CHILDREN'S MUSIC II: A continuation of MUS 1304. In addition, the student will become familiar with children's song literature, recordings, basic physical rhythmic responses and group activities. Included will be internship practice in the Child Care Training Center. P.R. MUS 1304. * (3 - 0) 3

- MUS 1310 INTRODUCTION TO MUSIC THEORY: A beginning or refresher course for the student with little or no keyboard background, this course should prepare the student for Music Theory I. Included are the basic fundamentals of music theory, notation, major and minor scales, intervals and basic chord structure. Upon successful completion of the course the student will better understand the basic principles and application of music theory. (3 - 0) 3
- MUS 1314 MUSIC APPRECIATION I: Upon successful completion of this course a student should have developed skills in basic listening and understanding of the art of music. Class material will introduce students to basic musical terminology, form, and history. This perspective should enable the student to be an informed listener. (3 - 0) 3
- MUS 1315 MUSIC APPRECIATION II: Upon successful completion of this course a student should have developed skills in basic listening and understanding of music from the Baroque and/or Classical periods. (3 - 0) 3
- MUS 1316 MUSIC APPRECIATION III: Upon successful completion of this course a student should have developed skills in basic listening and understanding of music from the Romantic and/or Contemporary periods. (3 - 0) 3
- MUS 1324 RECORDING STUDIO TECHNIQUES I: The student will be introduced to the recording studio from an artistic and operational point of view, the operation and function of audio consoles, microphones, multi-track recorders, echo chambers and their relationship to the musician, sound engineer and producer. (3 - 0) 3
- MUS 1325 RECORDING STUDIO TECHNIQUES II: This is a continuation of MUS 1324. In addition the student will be introduced to tape splicing and editing. P.R. MUS 1324. (3 - 0) 3
- MUS 1326 RECORDING STUDIO TECHNIQUES III: This course is a continuation of MUS 1325 with observation of multi-track recording and mix-down, mike placement and patch bay functions. Students participate as producers, musicians, singers and back-up voices while the instructor demonstrate the use of studio equipment. Students will also produce and participate in radio spots/AV audio. P.R. MUS 1325. (0 - 6) 3
- MUS 1327 RECORDING STUDIO TECHNIQUES IV: This is the last of a series of four courses in Recording Studio Techniques. The course is predominantly a recording studio workshop whereby the student is given the opportunity to create and produce commercial music, operate the console and tape recorders, and exhibit his own creativity in phases that interest him the most. P.R. MUS 1326. (0 - 6) 3
- MUS 1334 MUSIC WRITING I: AUTOGRAPHY AND PREPARATION: This course is designed to teach the serious music student the fundamental skills in music calligraphy including notational techniques, technical vocabulary, and editing procedures by which music is prepared for performance and graphic reproduction by autography. P.R. Basic music literacy. (2 - 2) 3
- MUS 1335 MUSIC WRITING II: This course will enlarge and develop the skills which the student has acquired in MUS 1334 with the addition of further techniques and specific problems encountered by the copyist: P.R. MUS 1334. (2 - 2) 3
- MUS 1504 MUSIC THEORY I: This course is concerned with the development of harmony dealing specifically with the principal triads including elementary work in melodic and rhythmic dictation, keyboard, and sight singing. The student should be able to write a simple diatonic melody and harmonize it according to Eighteenth Century techniques upon successful completion of this course. P.R. MUS 1310 or consent. (5 - 0) 5
- MUS 1505 MUSIC THEORY II: This course is a continuation of MUS 1504. The secondary triads and chord inversions are introduced in the development of harmony and more advanced work is done in dictation, keyboard, and sight singing. The student should be able to write a four voice choral piece and analyze it upon successful completion of the course. P.R. MUS 1504. (5 - 0) 5
- MUS 1506 MUSIC THEORY III: This course is a continuation of MUS 1505. Minor keys and seventh chords are studied in harmony and more advanced work is done in dictation, keyboard and sight singing. The student should be able to analyze and to write a diatonic piece in Baroque style and a song with piano accompaniment upon successful completion of the course. P.R. MUS 1505. (5 - 0) 5
- MUS 2114 ADVANCED CLASS PIANO I: Upon successful completion of this course the student should be able to harmonize simple tunes using secondary dominants and play a minimum number of technical studies and selected pieces of piano literature. P.R. MUS 1116 or consent. * (0 - 3) 1
- MUS 2115 ADVANCED CLASS PIANO II: A continuation of 2114. The course emphasizes technical development and mastery of music from several historical periods. The student will be able to play 3 or more etudes and pieces studied by the entire class and will in addition be able to perform one or more pieces selected to improve or capitalize on his individual pianistic ability. P.R. MUS 2114 or consent. * (0 - 3) 1

- MUS 2116 ADVANCED CLASS PIANO III: A continuation of MUS 2115. Technical and stylistic problems are dealt with both individually and collectively. Upon successful completion of this course the student should be able to perform one movement of a Classical sonata, a Baroque dance and a Romantic or Contemporary work, or the equivalent. P.R. MUS 2115 or consent. * (0 - 3) 1
- MUS 2117 PIANO ENSEMBLE: Designed for students having completed six or more quarters of piano, this class is an introductory study of piano literature requiring two or more persons performing on one or more pianos. Emphasis is upon ensemble performance, repertoire, sightreading and continued technique building. P.R. MUS 2116 or consent. * (0 - 3) 1
- MUS 2118 JAZZ PIANO: Upon successful completion of this course the student should be able to construct jazz chords from written chord symbols on the keyboard, write these chords on manuscript paper and be able to take a standard popular tune and reharmonize it according to certain basic rules. P.R. MUS 2116 or consent. * (0 - 3) 1
- MUS 2136 ADVANCED APPLIED VOICE: Continuation of MUS 1135. German and French song literature is begun or continued as well as study in the operatic and oratoric literature. Upon successful completion of the course the student should demonstrate continued improvement in his own vocal technique. P.R. MUS 1135 or consent of music faculty. * (1 - 0) 1
- MUS 2204 SPECIAL PROBLEMS IN MUSIC: An advanced problems course in which the student will select a topic for independent study involving independent laboratory and library work. P.R. Approval of department head.* (1 - 3) 2
- MUS 2214 CHOREOGRAPHY: The student will explore basic elements of movement; rhythm and design; and basics of form in dance compositions, analysis of music structure and quality. P.R. 1120 or permission.* (0 - 4) 2
- MUS 2304 HISTORY AND LITERATURE OF MUSIC I: A study of music from ancient times through the Renaissance. Upon successful completion of the course the student should be able to trace the development of music - its styles and forms - from ancient times through the Middle Ages and the Renaissance to 1600. He should know the major composers and should be able to identify some specific works of music and/or forms. P.R. The ability to read music and MUS 1314 or consent. (3 - 0) 3
- MUS 2305 HISTORY AND LITERATURE OF MUSIC II: A study of music of the Baroque and Classical periods up through the early and middle works of Beethoven. Upon successful completion of the course the student should be able to describe the most important characteristics and forms, vocal and instrumental, of each period as represented especially in the works of Monteverdi, Corelli, Vivaldi, Bach, Handel, Haydn, Mozart, and Beethoven, and should be able to identify some specific works. P.R. MUS 2304 or consent. (3 - 0) 3
- MUS 2306 HISTORY AND LITERATURE OF MUSIC III: A study of music of the Romantic Period beginning with late Beethoven and proceeding through the Twentieth Century. Upon successful completion of the course the student should be able to trace the major musical developments through the Nineteenth and Twentieth Centuries in respect to melody, rhythm, harmony, form, instrumentation. He should be acquainted with a variety of music by the major Romantic and Contemporary composers and be able to describe and distinguish style characteristics of a number of composers. P.R. MUS 2304 and 2305 or consent. (3 - 0) 3
- MUS 2307 ADVANCED MUSIC THEORY I: A continuation of MUS 1506. Chromatic harmony is dealt with by way of secondary dominants and modulation. Phrases and periods are discussed as well as advanced work in sight singing, dictation and keyboard. Upon successful completion of the course the student should be able to write a piece which modulates to another key and to analyze the phrase structure. P.R. MUS 1506. (3 - 0) 3
- MUS 2308 ADVANCED MUSIC THEORY II: A continuation of MUS 2307. Chromatic harmony is studied further by way of diminished seventh chords. Two and three part forms are discussed as well as advanced work in sight singing, dictation and keyboard. Upon successful completion of the course the student should be able to harmonize a modulating melody in Baroque and Classical style and analyze the form of a simple work in those periods. P.R. MUS 2307. (3 - 0) 3
- MUS 2309 ADVANCED MUSIC THEORY III: A continuation of MUS 2308. Chromatic harmony is dealt with in ninth and altered chords, modulation to distant keys, and Twentieth Century styles. Overall form is studied as well as advanced work in sight singing, dictation and keyboard. Upon successful completion of this course the student should be able to analyze harmonically and melodically a work in traditional style and to write a piece incorporating the above in Twentieth Century style. P.R. MUS 2308. (3 - 0) 3
- MUS 2338 OPERA WORKSHOP: This course is designed to help the student gain knowledge in interpretation and style of operatic literature and gain experience through performance and opera productions. Registration upon consent of the instructor.* (0 - 6) 3

* Does not meet humanities requirement.

NURSE AIDE

NUA 5700 NURSE AIDE SKILLS I: Upon completion of this course the student should be able to: (1) provide for the hygienic needs of patients; (2) provide a safe environment for patients; (3) utilize principles of body mechanics in giving patient care; (4) demonstrate the ability to perform basic nursing skills and procedures; (5) demonstrate appropriate behavior in patient care setting; (6) follow policies and procedures of the clinical agency. P.R. Admission to program. C.R. NUA 5701. (3-0-12) 7

NUA 5701 NURSE AIDE SKILLS II: Upon completion of this course the student should be able to: (1) demonstrate effective working relationships in the clinical setting; (2) appreciate the role of the nurse aide as a member of the health team; (3) use appropriate terminology in reporting and recording; (4) accept responsibility for own actions; (5) recognize the special needs of geriatric patients; (6) communicate appropriately in the clinical setting. P.R. Admission to program. C.R. NUA 5700. (3-0-12) 7

PRACTICAL NURSING

NUP 5104 VOCATIONAL RELATIONSHIPS: Upon completion of this course the student should be able to: (1) make application for licensure by examination and by endorsement; (2) identify nursing organizations and their functions; (3) follow appropriate procedures in seeking employment; (4) identify the two roles of a Licensed Practical Nurse; (5) relate specific legal aspects to nursing practice. C.R. NUP 5706, NUP 5707. (1-0-0) 1

NUP 5203 ORIENTATION TO VOCATIONAL RELATIONSHIPS: Upon completion of this course the student should be able to: (1) identify P.N. education and its place in the educational system; (2) discuss various periods of historical development in nursing and health; (3) define health team, medical team, nursing team and know the members of each; (4) set realistic standards for your own achievements; (5) identify authoritative sources of information in nursing; (6) list ethical and legal responsibilities in nursing. P.R. Admission to Program. C.R. NUP 5704. (2-0-0) 2

NUP 5390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3 - 0) 3

NUP 5400 BASIC PRINCIPLES OF DRUG ADMINISTRATION: Upon completion of this course the student should be able to: (1) demonstrate competence in the use of the systems of measurements in computing drug dosage; (2) follow established procedure in preparing oral and parenteral medications; (3) identify sources and purposes of commonly used drugs; (4) identify various forms in which drugs are packaged; (5) prepare drug cards utilizing appropriate information and resources; (6) identify safety measures necessary in administration of drugs; (7) identify action, side effects, common names and uses of specific drugs; (8) classify drugs according to therapeutic purposes; (9) list state and federal laws regulating the use of drugs. P.R. NUP 5704. C.R. NUP 5904. (3-2-0) 4

NUP 5704 INTRODUCTION TO PATIENT CARE: Upon completion of this course the student should be able to: (1) establish effective, professional relationships in the classroom and clinical setting; (2) use proper body mechanics in carrying out patient care; (3) identify basic nursing needs and implement measures necessary to meet these needs; (4) provide safety and comfort measures for all patients; (5) make accurate observations and report and record appropriately; (6) maintain a therapeutic environment in the patient care setting; (7) compute and measure drug dosage; (8) demonstrate basic nursing skills and procedures in caring for patients; (9) follow policies and procedures of clinical agency. P.R. Admission to Program. C.R. NUP 5203. (3-4-6) 7

NUP 5705 CARE OF PATIENTS WITH MED/SURGICAL CONDITIONS II: Upon completion of this course the student should be able to: (1) apply previously learned knowledge and skills in planning patient care for patients with Med/Surgical conditions; (2) carry out aseptic technique in patient care; (3) administer oral and parenteral medication; (4) plan and implement patient care based upon an increasing understanding of patient needs; (5) make, report and record pertinent observations using appropriate medical terminology; (6) provide safe effective nursing care to selected patients with specific Med/Surgical conditions; (7) behave at all times in a professional manner with patients, co-workers, instructors, nurses and medical staff; (8) do an objective self-evaluation of their performance. P.R. NUP 5400, NUP 5904. C.R. NUP 5717. (2-4-9) 7

NUP 5706 CARE OF INFANTS AND CHILDREN: Upon completion of this course the student should be able to: (1) provide safe nursing care for children from infancy through adolescence; (2) identify common growth and developmental tasks, and needs of children; (3) set priorities based upon principles of growth and development in organizing patient care; (4) compare the needs of the well child and the sick child; (5) identify anatomical differences between the child and adult; (6) provide nursing care for those disorders most commonly associated with childhood. P.R. NUP 5705, NUP 5717. (2-4-9) 7

NUP 5707 CARE OF MOTHERS AND NEW BORN INFANTS: Upon completion of this course the student should be able to: (1) carry out the function of the P.N. in care of mothers and infants during pregnancy, childbirth and the post-partum period; (2) demonstrate a knowledge and understanding of human sexuality, normal growth and development during pregnancy, and the processes of labor and delivery; (3) compare the psycho-prophalactic and the traditional methods commonly used in childbirth; (4) identify common discomforts of the antepartum and postpartum periods and give measures to relieve these discomforts; (5) report pertinent observations to the R.N. in caring for the maternity patients with complications. P.R. NUP 5705, NUP 5717. (2-4-9) 7

NUP 5717 CARE OF THE SERIOUSLY ILL AND INJURED: Upon completion of this course the student should be able to: (1) outline nursing care procedures needed for patients with specific condition of illness that are beyond routine measures. (2) perform effectively in an assisting role to the R.N. in the care of the seriously ill and injured; (3) to follow directions in carrying out delegated responsibilities in the care of the physically handicapped, the seriously ill, and the dying; (4) to assist in providing continued rehabilitation measures for physically impaired patients. P.R. NUP 5904, NUP 5400. C.R. NUP 5705. (2-4-9) 7

NUP 5904 CARE OF PATIENTS WITH MED/SURGICAL CONDITIONS I: Upon completion of this course the student should be able to: (1) provide the nursing needs of patients with various medical/surgery conditions; (2) administer oral and parenteral medication; (3) develop and implement a nursing care plan for selected patients; (4) use appropriate therapeutic measures; (5) demonstrate knowledge of principles of asepsis; (6) recognize and meet the needs of the geriatric patient; (7) apply previously learned principles in meeting physical, emotional and social needs of patients; (8) demonstrate an understanding of ways in which an individual responds to illness; (9) display acceptable behavior in the patient care setting. P.R. NUP 5704. C.R. NUP 5400. (3-2-15) 9

NUR 3704 FUNDAMENTALS OF NURSING I: Upon completion of this course the student should be able to: (1) use problem/solving approach in planning patient care; (2) demonstrate satisfactory interpersonal and professional relationships; (3) make and utilize pertinent observations; (4) provide for the basic needs of patients; (5) provide a safe environment for patients; (6) demonstrate skill in providing physical care for hospitalized patients; (7) demonstrate beginning knowledge of the specific needs of the geriatric patient; (8) calculate dosage and administer oral medications; (9) follow the policies and procedures of the clinical agency. P.R. Admission to program. C.R. PSY 2504, BIO 1504. (3-4-6) 7

NUR 3804 PHYSICAL AND MENTAL HEALTH NURSING I: Upon completion of this course the student should be able to: (1) integrate knowledge learned from previous nursing and related courses to provide safe nursing care; (2) demonstrate responsible professional behavior; (3) examine the relationship between the physical and mental effects of illness and plan nursing care based upon this relationship; (4) meet the psychological needs of patients based upon the knowledge of therapeutic communications and psychiatric therapies; (5) plan and implement nursing care for patients with problems of immobility based upon knowledge of pathophysiology and scientific principles of nursing; (6) plan and implement nursing care for patients with cancer based upon knowledge of pathophysiology and scientific principles of nursing. P.R. NUR 3705, BIO 1505, BIO 2304. C.R. BIO 1503, PSY 2514. (3-4-9) 8

NUR 3805 FUNDAMENTALS OF NURSING II: Upon completion of this course the student should be able to: (1) prepare a patient for surgery; (2) demonstrate understanding of the patient's surgical experience; (3) give general post-operative care; (4) calculate dosage for the administer oral and parenteral medications; (5) administer I.V. fluids and add medication to I.V. bottles and I.V. Volu-trole; (6) change post operative dressings; (7) care for the patient receiving inhalation therapy; (8) begin utilization of basic concepts of medical/surgical nursing related to shock and fluid and electrolyte balance; (9) follow the policies and practices of the clinical agency. P.R. NUR 3704, BIO 1504, PSY 2504. C.R. BIO 1505, BIO 2304. (3-4-9) 8

NUR 3905 PHYSICAL AND MENTAL HEALTH NURSING II: Upon completion of this course the student should be able to: (1) provide safe nursing care based upon knowledge learned from previous nursing and related courses; (2) demonstrate responsible professional behavior; (3) use effective communication techniques to meet the psychological needs of patients; (4) meet the needs of the mentally ill patient based upon knowledge of psychopathology and dynamics of interpersonal relationships; (5) plan and implement nursing care for patients with burns, endocrine disorders, and gastrointestinal disorders based upon knowledge of pathophysiology and scientific principles of nursing. P.R. NUR 3804, BIO 1503, PSY 2514. C.R. SOC 2514. (3-4-12) 9

NUR 4304 TRENDS IN NURSING: Upon completion of this course the student should be able to: (1) identify and relate past and current political, social, and economic factor to nursing education and practice; (2) compare professional, technical, and practical nursing education and practice; (3) identify the professional organizations of nursing, their purposes and contribution to nurses and nursing; (4) describe general qualifications for positions in various fields of nursing; (5) describe the major purpose and function of licensing laws, specifically, Nurse Practice Arts; (6) relate the Law of Negligence and Mal-practice to the practice of nursing; (7) identify the most common causes of legal action; (8) describe patterns and trends in nursing education and nursing practice. P.R. None. C.R. NUR 4906. (2-2-0) 3

NUR 4390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3 - 0) 3

NUR 4906 PHYSICAL AND MENTAL HEALTH NURSING III: Upon completion of this course the student should be able to: (1) assess the nursing needs, plan, implement and evaluate nursing care for patients in the coronary and intensive care units; (2) identify stressors that contribute to physical and mental illness in the adult; (3) demonstrate the ability to apply leadership skills when assigned to the role as team leader or team member in the clinical area; (4) interact with other health team members with the intent to modify patient care; (5) demonstrate the understanding of scientific principles underlying the care of patients with neurological, renal, cardiac, respiratory and nutritional problems when caring for patients assigned for clinical experience; (6) apply knowledge and skills gained in all previous nursing courses when caring for patients. P.R. NUR 4914, NUR 4915. C.R. NUR 4304. (3-4-12) 9

NURSING

NUR 4914 MATERNAL AND NEONATAL NURSING: Upon completion of this course the student should be able to: (1) apply the concept of family centered maternity care; (2) assess the needs and use the assessment as a basis to provide nursing care for the mother during the prenatal, intrapartal and post partal periods. (3) teach health care to promote an emotionally satisfying and physically safe delivery of the newborn infant; (4) assess the newborn infant's needs to use as a basis for giving nursing care; (5) teach the parents basic infant care; (6) recognize signs and symptoms of the various obstetrical complications and take appropriate nursing action. P.R. NUR 3905, SOC 2514.

(3-4-12) 9

NUR 4915 NURSING OF CHILDREN: Upon completion of this course the student should be able to: (1) meet the nursing needs of children (infants through preadolescents) which result from hereditary or congenital factors, accidental injury, or infection; (2) use knowledge of normal growth and development as a basis for planning nursing care and for recognizing the deviations which may be produced by illness and hospitalization. P.R. NUR 3905, SOC 2514.

(3-4-12) 9

NUR 9502 BASIC CALCULATIONS FOR NURSING: A beginning or refresher course for students who will enter health curriculums. Upon successful completion of NUR 9502, the student should be able to demonstrate an ability to work problems dealing with metric, Apothecaries, and household systems of measurement, dosages in tablet form, solutions, temperature conversions, and insulin dosage.

(5 - 0) 5

PHILOSOPHY PHI 1500 INTRODUCTION TO PHILOSOPHY: An introduction of the basic problems of human thought, emphasizing the philosophical systems dealing with these problems and their historical development.

(5 - 0) 5

PHI 2500 LOGIC: An intensive study of the methodology of valid reasoning, including formal principles of deduction and induction.

(5 - 0) 5

PHYSICS PHY 1300 SCIENCE AND SOCIETY: This course is designed to make the student more familiar with science as a part of cultural influence. The successful student will become aware of some of the most significant discoveries in the development of modern technological society, and their effect upon the art, politics, religion, etc. of the time. It is intended that the student become particularly aware of potential future conflicts between technology and humanism.

(3 - 0) 3

PHY 1400 SCIENCE AND SOCIETY: The same lecture as PHY 1300 with the addition of laboratory experience for physical science credit. The student will perform facsimilies of several classical experiments and become familiar with some basic laboratory apparatus.

(3 - 2) 4

PHY 1504 INTRODUCTION TO PHYSICS I: The first of a three course sequence designed to meet the needs and interests of students majoring in areas other than engineering, mathematics or physical science. Upon successful completion of the course, the student should be able to use the metric system of units fluently, understand such concepts as acceleration, force and energy, and apply these concepts to the analysis of physical systems. The course is taught using the self-pacing "Personalized System of Instruction," Corequisite: MAT 1504, high school equivalent or consent.

(4 - 2) 5

PHY 1505 INTRODUCTION TO PHYSICS II: A continuation of the sequence beginning with PHY 1504. Upon successful completion of this course, the student should be able to demonstrate understanding of basic concepts related to the structure of matter, electricity, magnetism and light through the definition of terms and the solution of appropriate problems and laboratory exercises. Taught using PSI. P.R. PHY 1504 or equivalent.

(4 - 2) 5

PHY 1506 INTRODUCTION TO PHYSICS III: The third in the sequence of courses beginning with PHY 1504. Students completing this course should be able to demonstrate an understanding of basic concepts related to waves and particles, relativity, radioactivity and nuclear energy. PSI based. P.R. PHY 1505 or equivalent.

(4 - 2) 5

PHY 2504 GENERAL PHYSICS I: MECHANICS: The first of a three course sequence designed primarily for students majoring in physical science, engineering or mathematics. Upon successful completion of this course the student should be able to demonstrate an understanding of principles of kinematics, particle dynamics, energy and momentum, particularly through the solution of appropriate problems of a level requiring the use of calculus and vector analysis. P.R. MAT 1524 or consent.

(4 - 2) 5

PHY 2505 GENERAL PHYSICS II: MOLECULAR PHYSICS AND WAVES: A continuation of the sequence beginning with PHY 2504. Upon successful completion of this course, the student should be able to demonstrate an understanding of principles of molecular physics, thermal properties of matter, wave mechanics and related topics. P.R. PHY 2504 or consent.

(4 - 2) 5

PHY 2506 GENERAL PHYSICS III: ELECTRICITY AND MAGNETISM: The third in the sequence of courses beginning with PHY 2504. Students completing this course should be able to solve rather rigorous problems in the areas of electrical fields, current electricity and electromagnetic fields. P.R. PHY 2505 or consent.

(4 - 2) 5

PHY 3324 RADIATION PHYSICS I: This course is designed primarily for, but not limited to, Radiology Technology students. Upon successful completion of this course, the student should have a background in structure of matter, basic electricity and magnetism, and the nature of electromagnetic radiation which will enable him or her to comprehend the theories underlying the construction and operation of a basic radiography unit. P.R. High school credit in algebra.

(2 - 2) 3

- PHY 3325 RADIATION PHYSICS II: A continuation of PHY 3324. Upon completion of this course, the student should be able to draw and explain basic radiography circuitry, and should be able to explain the basic principles of radiation dosage, detection, protection, and simple nuclear processes. P.R. PHY 3324. (2 - 2) 3
- PHY 3404 PHYSICS I: BASIC MECHANICS: An introductory physics course designed primarily for technology majors. After successful completion of the course the student will demonstrate an acceptable level of mastery of course content by solving problems describing the physical phenomena of linear motion, force, work, energy, power, friction, equilibrium, and linear momentum. P.R. MAT 3504. (3 - 2) 4
- PHY 3405 PHYSICS II: WORK, ENERGY, POWER: A continuation of PHY 3404 to include study of rigid body dynamics, machines, mechanical transmission of power, heat measurement and transfer, mechanical and thermo properties of matter, and periodic motion. For successful completion of the course, the student will describe in writing and solve selected problems that pertain to the topics listed. P.R. PHY 3404 MAT 3504. (3 - 2) 4
- PHY 3406 PHYSICS III: ELECTRICITY: Basic theories of electricity, types of electricity, methods of producing, transmitting and transforming electricity. Electron theory, electricity by friction, electricity by magnetism, induction, voltage, amperage, resistance, horsepower, wattage and transformers are major parts of the course. After successful completion of the course the student will demonstrate an acceptable level of mastery of the material by problem solving in topics that are related to his chosen technology. P.R. PHY 3404 MAT 3505. (3 - 2) 4
- PHY 3407 PHYSICS IV: LIGHT, SOUND AND ATOMIC PHYSICS: A study of sound, wave motion and an introduction to modern physics. Topics include sound energy and technical applications, illumination, principles of optical instruments, quantum mechanics and nuclear physics. After successful completion the student demonstrates understanding by solving rigorous problems that relate to the above topics. P.R. PHY 3404, MAT 3505. (3 - 2) 4
- PHY 3414 PHYSICS OF RESPIRATORY THERAPY: The student successfully completing this course should have an overview of basic principles related to properties of matter, energy, heat, gas laws and basic electricity, with particular emphasis on applications to Respiratory Therapy. P.R. MAT 3200. (3 - 2) 4
- PHY 5304 SHOP SCIENCE I: An introductory course in physics and its application covering systems and measurement and properties of solids, liquids and gases. Much emphasis is placed upon the principles of electricity including electron theory, magnetism and electromagnetism. The production, transmission, distribution, measurement and specific application of electrical energy also constitute major areas of study. The successful student will demonstrate an acceptable level of understanding by passing a series of mastery quizzes designed to cover each of the topics listed. (2 - 2) 3
- PHY 5305 SHOP SCIENCE II: A continuation of PHY 5304. Principles of force, motion, work, energy, power and mechanisms' mechanical advantage are treated extensively. The production and transmission of heat and its conversion into work are covered. Student mastery testing is again employed. (2 - 2) 3
- PME 5211 SMALL ENGINE REPAIR I: Upon completion of this course the student will have: (1) demonstrated an understanding of the basic operation of two-stroke and four-stroke cycle air cooled engines; (2) demonstrated an understanding of magneto ignition systems; (3) serviced at least two types of ignition systems; (4) demonstrated an understanding of carburetion; (5) serviced at least three (3) types of carburetors; (6) serviced recoil starters. P.R. None. (1 - 3) 2
- PME 5214 SMALL ENGINE REPAIR II: Upon completion of this course the student should be able to service most small air cooled two or four-stroke engines. This service to include: (1) disassembly and reassembly; (2) measuring components for wear; (3) servicing valves; (4) resizing cylinders; (5) replacing bearings and bushings. P.R. PME 5211. (1 - 3) 2
- POL 1502 AMERICAN POLITICS: The student will employ a "systems approach" to analyze the three branches of American national government and the ways in which they interact with each other, and with political parties, interest groups, and the electorate in political decision-making. (formerly POL 1504) (5 - 0) 5
- POL 1510 INTRODUCTION TO COMPARATIVE POLITICS: The student will employ a "systems approach" to compare and contrast decision-making in several Western and non-Western, industrial and less developed, democratic and authoritarian political systems. (formerly POL 1500) (5 - 0) 5
- POL 1511 INTRODUCTION TO INTERNATIONAL RELATIONS: The student will identify and analyze patterns in relations among nations, and explain the effects on international relations of differing national perspectives, "power," international law, and international organizations, and assess contemporary international relations as both a "balance of power" and "balance of terror." (formerly POL 1501) (5 - 0) 5

POL 2500 STATE AND URBAN POLITICS: The student will utilize a "systems approach" to analyze political decision-making in the states and urban areas, emphasizing in his analysis: changing relations between the federal government, states, and cities; the decline of southern sectionalism and big city political machines, the rise of suburban areas, citizen action groups, and new forms of metropolitan government. (formerly POL 1505) (5 - 0) 5

POL 2104-2504 SPECIAL TOPICS IN POLITICAL SCIENCE: The student will examine particular topics of political interaction and decision-making in areas not covered in standard courses. Topics' course objectives vary with the subject matter studied. (1 to 5 hrs.class/week) (1 to 5 hrs Credit)

GRAPHIC ARTS PRN 5204 ORIENTATION TO CO-OP: Upon completion of this course, the student will have: (1) demonstrated ability to complete a job application form; (2) satisfactorily completed a simulated job interview; (3) described in writing twelve student actions that will lead to positive employee/ employer relations; (4) with the support of the program faculty, located his/her co-op training station. P.R. Completion of first quarter. (2 - 0) 2

PRN 5301 PRINTING MANAGEMENT: Upon completion of this course the student should be able to: (1) describe the structure of the management levels in a company; (2) discuss the importance of coordinating the elements of a job and keeping the customers informed as to the status of their job in the plant; (3) describe production control, proper purchasing of supplies, quality control and material handling. P.R. None. (3 - 0) 3

PRN 5303 ESTIMATING I: Upon completion of this course the student will be able to: (1) compute paper and ink costs; (2) copy fit type for a job; (3) compute cost of producing a negative, plate, printing and bindery for a given job. P.R. None. (3 - 0) 3

PRN 5304 COOPERATIVE LAB I: Upon completion of this course the student should be able to: (1) apply the skills learned in the classroom, graphic arts lab, and on the job training to actual working situations in the graphic arts industry. P.R. PRN 5204. (2 - 15) 5

PRN 5305 COOPERATIVE LAB II: (A continuation of PRN 5304). Upon completion of this course the student should be able to: (1) make the transition from the classroom and lab to an actual job in the graphic arts industry with little or no difficulty. P.R. PRN 5304. (2 - 15) 5

PRN 5310 PAPER AND INK: Upon completion of this course the student should be able to: (1) select and/or distinguish between various types of papers used including bonds, book papers, Bristols, index, cover, and boards; (2) trouble shoot various problems related to the running of sheet and web offset; (3) describe how ink is mixed; (4) color match ink to a customer's specifications. P.R. None. (3 - 0) 3

PRN 5314 OFFSET CAMERA I: Upon completion of this course the student should be able to: (1) describe the theory and application of photomechanical photography, photomechanical equipment and materials; (2) recognize types of copy that will not photograph properly; (3) shoot line and half-tone copy; (4) operate a densitometer; (5) use filters properly. P.R. None. (2 - 2) 3

PRN 5315 OFFSET CAMERA II: (A continuation of PRN 5314). Upon completion of this course the student should be able to: (1) shoot duo-tones, tri-tones; (2) shoot halftones and line negatives from poor and difficult copy; (3) screen color; (4) make a drop-out halftone, a set-in and a mezzotint. P.R. PRN 5314. (2 - 2) 3

PRN 5324 OFFSET PRESS I AND BINDERY: Upon completion of this course the student should be able to: (1) describe and perform procedures in press make-ready including determining correct measurements for packing, mounting of plates and blankets; (2) set controls on feeder, delivery, rollers dampeners, inking, fountain solutions and PH; (3) operate duplicator to produce a satisfactory printed piece; (4) identify and describe the various types of bindery operations including book bindery, finishing operations in packaging, padding and other general bindery procedures. P.R. None. (2 - 2) 3

PRN 5325 OFFSET PRESS II: (A continuation of PRN 5324). Upon completion of this course the student should be able to: (1) operate the duplicator and be able to correct difficulties that arise; (2) run envelopes; (3) control the ink and water balance; (4) control the register of color work. P.R. PRN 5324. (2 - 2) 3

PRN 5335 OFFSET STRIPPING II: (A continuation of PRN 5434). Upon completion of this course the student should be able to: (1) set up a flat using register pins; (2) make composite negatives; (3) strip duotones, four color, run and across, and four color with bleeds. P.R. PRN 5434. (2 - 2) 3

PRN 5336 COLOR REPRODUCTION: Upon completion of this course the student should be able to: (1) describe the fundamentals in basic color separation using direct and indirect methods; (2) describe the importance of the contact screen and the angles used in color reproduction; (3) describe masking techniques for color correction and tone reproduction; (4) describe all steps necessary to produce a job in color. P.R. PRN 5335, PRN 5325, PRN 5315. (3 - 0) 3

PRN 5337 COLOR SEPARATION TECHNIQUES AND THEORY: Upon completion of this course the student should be able to: (1) describe the effect of dot size and half-tone techniques on the reproduction of half-tones; (2) discuss three characteristics which demonstrate the importance of the densitometer; (3) discuss the function of masking, masking materials, exposure procedures, mask sharpness, and mask aim points; (4) describe the importance of and procedures used in color corrections. P.R. PRN 5336. (3 - 0) 3

PRN 5354 ESTIMATING II: (A continuation of PRN 5303). Upon completion of this course the student should be able to: (1) price various types of jobs in the Franklin catalogs; (2) complete job estimates using the costing method. P.R. PRN 5303. (3 - 0) 3

PRN 5390 INDIVIDUAL STUDY: This is being offered to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other courses. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. PRN 5434, PRN 5314, PRN 5324. (3 - 0) 3

PRN 5400 INTRODUCTION TO GRAPHIC ARTS: Upon completion of this course the student should be able to: (1) list and describe five printing processes; (2) describe the functions of management and sales; (3) list and describe three types of layouts; (4) list and describe seven steps in the offset process; (5) describe the graphic arts industry in the local area. P.R. None. (3 - 2) 4

PRN 5401 COPY PREPARATION AND COMPOSITION: Upon completion of this course the student should be able to: (1) identify and/or describe makeup of comprehensive sketches, dummies, mechanical layouts with overlays, stats and keying of art elements to paste-ups; (2) describe the equipment and processes used in typesetting; (3) make a simple paste-up; (4) classify type; (5) use Rubylith film; (6) make a paste-up of color. P.R. None. (4 - 0) 4

PRN 5434 STRIPPING I AND PLATEMAKING: Upon completion of this course the student should be able to: (1) describe the various methods of image assembly of film negatives or positives into stripping flats; (2) prepare a basic unlined goldenrod flat; (3) opaque silhouetting halftones; (4) prepare spreads and chokes; (5) strip line and halftone negatives; (6) add register masks, rules, borders and screen tints to a flat and/or negative; (7) describe procedures for processing wipe-on, deep etch, bi and tri-metal and camera plates; (8) expose and process various types of additive and subtractive plates. P.R. None. (2 - 4) 4

PSC 3500 INTRODUCTION TO CRIMINOLOGY: Upon completion of this course the student should be able to: (1) identify and describe the major theories of crime causation; (2) identify and describe the major crime prevention programs; (3) identify and describe the major treatment programs; and (4) identify the major researchers in the field of criminology. P.R. None. (5 - 0) 5

PSC 3501 INTRODUCTION TO LAW ENFORCEMENT: Upon completion of this course the student should be able to: (1) identify at least 80 major concepts related to the history of law enforcement; (2) identify the purpose of at least 25 law enforcement agencies operating in North Carolina; (3) from a list of at least 18 specific crimes, identify the law enforcement agency with jurisdiction; (4) recognize at least 34 current practices of law enforcement agencies and/or personnel; and (6) identify the purpose of at least 10 federal law enforcement agencies. P.R. None. (5 - 0) 5

PSC 3504 CRIME SCENE TECHNOLOGY: Upon completion of this course the student should be able to: (1) protect life and property at a crime scene; (2) protect, preserve and photograph a crime scene; (3) search the crime scene for evidence; (4) locate, collect, and identify physical evidence; (5) maintain chain of custody in handling of physical evidence; (6) demonstrate proficiency in the use of specialized equipment in collecting, identifying and processing physical evidence. P.R. None. (5 - 0) 5

PSC 3510 CRIMINAL LAW: Upon completion of this course the student will have had a practical approach to the substantive law and should: have a sound introduction to legal theory; have a basic knowledge of the Common Law, identify and define elements of crimes; understand how basic concepts function to determine the law; and be able to identify and define legally recognized defenses. P.R. None. (5 - 0) 5

PSC 3514 POLICE ORGANIZATION AND ADMINISTRATION: Upon completion of this course the student should be able to: (1) depict the organization of a police agency within the guidelines of sound organizational principles; (2) recognize effective administrative functions; (3) formulate a budget; and (4) write a staff study, emergency plan, standard operating procedure and a general order. P.R. None. (5 - 0) 5

PSC 4390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3 - 0) 3

PSC 4501 CONSTITUTIONAL LAW: Upon completion of this course the student should be able to: Identify, define and apply statutory rules and standards in the area of arrest, search and seizure; and possess an understanding of the landmark cases under the State and Federal constitutions, particularly under the Bill of Rights and the Fourteenth Amendment. P.R. None. (5 - 0) 5

PSC 4503 LAW ENFORCEMENT PSYCHOLOGY: Upon completion of this course the student should be able to: (1) identify the most common psychological demands, affects and effects of the law enforcement function on the officers and their families; (2) identify the most common procedures of selection, retention and promotion of police officers; (3) identify major methods of obtaining information; (4) identify the major methods employed in deception; (5) identify common principles of dealing with and controlling people; (6) identify the behavioral characteristics of abnormal people commonly encountered by police officers; and (7) know the remedial services that are available. P.R. None. (5 - 0) 5

LAW ENFORCEMENT

PSC 4504 CRIMINAL PROCEDURE AND RULES OF EVIDENCE: Upon completion of this course the student should be able to: display and demonstrate a workable knowledge by having during the quarter participated in mock criminal proceedings specifically designed to test knowledge and skill in criminal procedure and rules of evidence, and demonstrate a generally desired and accepted practice of courtroom decorum. Such would include: North Carolina Code of Pretrial Criminal Procedure Appellate Review, the role of the presiding judge, judicial notice, impeachment and corroboration, examination, competency and privilege in general, transactions with persons since deceased or insane, circumstantial evidence, character, real evidence, evidence illegally obtained, opinion, expert testimony, hearsay, admissions, confessions burden of proof and presumptions. P.R. PSC 3510 and PSC 4501 or consent. (5 - 0) 5

PSC 4505 CRIMINAL INVESTIGATION: Upon completion of this course the student should be able to: (1) maintain an accurate notebook; (2) define the accepted procedures for interviews, interrogations, admissions, confessions and written statements; (3) define the accepted procedures for developing and maintaining informants; (4) identify sources of information; (5) define accepted procedures for undercover operations and surveillance; (6) define accepted procedures for the investigation of specific offenses; (7) define specific forensic procedures and applications; and (8) identify laws and case laws applicable to criminal investigation. P.R. PSC 3504 or consent. (5 - 0) 5

PSC 4510 POLICE OPERATIONS: Upon completion of this course the student should be able to: (1) define the purpose of police control; (2) define the types of patrol; (3) define the types of communications; (4) define the accepted procedures for: observation, perception, notetaking, report-writing, identification and description of persons and property, field interrogation, stopping of vehicles and control of occupants, use of personal protective weapons, techniques and tactics by type of call; (5) perform a stop and frisk; and (6) complete an affidavit and search warrant. P.R. None. (5 - 0) 5

PSC 4511 ADMINISTRATION OF JUSTICE: Upon completion of this course the student should be able to: (1) construct a flow chart demonstrating the difference between the Federal, State, and local systems of Criminal Justice; (2) be able to identify and differentiate between the functions and responsibilities of Law Enforcement, Courts and Corrections; (3) identify and define the philosophical basis for the existence of the various components of the Criminal Justice System; (4) construct and demonstrate the feasibility of felony alert and disaster plans coordinating the units of the system. P.R. None. (5 - 0) 5

PSC 4515 POLICE MANAGEMENT: Upon completion of this course the student should be able to: (1) define at least 35 current functions of management; (2) identify at least 14 factors related to change within a police agency; (3) conduct a news conference, a meeting and a brainstorming session; and (4) write a job description. P.R. PSC 3514 or consent. P.R. None. (5 - 0) 5

PSC 4520 PUBLIC RELATIONS: Upon completion of this course the student should be able to: (1) Define the focus and overall purpose of public relations; (2) List 25 positive benefits of effective public relations for public safety agencies; (3) List 25 negative aspects of faulty public relations for public safety agencies; (4) Define the power and influence of public opinion; (5) Identify major problems in public relations as related to the public safety mission; (6) Identify factors which foster effective and affective public relations; (7) Identify examples of conserving favorable public opinion; and (8) Identify common ways of sampling public opinion. P.R. None (5 - 0) 5

PSC SPECIALIZED TRAINING ELECTIVE: This offering is designed to teach a skill and/or knowledge critical to the public safety mission. A number of electives will be offered each year. The student can select the course best suited to his/her needs, background, experience, future or current employment. Approval of the program director and department chairman is required in some courses. P.R. None. (3 - 0) 3

POSTAL SERVICE MANAGEMENT PSM 3300 POSTAL SERVICE HISTORY AND ORGANIZATION: The student will analyze the modes of delivery of written communications and merchandise from earlier eras to the present. The U.S. Postal Service organization will be studied in relationship to its own structure, functions, policies, procedures and relationship to other governmental agencies. (3 - 0) 3

PSM 3401 POSTAL SERVICE LABOR MANAGEMENT: The student will obtain an overview of labor-management relationships in the U.S. Postal Service. The study includes an analysis of laws and regulations pertaining to labor-management relationships, current industrial relations issues, description of the national and local labor agreements, grievance and disciplinary policy and the function of the National Labor Relations Board. P.R. ECO 3302. (3 - 2) 4

PSM 3404 MAIL PROCESSING I: This course is designed to provide the student with a knowledge of the interrelated factors involved in the collection of mail and its separation into categories. Scheduling and staffing techniques as well as the systems employed in destination separation and the control of quality of mail flow will be studied. (2 - 4) 4

PSM 3405 MAIL PROCESSING II: This course is a continuation of mail processing techniques devoted to the receipt processing and dispatch of second, third and fourth class mail. The student will become familiar with the definition of mail classification and rate determination; regulations regarding packaging size, shape and sealing techniques; and an analysis of the organization, functions and layout of the bulk mailing system and a bulk mailing center. (2 - 4) 4

PSM 4401 POSTAL SERVICE SUPPORT: The student will be exposed to the ancillary functions such as office, accounting, administrative, warehousing and distribution services that support the principal functions of the Postal Service. The planning of revenues, facilities and the control of operations is emphasized. (2 - 4) 4

PSM 4421 POSTAL CUSTOMER SERVICES: The student will be introduced to all services provided to postal customers, including all mailing services and non-postal services such as Passport Applications. This course also provides training in customer relations and retail marketing techniques. (2 - 4) 4

PSM 4420 POSTAL EMPLOYEE SERVICES: The student will analyze in detail the operation and functions of the Postal Service Personnel Office. A review of policies relative to selection, placement, training, and promotion of employees is made. Salary and wage schedules, insurance and retirement benefits, awards program, and safety and health policies and procedures are also studied.

(3 - 2) 4

PSM 4430 POSTAL DELIVERY AND COLLECTION: The student will study the problems in collecting mail from diverse points and delivering it to collection centers for processing and further delivery to multiple, diverse recipients; the organizational structure and the physical facility of a metropolitan postal system; and policies regarding all aspects of collection and distribution.

(2 - 4) 4

PSM 4431 POSTAL PROBLEMS ANALYSIS: The successful student will learn how situation analysis, problem analysis, decision analysis, consequence analysis, and solution analysis are applied to Postal Service management. Problems related to personnel selection and evaluation, job classifications, communication, automation and costs will also be explored.

(2 - 4) 4

PSY 2500 EDUCATIONAL PSYCHOLOGY: A study of the nature of the learning process with attention to inherited tendencies, habit and attitude formation, acquisition of skills, sense perception and retention. It includes a consideration of the elements of learning theory such as conditioning, association and insight.

(5 - 0) 5

PSY 2504 GENERAL PSYCHOLOGY: A survey of psychology, including organic structure, perception, motivation, learning, principles of behavior, measurements and theories of psychology.

(5 - 0) 5

PSY 2505 HUMAN DEVELOPMENT: Development of the normal child and adolescent, with consideration of the social, biological and cultural influences upon growth. Satisfactory completion of PSY 2504.

(5 - 0) 5

PSY 2514 ABNORMAL PSYCHOLOGY: The biological, intellectual, cultural, and physiological dynamics of human behavior are examined with emphasis on deviant developmental patterns. Satisfactory completion of PSY 2504.

(5 - 0) 5

PSY 2524 MENTAL RETARDATION: A study of the psychological aspects of mental retardation; methods of diagnosis, treatment, and education. Satisfactory completion of PSY 2504.

(5 - 0) 5

PSY 2536 SPECIAL PROBLEMS IN PSYCHOLOGY: A number of selected topics will be presented to the class for examination and evaluation. Each student will complete a research project in an area of special interest, upon approval by, and under the direction of, the instructor. P.R. successful completion of PSY 2504 and permission of department head.

(5 - 0) 5

PSY 3314 PRINCIPLES OF HUMANISTIC PSYCHOLOGY: Examining and evaluating Maslow's Hierarchy of Needs, the student should acquire understanding of what constitutes healthy personality from the humanistic point of view.

(3 - 0) 3

PTH 3404 INTRODUCTION TO PHYSICAL THERAPY: At the completion of this course the student should be able to: (1) describe the developments and role of the personnel in physical therapy and its relationship to patient care; (2) develop an awareness of physical therapy services in various clinical settings; (3) demonstrate a knowledge of major diseases as commonly treated by physical therapy services; (4) identify the various medical and paramedical services and their interrelationship in total patient care; (5) demonstrate: (a) basic aseptic techniques; (b) safe body mechanics; (c) specified transfer techniques; and (d) ability to obtain vital signs of temperature, pulse, respiration and blood pressure. P.R. Acceptance into the program.

(3-0-3) 4

PTH 3515 APPLIED ANATOMY: Upon completion of this course the student should be able to: (1) describe and demonstrate major joint actions; (2) identify the major muscles of these actions, their nerves and bony attachments; (3) offer comparisons of expected extremity strengths. (4) identify components of central & peripheral nervous systems, and; (5) describe the major nerves plexuses by origins and muscle distributions. P.R. BIO 1504, PTH 3404.

(3-4-0) 5

PTH 3524 PHYSICAL THERAPY PROCEDURES I: At the completion of this course the student will: (1) demonstrate the ability to (a) apply hot packs for specified patient treatment care; (b) apply hot packs and electrical stimulation as combined treatment for patient care; (c) demonstrate four basic massage techniques relating the rationale to patient care; (2) demonstrate: (a) a knowledge of physical and physiological effects of heat; (b) four methods of heat transmission; (c) knowledge of the rationale of heat application for expected effects, indications-contraindications, in patient care; (d) good body mechanics in safe patient transfer; (3) demonstrate an understanding of departmental procedures, and; (4) demonstrate a basic knowledge of specific diagnoses as relative to patient care and needs. P.R. PTH 3404, BIO 1504.

(3-0-6) 5

PTH 3525 PHYSICAL THERAPY PROCEDURES II: With emphasis upon low and high frequency current as used therapeutically and lower extremity massage, information of prerequisites is broadened and more depth of usage expected. At the completion of this course the student will be able to: (1) identify the basic physics of therapeutic currents (low and high frequency) and how they apply to patient care; (2) relate the: (a) physical and physiological effects; (b) indications and contraindications; (c) and various currents as applied to human tissue; (3) demonstrate skill in all learned procedures in actual patient care. P.R. PTH 3524, PTH 3515.

(3-0-6) 5

PSYCHOLOGY

PHYSICAL THERAPY

PTH 3614 THERAPEUTIC EXERCISE: Upon completion of this course the student should be able to: (1) identify the structural unit and physiological activities of muscle tissue; (2) relate neuromuscular function or dysfunction to a number of clinical conditions; (3) apply and explain the use of exercise and ambulation appliances; (4) utilize patient safety measures and good personal body mechanics; (5) instruct another in performance of various exercise and ambulation activities. P.R. PTH 3515, PTH 3524. (3-6-0) 6

PTH 4324 PSYCHOLOGY OF ADJUSTMENT: Upon completion of this course the student should be able to: (1) describe a variety of personality traits; (2) recognize the value and utilization of coping mechanisms; (3) participate effectively in interpersonal relations as related to simulated stress situations; and (4) demonstrate a recognition of the need for behavioral adjustments by both health worker and the patient. P.R. PTH 3525. (3-0-0) 3

PTH 4334 COMMUNITY HEALTH & WELFARE: Upon completion of this course the student should be able to: (1) describe a community of interest for problem solving; (2) define and offer appropriate examples of three categories of service agencies; (3) list and explain four phases of health care; (4) offer valid examples of governmental influences on the health and welfare system; (5) identify at least five referral resources usually available to meet patient needs; and (6) describe in detail the organization of and services provided by one community agency. P.R. PTH 4627. (3-0-0) 3

PTH 4344 SEMINAR IN PHYSICAL THERAPY PROCEDURES: Upon completion of this course the student should be able to: (1) organize pertinent information in a logical, sequential manner for presentation; (2) present case studies, indicating the role of physical therapy; (3) prepare and present progress notes in a prescribed form; (4) identify both positive and negative learning experiences encountered in clinical practice. C.R. PTH 4704, PTH 4705. P.R. PTH 4728. (3-0-0) 3

PTH 4390 INDIVIDUAL STUDY: Upon completion of this course the student should be able to: meet the objectives outlined by the student and instructor to meet particular student needs not provided in other courses of study. P.R. Consent. (3-0-0) 3

PTH 4627 PHYSICAL THERAPY PROCEDURES III: Upon completion of this course the student should be able to: (1) identify and explain the physiological effects, indications and contraindications of the use of cold, paraffin and hydrotherapy procedures; (2) demonstrate acceptable application of these same treatment procedures; (3) perform direct patient care utilizing cold, paraffin and hydrotherapy pressures; (4) demonstrate ethical relationships in the patient care setting. P.R. PTH 3525, PTH 3614. (3-0-9) 6

PTH 4704 CLINICAL EDUCATION I: Upon completion of this course the student should be able to: (1) demonstrate in the clinical setting the personal responsibility of promptness, neatness and familiarization with departmental procedures; (2) develop and maintain positive rapport with patients and staff; (3) provide patient care in an ethical and efficient manner; (4) communicate with others effectively; (5) offer delegated patient care in an acceptable manner; (6) relate theory and principles to practice; (7) utilize time for learning and self improvement. C.R. PTH 4705, PTH 4344. P.R. PTH 4728. (2-0-15) 7

PTH 4705 CLINICAL EDUCATION II: A continuation of Clinical Education I with identical expectations. C.R. PTH 4704, PTH 4344. P.R. PTH 4728. (2-0-15) 7

PTH 4728 PHYSICAL THERAPY PROCEDURES IV: At the completion of this course the student will be able to: (1) demonstrate a knowledge of radiant heat, its physical and physiological effect, indications/contraindications; (2) demonstrate knowledge of all modalities learned and interrelationship with specific diagnosis entities; (3) identify all muscle structure and function; (4) demonstrate ability for interpersonal relationship and rapport with patients, and all personnel; (5) with given assignment, coordinate all learning experiences to safe and appropriate patient care. P.R. PTH 4627. (3-0-12) 7

READING
RDN 9312 SPEED READING: An individualized, self-paced course designed to meet the needs of any student, businessman, or member of the community who does not have the reading speed necessary to manage his daily reading load. Upon successful completion of RDN 9312, the student should be able to demonstrate that he has doubled his beginning reading rate while maintaining 80 per cent comprehension on the basis of a standardized reading test. (3 - 0) 3

RDN 9510 READING IMPROVEMENT: An individualized, self-paced course designed to meet the needs of any student who does not have the reading skills necessary to perform well in his/her chosen occupation. Upon successful completion of RDN 9510, the student should be able to demonstrate his understanding of a passage by answering multiple choice questions on the passage and/or summarizing the passage in his own words. The student will also demonstrate his understanding of vocabulary by defining words from a reading list. (5 - 0) 5

RESPIRATORY THERAPY
RTH 3205 RESPIRATORY PHARMACOLOGY: Upon completion of this course the student should be able to: (1) use current reference standards; (2) read and interpret a prescription; (3) compute dosages, determine ratios and percents, and prepare solutions for aerosol administration; (4) describe the mechanism of action of airway dilators; (5) describe the mechanism of action of drugs used in the mobilization of bronchial secretions; (6) describe and prepare antibiotics used in the treatment of pulmonary infections; (7) explain the pharmacologic effects of drugs commonly seen in overdose situations. P.R. None. (2-0-0) 2

RTH 3304 PATHOLOGY AND PHYSICAL DIAGNOSIS: Upon completion of this course the student should be able to: (1) recognize abnormalities of the head, neck and thorax gathered from inspection; (2) use a stethoscope; (3) distinguish and identify normal breath sounds using a stethoscope, and explain and differentiate various pulmonary diseases caused by bacterial and fungal infection; (5) explain the pathology of chronic obstructive pulmonary diseases; (6) list the various types of pulmonary carcinomas; (7) discuss the physiologic alterations of the lung caused by extra-pulmonary sources; (8) explain and list conditions of the nervous system which could lead to respiratory failure. P.R. None. (2-2-0) 3

RTH 3807 INTRODUCTION TO RESPIRATORY THERAPY: Upon completion of this course the student should be able to (1) recognize the major developments in Medicine & Science as they relate to the historical aspects of Respiratory Therapy; (2) list and describe the professional and accrediting organizations; (3) explain the roles and responsibilities of the different levels of individuals employed in Respiratory Therapy; (4) use the English and Metric systems of measurement interchangeably; (5) define and use medical terms; (6) read a patient chart; (7) correct gases for changes in volume, pressure and temperature; (8) assemble, operate and apply equipment used to administer medical gas therapy. P.R. Admission to Respiratory Therapy Program. (4-4-6) 8

RTH 3814 RESPIRATORY THERAPY PROCEDURES I: Upon completion of this course the student should be able to: (1) assemble, operate and apply equipment used to administer aerosol therapy; (2) compute, deliver and analyze the fractional concentration of oxygen in any air-oxygen mixture; (3) explain the principles of operation and use equipment used to administer intermittent positive pressure breathing; (4) position patients and perform basic techniques of pulmonary drainage; (5) use tools and testing equipment required in routine maintenance of Respiratory Therapy equipment; (6) disassemble and correctly reassemble equipment used in the administration of intermittent positive pressure breathing. P.R. RTH 3807. (3-2-12) 8

RTH 3905 RESPIRATORY THERAPY PROCEDURES II: Upon completion of this course the student should be able to: (1) read and interpret results from arterial blood gas analysis; (2) monitor correctly all parameters of continuous ventilation; (3) recognize and use artificial airways; (4) manage the airways of patients requiring artificial airways; (5) correctly perform the ABC's of cardiopulmonary resuscitation; (6) obtain and interpret a basic expirogram. P.R. RTH 3814. (3-4-12) 9

RTH 4515 EQUIPMENT FOR CONTINUOUS VENTILATION: Upon completion of this course the student should be able to: (1) classify selected ventilators; (2) discuss compliance and how it relates to ventilator performance; (3) list and describe the cycling mechanism and mode of operation of selected ventilators; (5) trace gas flows from power source to patient in selected ventilators; (6) identify common malfunctions and proper corrective measures in selected ventilators; (7) identify parts of selected ventilators which can be sterilized and list the best method of sterilization for that particular part; (8) list testing procedure for selected ventilators prior to patient use. P.R. RTH 4714 and PHY 3414. C.R. RTH 4724. (1-4-6) 5

RTH 4604 PULMONARY FUNCTION I: Upon completion of this course the student should be able to: (1) draw and label a normal spirogram; (2) use water and electric spirometers to obtain spiograms; (3) determine functional residual capacity measurements; (4) measure oxygen uptake; (5) measure the volume of dead space and tidal volume, establish a ratio, and state significance of same; (6) obtain arterial blood from indwelling arterial lines; (7) calibrate, analyze and change the membranes on selected blood gas analyzers; (8) use a co-oximeter; (9) perform a P50 determination. P.R. RTH 4724, C.R. RTH 4605. (2-2-9) 6

RTH 4605 PULMONARY FUNCTION II: Upon completion of this course the student should be able to: (1) draw and label a normal spirogram; (2) use water and electric spirometers to obtain spiograms; (3) determine functional residual capacity measurements; (4) measure oxygen uptake; (5) measure the volume of dead space and tidal volume, establish a ratio, and state significance of same; (6) obtain arterial blood from indwelling arterial lines; (7) calibrate, analyze and change the membranes on selected blood gas analyzers; (8) use a co-oximeter; (9) perform a P50 determination. P.R. RTH 4724. C.R. RTH 4604. (2-2-9) 6

RTH 4606 CLINICAL APPLICATION I: Upon completion of this course the student should be able to: (1) provide respiratory care to patients in an intensive critical care unit; (2) participate in emergency situations while maintaining an airway and breathing for the patient; (3) provide intensive respiratory care to the infant and pediatric patient; (4) discuss the role of supervisory personnel; (5) write procedures for the various applications of respiratory care; (6) organize and provide instruction to medical personnel on specific topics in respiratory care; (7) participate in a program of cardiorespiratory rehabilitation. P.R. RTH 4605. C.R. RTH 4607. (2-0-12) 6

RTH 4607 CLINICAL APPLICATION II: Upon completion of this course the student should be able to: (1) provide respiratory care to patients in an intensive critical care unit; (2) participate in emergency situations while maintaining an airway and breathing for the patient; (3) provide intensive respiratory care to the infant and pediatric patient; (4) discuss the role of the supervisory personnel; (5) write procedures for the various applications of respiratory care; (6) organize and provide instruction to medical personnel on specific topics in respiratory care; (7) participate in a program of cardiorespiratory rehabilitation. P.R. RTH 4605. C.R. RTH 4606. (2-0-12) 6

RTH 4714 INTRODUCTION TO EMERGENCY AND INTENSIVE RESPIRATORY CARE: Upon completion of this course the student should be able to: (1) modify and use oxygen and aerosol administration devices to deal with specific adverse situations; (2) modify and use selected IPPB devices to deal with specific adverse situations; (3) modify patient positions for bronchopulmonary drainage to accommodate specific patient conditions; (4) perform endotracheal intubation on an adult and infant model; (5) administer oxygen and aerosol therapy to infants; (6) obtain an arterial blood sample for analysis; (7) complete a comparative assessment of manual resuscitators. P.R. RTH 3905. (1-4-12) 7

RTH 4724 CONTINUOUS VENTILATION: Upon completion of this course the student should be able to: (1) list indications for using mechanical ventilation; (2) given flow and pressure patterns, identify the type ventilator exemplified; (3) list clinical situations requiring the use of volume controlled ventilators; (4) explain the indication and procedure for weaning patients from ventilators; (5) explain the indications and procedures for establishing intermittent mandatory ventilation, positive end expiratory pressure, expiratory resistance and inspiratory plateau; (6) interpret arterial blood gas analysis and make appropriate ventilator changes to correct adverse results. P.R. RTH 4714, C.R. RTH 4515. (3-0-12) 7

SECURITY SCU 3300 PRINCIPLES OF INTERVIEWING: Upon completion of this course, the student should be able to: (1) interview victims, witnesses, informants and complainants as a communicative relationship; (2) using professionally acceptable techniques, question suspects and person in custody; (3) apply information obtained through the interview process for court testimony when required. P.R. None. (3 - 0) 3

SCU 3304 ACCESS CONTROLS AND LOSS PREVENTION: Upon completion of this course the student should be able to: (1) determine strengths and limitations of security alarm systems; (2) understand the functional operations of common access control systems; (3) understand the fundamental operations of theft and risk control; (4) translate principles of loss prevention management into workable security procedures. P.R. SCU 3500. (3 - 0) 3

SCU 3500 INTRODUCTION TO SECURITY: Upon completion of this course, the student should be able to: (1) understand the historical, philosophical and legal basis of security; (2) know the role of security and the security individual in modern society; (3) understand the correlation between governmental and proprietary security; (4) conduct a security survey of a facility incorporating personnel, information and physical security criteria. P.R. None. (5 - 0) 5

SCU 3501 INTRODUCTION TO PRINCIPLES OF SAFETY: Upon completion of this course the student should be able to: (1) know at least 15 principles of safety and 20 current practices associated with safety management; (2) know the current legal liabilities involved with safety and negligence; (3) be able to complete the OSHA checklist with 90% accuracy; (4) formulate a safety checklist for a particular facility and conduct a safety survey. P.R. None. (5 - 0) 5

SCU 3502 PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA): Upon completion of this course, the student should be able to: (1) understand the basic requirements and current legislation of the Occupational Safety and Health Act (OSHA); (2) understand electrical, fire, industrial hygiene and toxicology codes relating to OSHA; (3) understand State safety and construction safety codes and the Southern Building Code, as they relate to State and Federal OSHA. P.R. None. (5 - 0) 5

SCU 3503 RETAIL SECURITY: Upon completion of this course the student should be able to: (1) recognize problems and practices associated with retail security; (2) prepare security proposals for a retail facility to include employee screening procedures, combating employee theft and shoplifting; (3) recognize acceptable practices and procedures necessary for general control of a retail facility with regard to security measures; (4) understand the proper utilization of honesty shoppers, undercover detectives, and employee morale building programs. P.R. SCU 3500. (5 - 0) 5

SCU 4300 SELF-DEFENSE AND WEAPONRY: Upon completion of this course the student should be able to: (1) demonstrate firing proficiency with the .38 caliber service revolver, including prescribed safety procedures; (2) demonstrate self-defense procedures utilizing police methods; (3) demonstrate proficiency in the use of the baton and proper utilization of handcuffs. P.R. None. (1 - 4) 3

SCU 4390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. P.R. None. (3 - 0) 3

SCU 4504 SECURITY PROBLEMS AND PRACTICES I: Upon completion of this course the student should be able to: (1) analyze and understand special problems and practices of the security profession; (2) prepare a security survey of an open office, office building, school campus and airport; (3) identify problem areas and recommend procedures for safeguarding computer facilities; (4) prepare and implement procedures for security of transportation and cargo facilities. P.R. SCU 3500. (5 - 0) 5

SCU 4505 SECURITY PROBLEMS AND PRACTICES II: Upon completion of this course the student should be able to: (1) understand special problems and practices of security profession including private security companies, retail security, civil disturbances and terrorist activities; (2) recognize problem areas in a retail establishment and implement methods to successfully combat shoplifting and internal theft; (3) prepare and implement a contingency plan for emergencies or disasters, either natural or man-made; (4) prepare and implement a contingency plan in the event of terrorist attack or bomb threat. P.R. SCU 3500. (5 - 0) 5

- SEC 3301 LEGAL TERMINOLOGY AND VOCABULARY: The student will receive an intensive course of study in legal terminology and vocabulary including definitions, usage, derivations and spelling. (3 - 0) 3
- SEC 3310 CLERICAL PROCEDURES: The student will prepare to apply for a general office position. He/she will perform duties such as: typing, filing, using the telephone, handling mail, serving as receptionist, etc. P.R. SEC 3406. (3 - 0) 3
- SEC 3320 PERSONALITY DEVELOPMENT: The student will learn to recognize the importance of the physical, intellectual, social and emotional dimensions of personality. Emphasis will be placed on grooming and methods of personality improvements. (3 - 0) 3
- SEC 3404 ELEMENTARY TYPEWRITING I: The student will be introduced to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, and tabulation. Speed requirement: 30 words per minute for 3 minutes. Proficiency test may be taken for this course. (3 - 2) 4
- SEC 3405 ELEMENTARY TYPEWRITING II: The student will develop further mastery of correct typewriting techniques to be applied in tabulations, word division problems, manuscripts and business letters. The course is individualized and employs self-pacing methods. Speed requirement: 40 words per minute for 5 minutes. P.R. SEC 3404 or equivalent. Placement in this course by examination is available. (3 - 2) 4
- SEC 3406 INTERMEDIATE TYPEWRITING I: The student will begin to function as an expert typist producing mailable copies. The production units will involve tabulations, manuscripts, correspondence and business forms. Individualized and self-instructional methods are employed. Speed Requirement: 50 words per minute for 5 minutes. P.R. SEC 3405 or equivalent. (3 - 2) 4
- SEC 3414 SHORTHAND I: The student will learn Gregg shorthand theory and will practice reading and writing shorthand. The emphasis will be on phonetics, penmanship, word families, brief forms and phrases. Proficiency test may be taken for this course. (3 - 2) 4
- SEC 3415 SHORTHAND II: The student will continue to study Gregg shorthand theory with greater emphasis on dictation and elementary transcription. P.R. SEC 3414 or the equivalent. Proficiency test may be taken for this course. (3 - 2) 4
- SEC 3416 SHORTHAND III: The student will continue to review Gregg shorthand theory and to build speed. Emphasis will be on development of speed in dictation and accuracy in transcription. Upon successful completion of this course, the student will be able to take a minimum dictation rate on new material of 80 words per minute for 3 minutes. P.R. SEC 3415 or equivalent. Proficiency test may be taken for this course. (3 - 2) 4
- SEC 3424 MEDICAL TRANSCRIPTION I: The student will complete production units on the typewriter from dictation-transcription machines of medical correspondence and documents such as case histories, articles, and hospital reports. P.R. SEC 3406. (2 - 4) 4
- SEC 3425 MEDICAL TRANSCRIPTION II: A continuation of SEC 3424. Emphasis will be placed on the development of individual production rates. The student will learn the techniques needed in planning and typing projects that relate closely to hospital reports and case histories. P.R. SEC 3424. (1 - 6 - 0) 4
- SEC 4100 SECRETARIAL SEMINAR: The student will receive an over-view of job opportunities in the local professional and industrial area to assist students in their selection of a specific field and secretarial course development. The course may be taken after the first two quarters of the secretarial program. (0 - 2) 1
- SEC 4300 OFFICE MACHINES: The student will receive training in techniques, processes, operation and application of ten keyboard printing and electronic calculators, full keyboard adding machine and rotary calculator. P.R. FIN 3314 or equivalent. (2 - 2) 3
- SEC 4301 SECRETARIAL PROCEDURES: The student will learn to handle responsibilities encountered by a secretary in a simulated work situation. These responsibilities include the following: receptionist duties, telephone technique, handling mail, making travel arrangements, keeping insurance and tax records, preparing payroll data, and organization of supplies. P.R. SEC 4407. (3 - 0) 3
- SEC 4304 MACHINE TRANSCRIPTION AND DUPLICATION: The student will learn to operate duplication equipment and dictation and transcription machines. P.R. SEC 3406. (2 - 2) 3
- SEC 4305 BUSINESS COMMUNICATIONS: Student will review grammar and punctuation skills and develop effective techniques for handling the special requirements of business letters and other forms of business communications. P.R. COM 1314 and SEC 3404. (3 - 0) 3
- SEC 4310 VOCABULARY BUILDING: The student will develop proficiency in spelling, word usage, business terminology, and intelligent use of the dictionary. (3 - 0) 3

SEC 4370 RECORDS MANAGEMENT: The student will learn the fundamentals of indexing and filing. Theory and practice will be combined by the use of miniature letters, filing boxes and guides. Topics studied will include alphabetic name, geographic, subject and numerical filing.

(3 - 0) 3

SEC 4406 MEDICAL SHORTHAND: The student will learn to construct medical shorthand outlines, take dictation using medical terminology and will develop the ability to transcribe such dictation. P.R. SEC 3416.

(3 - 2) 4

SEC 4407 INTERMEDIATE TYPEWRITING II: The student will continue to increase her/his speed and accuracy on straight copy and production typing. The emphasis of this course will be to review the fundamental principles of typewriting as they apply to production work. P.R. SEC 3406.

(3 - 2) 4

SEC 4417 DICTATION AND TRANSCRIPTION I: The student will develop the skills of taking dictation and transcribing material appropriate to a business office. Topics will include a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Upon successful completion of the course the student will be able to take dictation at 90 words a minute for 3 minutes on new material. P.R. SEC 3416 or equivalent.

(3 - 2) 4

SEC 4418 DICTATION AND TRANSCRIPTION II: The student will develop the accuracy, speed and vocabulary which will enable her to meet the stenographic requirements of business offices. Upon successful completion of the course the student will be able to take dictation on new material at 100 words per minute for 3 minutes. P.R. SEC 4417.

(3 - 2) 4

SEC 4419 DICTATION AND TRANSCRIPTION III: The student will continue to build speed using material appropriate to a business office. Upon successful completion of the course the student will be able to take a minimum dictation rate on new material of 110 words a minute for 3 minutes. P.R. SEC 4418.

(3 - 2) 4

SEC 4424 ADVANCED EXECUTIVE TYPEWRITING: The student will learn the techniques needed in planning and in typing projects that closely approximate the work of the executive secretary. These projects will include letters, statistical tabulations, and the typing of reports, manuscripts and other business forms. Speed Requirement: 60 words a minute for 5 minutes. P.R. SEC 4407.

(3 - 2) 4

SEC 4448 LEGAL DICTATION AND TRANSCRIPTION I: The student will develop the ability to take and transcribe legal documents, instruments, and letters rapidly and accurately. Shorthand shortcuts for legal vocabulary and law office procedures will be emphasized. The student will develop a minimum dictation rate on new legal material of 100 words per minute for 3 minutes. P.R. SEC 4417.

(3 - 2) 4

SEC 4449 LEGAL DICTATION AND TRANSCRIPTION II: The student will continue to build speed and accuracy in taking and transcribing legal materials. Additional shorthand shortcuts and law office procedures will be covered. Upon successful completion of the course the students will develop a minimum dictation rate on new legal material of 110 words per minute for 3 minutes. P.R. SEC 4448.

(3 - 2) 4

SEC 4454 ADVANCED MEDICAL TYPEWRITING: The student will develop individual production rates and will learn the techniques needed in planning and typing projects that closely approximate the work in the medical area. The projects will include hospital reports and case histories. P.R. SEC 4407.

(3 - 2) 4

SEC 4614 LEGAL TYPEWRITING AND OFFICE PROCEDURES: The student will receive intensive instruction and practice in the preparation of legal instruments, documents, and correspondence. In addition to typing various legal projects, the student will also complete practical application exercises in order to integrate all legal secretarial skills. Emphasis will be placed on an understanding of the flow of work in the legal office. Speed Requirement: 60 words per minute for 5 minutes. P.R. SEC 4407.

(5 - 2) 6

SEC 4704 OFFICE PRODUCTION: The student will secure a general office position and will be evaluated on his/her performance on the job. P.R. SEC 3310 and SEC 4424 or consent.

(0 - 21) 7

SOCIOLOGY SEC 1301 GROUP INTERACTION: An introductory course in group process. The effect of roles, different leadership styles, techniques and decision-making processes will be stressed.

(3 - 0) 3

SEC 1500 SOCIOLOGY OF THE FAMILY: A course designed to help the student develop an understanding of contemporary American family patterns when examined from a cross-cultural perspective. Upon completion the student will demonstrate a knowledge of the family as a social institution and the social forces which have influenced its development.

(5 - 0) 5

SOC 2501 PEOPLE AND THEIR ENVIRONMENTS: ENERGETICS: An interdisciplinary course designed to promote an understanding of the basic principles governing ecological systems, and the interaction of historical, social, economic, biological, and physical forces which sustain the totality of life. Emphasis will be placed on developing an awareness of the place of people within these systems. Examination of environmental concerns, both local and worldwide, will promote an understanding of the environmental impact of individual and group socio-cultural activities and will develop skills in making rational decisions concerning the environment.

(3 - 4) 5

SOC 2502 WOMEN IN SOCIETY: An interdisciplinary course designed to develop an awareness and understanding of the roles of women in American society. Upon completion the student will demonstrate a knowledge of the process of sex role socialization, the position of women in each of the major social institutions, the roles of women in other cultures and subcultures, and the impact of changing roles for her/his own life. (5 - 0) 5

SOC 2514 INTRODUCTION TO SOCIOLOGY: An introductory course which may be taken in either a self-pace or traditional manner. Upon completion the student will demonstrate a knowledge of the basic concepts of sociology, their application to contemporary group life, and the skills essential for objective analysis of one's social and cultural heritage. (5 - 0) 5

SOC 2515 SOCIAL PROBLEMS: A course which may be taken in either a self-pace or traditional manner. Upon completion the student will demonstrate an understanding of some of the major social problems confronting contemporary American society, as well as the theories which account for the underlying conditions and human behaviors which result in these conditions. Proposals for reform will be examined. P.R. SOC 2514 or consent of department head. (5 - 0) 5

SOC 2524 SPECIAL PROBLEMS OF SOCIOLOGY: A course for advanced students who have been approved by the department head. The student will consult with a departmental instructor and select a sociological topic of study. The study may involve library research as well as actual observation and the collection of data. Where several students have selected the same or similar topic concerned with a timely or important sociological subject, a seminar or class may be arranged. P.R. consent of department head. (5 - 0) 5

SOC 4300 SOCIAL AND MINORITY ISSUES: The student will demonstrate an increased awareness and appreciation of minorities and other intergroup relations, including ethnic and sex-role differences in contemporary American society. Through classroom participation in discussions, role playing, simulation games, and testing, the student will show evidence of having developed a greater understanding of the basic sociological concepts which characterize intergroup relations, including a greater appreciation of intergroup differences. (3 - 0) 3

SPA 1300 TRAVEL SPANISH: Oral approach to comprehending and communicating in Spanish. Upon successful completion of SPA 1300, the student should be able to use basic communication in terminals, shops, restaurants, hotels, and other places. Tapes, filmstrips, movies, and extensive conversation in classroom. (Elective credit only.) (Does not satisfy humanities requirement.) (3 - 1) 3

SPA 1600 ELEMENTARY SPANISH I: Basic elements of Spanish in conversation, reading, and writing for beginning students. Tapes, filmstrips, movies, and extensive conversation in classroom. (Does not satisfy humanities requirement.) (5 - 2) 6

SPA 1601 ELEMENTARY SPANISH II. Continuation of SPA 1600 in basic elements of conversation, reading, and writing. Tapes, filmstrips, movies, and extensive conversation in classroom. P.R. SPA 1600 or consent. (Does not satisfy humanities requirement.) (5 - 2) 6

SPA 2320 SPECIAL TOPICS: An advanced course in which the students and the instructor select topics for independent study. Class meetings for oral reports and discussion. P.R. SPA 2600 or consent. (3 - 0) 3

SPA 2600 INTERMEDIATE SPANISH I: Intensive review of basic grammar. Oral work and reading of selections in Spanish. P.R. SPA 1601 or two high school units or consent. (5 - 2) 6

SPA 2601 INTERMEDIATE SPANISH II: Continuation of SPA 2600. Reading of selections from Spanish literature. P.R. SPA 2600 or consent. (SPA 2600 and 2601 combined will satisfy humanities requirement.) (5 - 2) 6

SPH 1300 ORAL COMMUNICATIONS: Upon successful completion of SPH 1300, the student will be able to use the basic communications techniques in speaking to small groups. He/She will be able to participate in group discussions both as a leader and as a follower. (3 - 0) 3

SPH 2101 PARLIAMENTARY PROCEDURE: Upon successful completion of SPH 2101, the student will be able to participate in business, professional, labor, service, and fraternal organizations that use the rules of parliamentary procedure. (1 - 0) 1

SPH 2300 VOICE AND DICTION: Upon successful completion of SPH 2300, the student will be able to approximate the sounds of standard American English, identify them in simple words and employ the sounds through individual readings. The student will be able to demonstrate breath control, phrasing, pitch inflection and vocal variation for effective speech. (3 - 0) 3

SPH 2304 PUBLIC SPEAKING: Upon successful completion of SPH 2304, the student will be able to prepare and deliver the following speeches: informative, impromptu, entertaining, and persuasive. In addition, he/she will be able to introduce a speaker and present and accept awards. P.R. SPH 1300 or consent of department head. (3 - 0) 3

TAV 3300 VISUAL AIDS DEVELOPMENT: This course is designed for students who plan occupations or avocations requiring them to develop and utilize projected visuals. Upon completion of this course, student should be able to develop useful and effective visual materials using overhead transparencies, 35mm slides and film strips and should be able to use and maintain basic projection equipment. (2 - 2) 3

TAV 4204 PROFESSIONAL PRACTICES AND PROCEDURES I: The student will examine business practices related to the production of graphic art for projected media. Discussions will be provided on the organization and operation of audio-visual companies and media departments. (1 - 2) 2

SPANISH

SPEECH

TELEVISION and VISUAL GRAPHICS
IN COMMERCIAL ART

TAV 4205 PROFESSIONAL PRACTICES AND PROCEDURES II: The student will identify and describe sources of supplies for the graphics and audio-visual industry. Discussions will be conducted on the organization of work flow, relationships with clients, and personnel relations. P.R. TAV 4204.

(1 - 2) 2

TAV 4214 VISUAL PROJECTION I: The student will use basic projection equipment including: (1) 35mm slide projector, (2) 16mm movie projector, (3) film strip projector, (4) overhead projector, and (5) opaque projector. P.R. Completion of Commercial Art foundation program or consent.

(1 - 2) 2

TAV 4215 VISUAL PROJECTION II: The student will study, examine, and use video tape recording equipment and should be able to identify, set up and operate the various components of a typical single VTR system. Discussions will be provided on the use of 16mm movie film, and the student will receive experience in splicing 16mm and super eight motion picture film. Students will compare the various projected media and analyze each media's advantages and disadvantages. P.R. TAV 4214, TAV 4314.

(1 - 2) 2

TAV 4216 VISUAL PROJECTION III: During this course, each student will assist a faculty member in the planning of an audio-visual program, meeting and communicating directly in the production of this audio-visual. The student should accompany the instructor into the classroom to observe and interpret the effectiveness of the presentation. P.R. TAV 4315, TAV 4215.

(1 - 2) 2

TAV 4224 TELEVISION AND VISUAL GRAPHICS THESIS: This course is designed to integrate the student's work in commercial art into a portfolio of a quality suitable for presentation to prospective employers. The student will also develop a resume of his background, qualification, experience, and other personal data. P.R. TAV 4214.

(1 - 2) 2

TAV 4300 PHOTOGRAPHY IV: The student will examine basic color theory as applied to the color printing process. Color printing will be discussed, and the student will prepare a portfolio of color photographs which he/she has taken and printed, using the subtractive color printing process. P.R. VCO 3306.

(2 - 2) 3

TAV 4314 VISUAL GRAPHICS STUDIO I: The student will develop and execute concepts for an audio-visual presentation, preparing a story board for use in this audio-visual. Discussions will be provided on the requirements and limitations of art for various projection devices. P.R. Commercial Art foundation program or consent.

(2 - 2) 3

TAV 4315 VISUAL GRAPHICS STUDIO II: The student will prepare art work for use on various projection devices including film strips, 35mm slides, video tapes, and overhead transparencies. P.R. TAV 4313.

(2 - 2) 3

TAV 4316 VISUAL GRAPHICS STUDIO III: This course is designed to allow the student to use basic video tape recording equipment to prepare a training program. The student will work with other students and "clients" to execute a story board and script and to shoot and edit this presentation. P.R. TAV 4315, TAV 4215.

(2 - 2) 3

VCO 3300 INTRODUCTION TO VISUAL ARTS: The student will make a comprehensive survey of the visual arts and their influence in the modern world. Upon completion of this course the student will be able to: (1) identify specific areas where art influences daily activities; (2) identify specific architectural structures and periods; (3) describe particular paintings, painters and styles of painting; (4) identify specific sculptors and sculptures; and (5) discuss the phase of art today in advertising and commerce.

(3 - 0) 3

VCO 3301 ILLUSTRATION: Upon completion of this course the student should be able to: (1) identify the types of illustrations in use today; (2) complete full-color illustrations for selling products and services; (3) prepare a story illustration; (4) make spot illustrations; (5) execute illustrations with the use 35mm slides and mechanical drawing aids; and (6) prepare a full color editorial or institutional illustration using mixed media. P.R. VCO 3316, VCO 3326.

(2 - 2) 3

VCO 3304 PHOTOGRAPHY I: Upon completion of this course the student will be able to: (1) identify various cameras, photographic equipment and materials; (2) describe functions of the camera and its expressive possibilities; (3) use the 35mm camera properly to take black and white exposures; and (4) follow correct darkroom procedures for developing film and making prints for presentation and exhibition.

(2 - 2) 3

VCO 3305 PHOTOGRAPHY II: Upon completion of this course the student will be able to: (1) take professional quality black and white as well as full color product photographs for use in advertising; and (2) prepare product photographs for presentation and/or exhibition. P.R. VCO 3304.

(2 - 2) 3

VCO 3306 PHOTOGRAPHY III: The student who completes this course will be able to use advanced photographic techniques in advertising design with particular emphasis upon the photo-mechanical processes. The student will also be able to describe introductory color theory. P.R. VCO 3305.

(2 - 2) 3

VCO 3314 DRAWING I: Upon completion of this course the student will be able to: (1) identify various drawing papers and media; (2) use hard and soft pencils in carefully executed value studies; (3) draw still-life compositions with a variety of media including pencil, charcoal, chalks, conte-crayon and pen and ink,

(2 - 2) 3

- VCO 3315 DRAWING II: Emphasis in this course is upon the human figure. The student will be able to: (1) draw the male and female figure in correct proportion with a variety of media; (2) indicate light and shade, muscle structure, character and expressions; and (3) demonstrate the correct use of two-point perspective in still-life and landscape drawings. P.R. VCO 3314. (2 - 2) 3
- VCO 3316 DRAWING III: This course encourages the student in individual selections of materials and techniques. Upon completion of the course the student will be able to: (1) draw landscapes using two-point perspective correctly; (2) use transparent water-color and ink washes to enhance pen and ink and pencil drawings; and (3) complete figure and still-life drawings in a variety of media. P.R. VCO 3315. (2 - 2) 3
- VCO 3324 DESIGN I: In this course the student will recognize and apply basic fundamentals and principles in assigned visual problems; will use basic design media; and will begin to analyze and critique design. (2 - 2) 3
- VCO 3325 DESIGN II: In this course the student will use and examine the element of color extensively in more advanced design problems, experimenting with new media or combinations of media. P.R. VCO 3324. (2 - 2) 3
- VCO 3326 DESIGN III: In this course the student will apply design fundamentals to both two and three dimensional problems, applying such principles to commercially oriented problems. P.R. VCO 3324. (2 - 2) 3
- VCO 4100 SEMINAR I: In this course students will interact together in small group sessions and will discuss a variety of topics of special interest to that group. (1 - 0) 1
- VCO 4101 SEMINAR II: In this course students will examine more closely the various options and career opportunities within the Commercial Art program through formal presentations and guest speakers. (1 - 0) 1
- VCO 4300 FASHION MERCHANDISING AND PROMOTION: In this course the student will learn procedures in merchandising and promotion and will discuss purchase planning, media and budget. (3 - 0) 3
- VCO 4302 SILK SCREEN: In this course the student will use and demonstrate skill in the silk-screening process in commercial applications. (2 - 2) 3
- VCO 4303 FASHION DESIGN: In this course the student will discuss production techniques of this industry and prepare basic designs. (2 - 2) 3
- VCO 4304 TYPOGRAPHY I: In this course the student will examine the principles of hot metal composition and photo composition and will know and use appropriate typographic terminology. The student will also be able to execute lettering, ranging from rough indication to comprehensive lettering. (2 - 2) 3
- VCO 4305 TYPOGRAPHY II: In this course the student will analyze the use of typography as a design and communications element and will be able to identify a variety of typefaces and explore their use in creating communications messages. P.R. VCO 4304. (2 - 2) 3
- VCO 4310 FASHION ILLUSTRATION I: In this course the student will sketch wearing apparel in a variety of media and will use the human figure extensively in these illustrations. (2 - 2) 3
- VCO 4311 FASHION ILLUSTRATION II: In this course the student will continue to broaden illustrative techniques and explore other subject matter such as accessories and furnishings in addition to the figure, examining and reorganizing layout problems through the production stages. P.R. VCO 4310. (2 - 2) 3
- VCO 4313 CARTOONING AND CARICATURE: In this course the student will analyze techniques in cartooning and caricature, drawing and interpreting given problems with an emphasis on originality. (2 - 2) 3
- VCO 4320 PACKAGE DESIGN I: In this course the student will discuss and examine effective package design, applying the principles learned to basic design for this industry. (2 - 2) 3
- VCO 4324 COPYWRITING I: In this course the student will examine techniques in originating effective copy for a variety of media, demonstrating the use of copy in format or layout solutions. (3 - 0) 3
- VCO 4325 COPYWRITING II: In this course the student will analyze more complex copy problems for a variety of media and will be able to copy-fit and formulate concepts through the use of copy. P.R. VCO 4324. (3 - 0) 3
- VCO 4414 ADV PRODUCTION I: Upon completion of this course the student will know and use graphic production terminology, basic production materials and tools, and will discuss and contrast printing methods and techniques through field trips to printing plants. (3 - 2) 4

VCO 4415 ADV PRODUCTION II: In this course the student will continue to examine production techniques and more complex production and mechanical art problems. Some conceptualizing and layout problems will be examined. P.R. VCO 4414. (3 - 2) 4

VCO 4416 ADV PRODUCTION III: In this course the student will solve an assigned communications problem through the stages of concept and layout to the finished product; will continue to expand creative and technical abilities; and will select appropriate production techniques for communications problems. P.R. VCO 4415. (3 - 2) 4

VISUAL MERCHANDISING IN COMMERCIAL ART

VIM 4200 CREATIVE DESIGN: Upon completion of this course, the student should be able to define "point of purchase" as commonly used in retailing; design and construct workable "point of purchase" displays; construct model or lifesize designs; select materials best suited for design; execute simple drawings illustrating these designs; and to utilize materials, techniques and new ideas from other fields. (1 - 2) 2

VIM 4201 PROFESSIONAL PRACTICES AND PROCEDURES: Upon completion of this course the student should be able to examine and appraise on the job conduct; budgeting; requisitioning procedures; staff responsibilities; and evaluate their personal portfolio utilizing professional standards. (1 - 2) 2

VIM 4304 RETAIL ADVERTISING AND PROMOTION: Upon completion of this course, the student should be able to understand the basic role of the retail designer in today's business world; interpret this understanding through scaled models of design problems; organize materials needed for construction of a model; understand basic prices, costs, budgets, types of promotion and limitations in creating a "working" design; and be able to demonstrate this understanding by executing finished drawings and scaled models of design projects. (2 - 2) 3

VIM 4504 VISUAL MERCHANDISING I: Upon completion of this course, the student should understand the importance of presenting merchandise in the most effective way; apply various techniques in presentation of merchandise; use mannequins, counters, and other displays for presentation of merchandise; plan window and interior displays; execute simple drawings illustrating design; and construct props from cardboards used in their design. (2 - 6) 5

VIM 4505 VISUAL MERCHANDISING II: Continuation of Visual Merchandising I. Upon completion of this course the student would be able to: coordinate the planning of window and interior display design; recognize technical, mechanical problems, demonstrating solutions; discuss and create special theme and seasonal display design; and execute drawings illustrating plans in a neat professional manner. P.R. VIM 4504. (2 - 6) 5

VIM 4506 VISUAL MERCHANDISING III: Continuation of Visual Merchandising II. Upon completion of this course the student should be able to: demonstrate creative use of materials and techniques in advanced window and interior design problems; draw blueprints of a retail store situation, demonstrating ability to organize interior design, display, fixtures and merchandise into one total "working" design; and execute models of designs, presenting finished drawings of total design with photographs made of all models for a portfolio. P.R. VIM 4505. (2 - 6) 5

WELDING

WLD 5110 BASIC OXYACETYLENE WELDING: Upon completion of this course the student should be able to: (1) assemble and operate the oxyacetylene welding equipment; (2) demonstrate surface welding, bronze welding and flame cutting methods applicable to mechanical repair work; (3) practice safety precautions pertaining to oxyacetylene welding and cutting. P.R. None (0 - 3) 1

WLD 5120 BASIC ELECTRIC ARC WELDING: Upon completion of this course the student should be able to: (1) operate an AC transformer and rectifier type welding machine; (2) weld different types of joints in the flat position; (3) practice safety precautions pertaining to electric arc welding. P.R. None (0 - 3) 1

WLD 5130 AUTO BODY WELDING: Upon completion of this course the student should be able to: (1) weld on material applicable to the installation of auto body panels and repairs to auto doors, fenders, hoods and deck lids; (2) do butt and fillet welds and perform tests to determine strength and weaknesses of welded joints; (3) practice safety precautions involved in oxyacetylene welding. P.R. WLD 5110 (0 - 3) 1

WLD 5140 BASIC GAS METAL ARC WELDING: Upon completion of this course the student should be able to: (1) assemble and operate the gas-metal arc welding equipment; (2) weld different types of joints in the flat position; (3) select welding heats and shielding gasses; (4) practice safety precautions pertaining to gas-metal arc welding. P.R. None. (0 - 3) 1

WLD 5240 INTRODUCTORY PIPE WELDING: Upon completion of this course the student should be able to: (1) weld pipe in the horizontal, vertical and horizontal fixed position using shielded metal arc welding processes; (2) practice safety precautions pertaining to Gas metal arc welding. P.R. WLD 5820. (1 - 3) 2

WLD 5267 CERTIFICATION PRACTICE: Upon completion of this course the student should be able to: (1) weld various metals to meet CPCC certification standards using oxyacetylene, electric arc, gas tungsten arc, and gas metal arc welding processes; (2) practice safety precautions involved in using the welding equipment and other tools. P.R. WLD 5810, WLD 5820, WLD 5830. (0 - 6) 2

WLD 5268 CERTIFICATION TESTING: Upon completion of this course the student should be able to: (1) use various tests including guided bend and tensile tests to check the quality of his work; (2) demonstrate skill in producing quality welds. P.R. WLD 5810, WLD 5820, WLD 5830. (2 - 0) 2

WLD 5355 COMMERCIAL AND INDUSTRIAL PRACTICES I: Upon completion of this course the student should be able to: (1) demonstrate skill developed through practice in simulated industrial processes and techniques; (2) sketch, lay out, list procedures and construct a product following these procedures; (3) repair worn or broken parts by special welding applications; (4) perform non-destructive tests and inspection; (5) practice safety precautions involved in the welding industry. P.R. WLD 5810, WLD 5820, WLD 5830. (1 - 6) 3

WLD 5356 COMMERCIAL AND INDUSTRIAL PRACTICES II: A continuation of WLD 5355. Upon completion of this course the student should be able to: (1) demonstrate additional skill in those areas outlined in WLD 5355. P.R. WLD 5355. (1 - 6) 3

WLD 5390 INDIVIDUAL STUDY: This offering is being made to provide students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment would provide access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Approval of the sponsor and department head is required. (3 - 0) 3

WLD 5411 OXYACETYLENE WELDING AND CUTTING I: Upon completion of this course the student should be able to: (1) demonstrate a knowledge of the principles of oxyacetylene welding and cutting; (2) describe the nomenclature of the equipment; (3) properly assemble all components; (4) Be able to form a puddle and carry the puddle forming weld beads in the flat position on different types of joints, practice all safety precautions involved in oxyacetylene welding. P.R. None. (2 - 6) 4

WLD 5412 OXYACETYLENE WELDING AND CUTTING II: A continuation of WLD 5411. Upon completion of this course the student should be able to: (1) weld in all positions on different types of joints; (2) cut ferrous metals; (3) perform brazing operations; (4) visually inspect all welds to determine quality; (5) practice all safety precautions involved in oxyacetylene welding and cutting. P.R. WLD 5411. (2 - 6) 4

WLD 5421 ARC WELDING I: Upon completion of this course the student should be able to: (1) operate an AC transformer, rectifier and DC motor generator arc welding machine; (2) select welding heats, polarities and electrodes used in joining various metal alloys; (3) weld different types of joints in the flat position; (4) practice safety precautions pertaining to electric arc welding. P.R. None. (2 - 6) 4

WLD 5422 ARC WELDING II: A continuation of WLD 5421. Upon completion of this course the student should be able to: (1) weld different types of joints in all positions, (2) make intermittent welds and multiple passes; (3) test welds to detect weaknesses and imperfections; (4) practice safety precautions pertaining to electric arc welding. P.R. WLD 5421. (2 - 6) 4

WLD 5431 INERT GAS WELDING I: Upon completion of this course the student should be able to: (1) operate an inert-gas-shielded arc welding machine; (2) understand equipment operation and safety procedures; (3) weld different types of joints in the flat position; (4) practice safety precautions pertaining to inert-gas-shielded arc welding. P.R. None. (2 - 6) 4

WLD 5432 INERT GAS WELDING II: A continuation of WLD 5431. Upon completion of this course the student should be able to: (1) weld different types of joints in all positions; (2) select welding heats, shielding gasses and filler rods; (3) practice safety precautions pertaining to inert-gas welding. P.R. WLD 5431. (2 - 6) 4

WLD 5654 COMMERCIAL AND INDUSTRIAL PRACTICES: Upon completion of this course the student should be able to: (1) demonstrate skills developed through practice in simulated industrial processes and techniques; (2) sketch, lay out, list procedures and construct a product following these procedures; (3) repair worn or broken parts by special welding applications; (4) perform non-destructive tests and inspection; (5) practice safety precautions involved in the welding industry. P.R. WLD 5810, WLD 5820, WLD 5830. (2 - 12) 6

WLD 5810 OXYACETYLENE WELDING AND CUTTING: Upon completion of this course the student should be able to: (1) demonstrate a knowledge of the principles of oxyacetylene welding and cutting; (2) describe the nomenclature of the equipment; (3) properly assemble all components; (4) be able to form a puddle and carry the puddle forming weld beads in all positions on different types of joints; (5) cut ferrous metals; (6) perform brazing operations; (7) visually inspect all welds to determine quality; (8) practice all safety precautions involved in oxyacetylene welding and cutting. P.R. None. (4 - 12) 8

WLD 5820 ARC WELDING: Upon completion of this course the student should be able to: (1) operate an AC transformer, rectifier, and DC motor generator arc welding machine; (2) select welding heats, polarities and electrodes used in joining various metal alloys; (3) weld different types of joints in all positions; (4) practice safety precautions pertaining to electric arc welding. P.R. None. (4 - 12) 8

WLD 5830 INERT GAS WELDING: Upon completion of this course the student should be able to: (1) operate an inert-gas shielded arc welding machine; (2) select welding heats, shielding gases and filler rods; (3) understand equipment operation and safety procedures; (4) weld different types of joints in all positions; (5) practice safety precautions pertaining to inert-gas shielded arc welding. P.R. None. (4 - 12) 8

FACULTY AND STAFF

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Undergraduate work at University of South Carolina.
- JAMES FRANKLIN ALEXANDER, Counselor
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 Fall Quarter 1976 Classes begin Monday, October 4
 Classes end Tuesday, December 21

Page 37 CORRECTIONAL SCIENCE

DESCRIPTION OF CURRICULUM

The curriculum is designed to give students the skills, knowledge and understanding required of correctional paraprofessional personnel. Upon successful completion of the curriculum, the degree of Associate in Applied Science will be awarded. The graduates of the program will have an understanding of the tasks performed by their profession, and the importance of their performance as related to the needs of society.

Suggested Sequence of Required Courses for Correctional Science

COURSE TITLE	QTR			COURSE TITLE	QTR		
	HR/WK	LAB	HRS		HR/WK	LAB	HRS
<u>FIRST QUARTER</u>				<u>SECOND QUARTER</u>			
COM 1314 Introduction to Communications	3	0	3	COM 3305 Communications II	3	0	3
PSC 4503 Law Enforcement Psychology	5	0	5	PSC 4520 Public Relations	5	0	5
CSC 3500 Introduction to Corrections	4	2	5	PSC 3500 Introduction to Criminology	5	0	5
SCU 3300 Principles of Interviewing	3	0	3	CSC 3524 Probation/Parole	4	2	5
	<u>15</u>	<u>2</u>	<u>16</u>		<u>17</u>	<u>2</u>	<u>18</u>
<u>THIRD QUARTER</u>				<u>FOURTH QUARTER</u>			
COM 3306 Communications III	3	0	3	HSA 3321 Helping & Behavioral Stress	3	0	3
PSY 3314 Principles Humanistic Psychol.	3	0	3	CSC 3514 Contemporary Correctional Institutions	5	0	5
HED 1204 First Aid I	2	0	2	PSC 3510 Criminal Law Procedures I	5	0	5
SEC 3404 Elementary Typewriting I	3	2	4	Elective	3	0	3
Elective	3	0	3		<u>16</u>	<u>0</u>	<u>16</u>
	<u>14</u>	<u>2</u>	<u>15</u>				
<u>FIFTH QUARTER</u>				<u>SIXTH QUARTER</u>			
MAT 33-- Practical Mathematics	3	0	3	SCU 4300 Self Defense & Weaponry	1	4	3
PSC 4501 Criminal Law Procedures II	5	0	5	SCU 3501 Intro. to Principles of Sfty	5	0	5
SPH 1300 Oral Communications	3	0	3	CSC 4514 Corrections/Community Based Programs	4	2	5
CSC 4504 Corrections/Now & Future	4	2	5	Elective	3	0	3
	<u>15</u>	<u>2</u>	<u>16</u>		<u>13</u>	<u>6</u>	<u>16</u>

Page 40 Electrical/Electronics Engineering Technology
 Paragraph Correction:
 Upon successful completion of the curriculum an Associate in Applied Science Degree in either electrical or electronics engineering technology will be awarded. Entrance to the program requires a placement test and an interview with a counselor. To enter the program, call or visit the college information desk and arrange for class placement and interviews.

Page 42 Fire Science Technology
 Add under Specialized Course Requirements:
 FIP 3304 Fire Protection II 3 0 3 Qtr. offered, W

Page 50 Medical Record Technology
 Third quarter lab hours total 4 hours.

Page 56 Secretarial Science
 Correct sixth quarter:
 BUS 2306 Business Law III

Page 65 Mathematics
 Add:
 MAT 3500 Mathematics for Firemen 3 0 3

Page 66 and Page 129 Music
 MUS 2218 Jazz Piano 0 4 2

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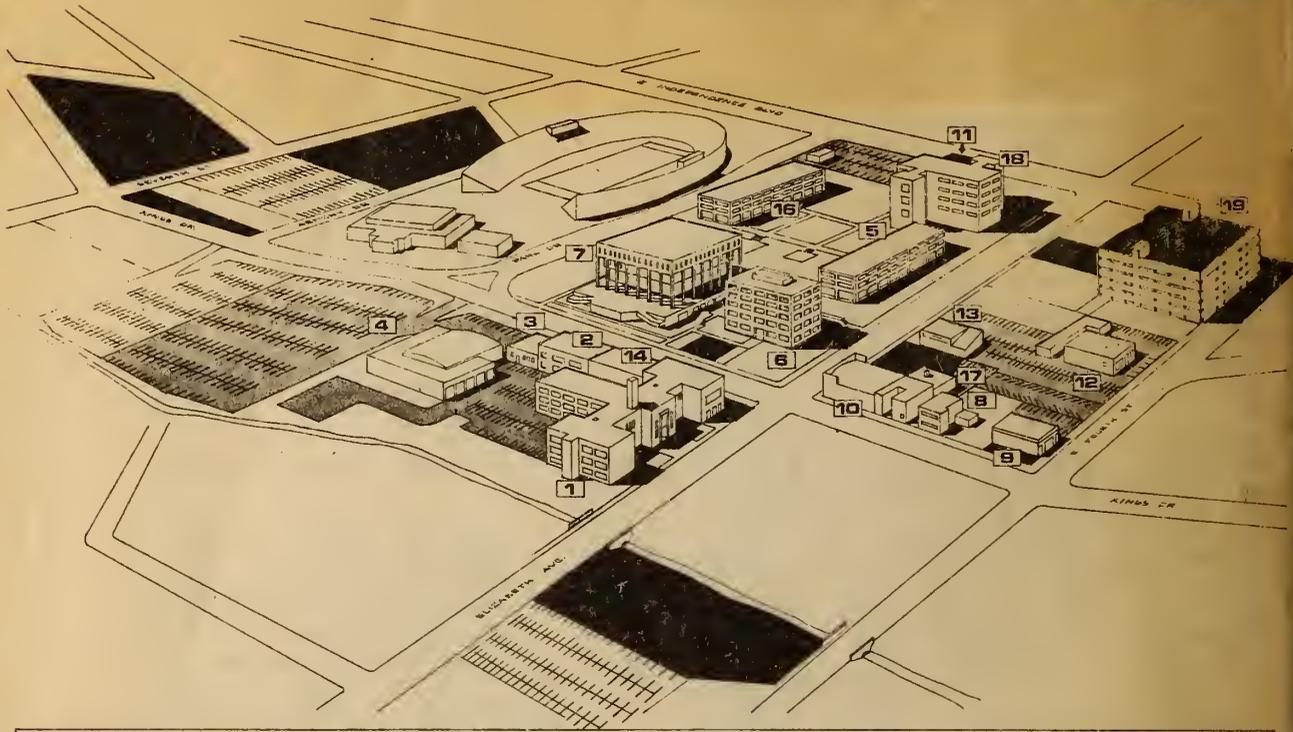
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