GASTON college

1996-97

academic catalog

{achieve your goals & conquer life's obstacles}

How to Use This Catalog

Important Sections

This catalog likely will be well-used throughout your time here at Gaston College. We suggest you skim through the entire book now, taking note of the main sections, then hold on to it for reference. You probably will find it beneficial to take a little more time in these sections:

- *Calendar*
- *Admissions*
- *Cost*
- *Financial Aid*
- *Registration and Records*
- *and your curriculum outline and course descriptions.*

To Help You

Also note these items, included for your convenience:

- *Table of Contents*
- *Index*
- *Glossary of Terms Used in this Catalog; and*
- *Campus Map (Back Cover).*

Americans with Disabilities Act (ADA)

The information in this catalog is available in alternative format upon request. Contact the Office of Marketing and Publications, 922-6215.

Schedule of Classes

A schedule of classes is published each quarter and is available approximately four weeks before each registration date. Schedules are available in the Admissions Office and at other campus locations. Please note that fees, curriculum, and other things can change at any time, so always check with your advisor before planning your schedule each quarter.

GASTON COLLEGE ACADEMIC CATALOG FOR 1996-97

ADDRESS

Gaston College
201 Highway 321 South
Dallas, North Carolina 28034-1499

Lincoln Campus of Gaston College
1 Timken Drive
Lincolnton, North Carolina 28092

PHONE NUMBERS

Main Campus:
(704) 922-6200
FAX (704) 922-6440

Lincolnton:
(704) 735-0487
FAX (704) 735-8292

NOTIFICATION OF NONDISCRIMINATION

Gaston College is committed to affirmative action and equal opportunity in employment and education and does not discriminate against current or potential employees or students on the basis of race, color, religion, sex, national origin, age, or disability. Inquiries concerning the college's affirmative action/equal opportunity policy should be directed to: the President's Office, Gaston College.

RIGHT TO CHANGE

The Board of Trustees and/or Administration of Gaston College reserves the right to change at any time, without notice: graduation requirements, fees and other charges, curriculum, course structure and content, and other such matters as may be within its control, notwithstanding any information set forth in this catalog. Gaston College reserves the right to cancel classes due to insufficient enrollment. Course offerings approved after publication of this catalog are described in class schedules which are issued quarterly.

STUDENT RIGHT-TO-KNOW

The average rate of persistence toward degree completion by students at Gaston College is available in the Records Office.

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General Information

COLLEGE CALENDAR OF INSTRUCTION

SPRING 1996

Monday, March 11	Registration (Dallas Campus)
Tuesday, March 12	Registration (Lincoln Campus)
Wednesday, March 13	First Day of Classes
Wednesday, March 27	Last Day to Petition for Graduation
Friday, April 5	Institutional Holiday
Wednesday, May 1	Last Day to Withdraw from Class, Declare an Audit, Complete and Record Credit by Examination
Wednesday, May 29	Last Day of Classes
Friday, May 31	Graduation

SUMMER 1996

Monday, June 10	Registration (Dallas Campus)
Tuesday, June 11	Registration (Lincoln Campus)
Wednesday, June 12	First Day of Classes
Tuesday, June 25	Last Day to Petition for Graduation
Thursday, July 4	Institutional Holiday
Wednesday, July 17	Last Day of First Session
Thursday, July 18	First Day of Second Session
Wednesday, July 31	Last Day to Withdraw from Class, Declare an Audit, Complete and Record Credit by Examination
Wednesday, August 21	Last Day of Classes
Friday, August 23	Graduation

FALL 1996

Thursday, August 22	Registration
Friday, August 23- Monday, September 2	Faculty Break
Monday, September 2	Institutional Holiday
Tuesday, September 3	First Day of Classes
Monday, October 21	Last Day to Withdraw From Class, Declare an Audit
Monday, November 18	Last Day of Classes

WINTER 1996-97

Tuesday, November 19	Registration
Wednesday, November 20-29	Faculty Break
Thursday, November 28-29	Institutional Holidays
Monday, December 2	First Day of Classes
Wednesday, December 18	Last Day of Class before Christmas
Thursday, January 2	Classes Resume
Monday, January 20	Institutional Holiday
Monday, February 3	Last Day to Withdraw From Class, Declare an Audit
Monday, February 17	Institutional Holiday
Tuesday, March 4	Last Day of Classes

SPRING 1997

Wednesday, March 12	Registration
Friday, March 14	First Day of Classes
Friday, March 28	Institutional Holiday
Monday, March 31	Last Day to Petition for Graduation
Friday, May 2	Last Day to Withdraw From Class, Declare an Audit
Friday, May 23	Last Day of Classes

GASTON COLLEGE PURPOSE

Gaston College is a publicly supported, open door, comprehensive community college organized and chartered to be of service to the people of Gaston and Lincoln Counties and the State of North Carolina. Our purpose is to provide the wisdom, leadership, resources, and educational opportunities which enable individuals to achieve their personal and career goals and to contribute to an enriched climate of intellectual, cultural, and economic growth. Gaston College aspires to both teaching excellence and academic excellence. To this end, the College:

Assures quality instruction by establishing effective, innovative, and professional teaching practices; by updating methods, materials, and facilities; and by providing recognition for teaching excellence

Provides comprehensive technical education programs for individuals seeking to complete their formal education at the associate degree level and provides college parallel programs for students who intend to transfer to senior institutions

Provides vocational education programs for individuals seeking to complete their formal education at the certificate and diploma level

Promotes positive relationships with public and private schools, with colleges and universities, and with businesses and industries through continuous cooperative involvement in institutional access, articulation, instruction, and curriculum

Assures quality in all educational programs through continuous evaluation of instructional effectiveness, administrative proficiency, and resource allocation

Provides support services for all students, including specialized services for the disadvantaged, and handicapped, and other special needs groups, that will enable them to enroll in appropriate programs, make progress, and meet their educational goals

Provides developmental, basic education, and high school equivalency programs for individuals seeking fundamental education

Provides non-curricular courses and programs of employee education and training to satisfy the skill development needs of the work force, business, industry, and public agencies

Provides community service and developmental activities which support local civic, economic, educational, and cultural efforts and which establish cooperative relationships between the College and the community.

ABOUT THE COLLEGE

Gaston College was granted a charter by the State of North Carolina in 1963 and began its first classes in temporary headquarters in September of 1964. The college moved to its permanent campus on Highway 321 between Dallas and Gastonia two months later. Serving both Gaston and Lincoln Counties, Gaston College enrolls approximately 4,000 students each quarter in curriculum programs and averages 21,000 students annually in its Continuing Education Programs.

FACILITIES

The eleven major buildings which comprise the Gaston College campus contain approximately 310,000 square feet and have an estimated current value of $23,500,000. There is an efficient road system and parking for more than 1,500 cars. College facilities (including a 480-seat auditorium) are available for public use and may be scheduled through the office of Community Education.

Lincoln Campus

The Lincoln Campus of Gaston College was opened in August of 1969. It moved to its present location, Lincoln County School of Technology at 1 Timken Drive, in 1987.

Beam Art Gallery

The Dewey F. And Prue K. Beam Center for Visual Arts on the main campus of Gaston College displays the paintings, drawings, and sculpture of local and regional professional artists as well as students. Shows typically change each month. For gallery hours and information, call 922-6343 or 922-6200.

Regional Emergency Services Training Center

The Regional Emergency Services Training Center is a five-story training facility used by fire, police, and emergency medical service organizations. On the surrounding grounds, there are nine propane and flammable liquid pits and a precision defensive driving course. The center gives Gaston College the opportunity to offer specialized training previously unavailable in our region.

Morris Library and Media Center

The Morris Library and Media Center opened in the fall of 1996. Located behind the Comer Engineering Technologies Building, the 35,000 square foot building houses both library services and media services.

The library maintains open stacks on the first and second floors and allows access to over 45,000 books, 240 periodicals, 3,300 pieces of audiovisual materials, 36,000 microforms, computer software and CD-ROM's to use with equipment located in the building.

The library services to students and faculty include:

- Reference and Research—This area is concerned with locating and using resources. Some of these services include the online public access catalog, elec-

tronic data bases on CD-ROM, First Search data bases, microforms of periodicals and printed materials.

- Circulation and Reserves—This area is concerned with materials check-out and check-in. It issues cards and sends overdue notices. The materials placed on reserve by instructors are handled by the staff.
- Collections Development—This area is concerned with selecting and ordering materials for the collections.
- Technical Processing—This area is concerned with cataloging and processing materials before they are put into circulation.
- Special Collections—This area is concerned with identifying, organizing and expanding the collections of rare/special books, local history and the College archives.

The media services include:

- Distance Learning—This area is concerned with interactive video and telecourses.
- Educational Video Production—This area is concerned with creating and editing television programs, commercials and educational videos.
- Satellite Teleconferencing—This area is concerned with receiving teleconferences via satellite. Programs are interactive and can be videotaped for later use.
- Audiovisual Production—This area is concerned with producing and duplicating audiovisual aids. Still photography is a part of this service.

The Morris Library and Media Center has a reciprocal agreement with Belmont Abbey College Library to allow the utilization of each other's services. Interlibrary loans can be made from other libraries through modem access by the reference librarian.

GASTON COLLEGE ADMINISTRATION

Dr. Patricia Skinner, President
Dr. John Reid, Vice President for Academic Affairs
Dr. Horace Cline, Vice President for Student Development and Enrollment Management
Ms. Pam Hall, Vice President for Administrative Services
Dr. Paul Berrier, Vice President for Campus Facilities

GASTON COLLEGE BOARD OF TRUSTEES

Officers:
Mr. Alan Albright, Chair
Mr. Jerry Cochrane, Vice Chair
Mr. Russell Keck, Secretary

Appointed by the Governor of North Carolina:

Mr. Hugh Bryant
Mr. J. A. Dalpiaz
Mrs. Marianna Cone
Mr. Thomas Cloninger

Appointed by the Gaston County Board of Commissioners:

Mr. Don Walser
Mr. Jerry Crisp
Mr. Russell Keck
Mrs. Sarah Knowles

Appointed by the Gaston County School Board

Mr. Alan Albright
Mr. Joe Carpenter
Mrs. Johnnie Moore
Mr. David Robinson

Appointed by the Lincoln County Board of Commissioners:

Mr. Jerry Cochrane
Mr. Jim Sain

Ex Officio:

Student Government Association President

GASTON COLLEGE FOUNDATION, INC. BOARD OF DIRECTORS

Mr. J. A. Dalpiaz, President
Mr. Alan Albright
Mr. Tom D. Efird
Mr. Thomas Cloninger
Mr. Larry Petty
Mr. Don Walser
Mrs. Sarah Knowles

ACCREDITATIONS AND MEMBERSHIPS

Gaston College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees.

Four engineering technology curricula are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. ABET is recognized by the National Commission of Accrediting as the appropriate accrediting agency for the accreditation of engineering technology curricula. The nursing programs are accredited by the North Carolina Board of Nursing. The medical assisting program is accredited by the Committee on Allied Health Education and Accreditation. The North Carolina Office of Emergency Medical Services approves the Emergency Medical Science courses.

The following organizations are among those in which the college holds institutional memberships:

American Association of Community Colleges
American Library Association
Accreditation Board for Engineering and Technology
Air Conditioning Contractors of America
American Society for Engineering Education
American Association of Collegiate Registrars and Admissions Officers
Carolina Association of Collegiate Registrars and Admissions Officers
Charlotte Area Educational Consortium
Enterprise 2000
Gaston County Chamber of Commerce
National Council for Marketing and Public Relations
North Carolina Association of Community College Presidents
National Association for Foreign Student Affairs
North Carolina Association of Community College Trustees
National Council on Black American Affairs/AACC
North Carolina Association of Colleges and Universities
North Carolina Citizens for Business and Industry
Southern Association of Community, Junior and Technical Colleges
Southern Association of Colleges and Schools

Admission

GENERAL ADMISSION REQUIREMENTS

Gaston College subscribes to the open door admission policy. Although restrictive standards for admission are not imposed, admission to the college does not guarantee immediate admission to the curriculum desired by the applicant. Admission to certain programs may be affected by special program requirements.

High school graduation or the equivalent is required of all applicants for degree programs.

DEGREE SEEKING

The following steps must be completed before students are admitted as degree-seeking students:

1. Submit to the Admission Office a completed Application for Admission.
2. Request that your high school mail an official transcript to the Office of Admission at Gaston College, 201 Hwy. 321 S., Dallas, NC 28034-1499. (GED or Adult High School Diploma is acceptable with a minimum score of 225 and no subscore less than 35.)
3. Schedule and take the ASSET placement instrument. A transfer student who has earned a "C" in *both* college-level math and English from a regionally accredited institution shall have the test waived. The college uses test scores to place students in developmental or regular courses.

Degree seeking applicants are encouraged to apply early to ensure completion of admission files prior to enrollment. Degree applicants may enroll on a provisional basis until all admission requirements are met such as receipt of transcripts and ASSET scores. However, all admission requirements must be met before a student can begin a second quarter of enrollment.

CERTIFICATE/DIPLOMA

A certificate or diploma student is one who is enrolled in a program of study leading to a diploma or certificate in a specialized field. Credit earned for work will not be applied to the associate degree unless the student is admitted and classified as a degree student.

Applicants planning to enroll in a certificate or non-vocational diploma program must submit an application for admission and high school and college transcripts to the Office of Admission.

TRANSFERRING FROM ANOTHER COLLEGE

Applicants transferring to Gaston College must submit all requirements for general admission. In addition, transfer applicants must submit transcripts from all other post-secondary institutions attended. The name you are currently using should appear on each transcript submitted.

NON-DEGREE APPLICANTS

Applicants planning to enroll in courses for special interest must submit an Application for Admission. Certain courses may require prerequisites and/or placement testing. Non-degree students do not qualify for degree status unless general admission requirements are met. A major must be declared upon completion of 15 credit hours.

RE-ADMISSION

Any student who has withdrawn and wishes to re-enter must verify current status with the Office of Admission. An application for re-admission or file update may be required.

INTERNATIONAL STUDENTS

International students must meet all admission requirements listed under General Admission Requirements. All official transcripts sent to the Office of Admission must be translated and certified before being sent to Gaston College. All applicants from countries whose language is not English must demonstrate proficiency in the English language by scoring no less than 500 on the Test of English as a Foreign Language (TOEFL). Applicants must present evidence of adequate financial resources and F-1 visa status. All F-1 students pay out-of-state tuition rates. Admission requirements must be completed at least six weeks prior to the quarter for which admission is sought.

DUAL ENROLLMENT PROGRAM

High school 11th or 12th graders, 16 years of age or older, upon approval by their principal, may be admitted as special students to appropriate courses (credit as well as non-credit) at Gaston College. Applicants are admitted on a space available basis into regular classes at the college.

Applicants must be taking at least three courses at the high school and be making progress toward graduation; or (in the case of courses offered in the summer) the principal must certify that a student took at least three high school courses during the preceding year and made appropriate progress toward graduation.

Students must obtain a Dual Enrollment Form from their principal and complete a Gaston College Application for Admission. The Dual Enrollment Form must be completed and all appropriate signatures obtained before enrollment will be allowed.

(All course prerequisites apply to dual enrollees. Therefore, a dual enrollment student who wishes to take college-level English, math, or reading must achieve a minimum score on ASSET, the college placement instrument.)

RESIDENCY

Gaston College is supported by the taxpayers of North Carolina and Gaston County. Students who are not state residents pay out-of-state fees. A student's official residency status is determined at the time of registration according to the residency policy of the State of North Carolina, the North Carolina Department of Community

Colleges, and the Gaston College Board of Trustees. A change of address does not automatically entitle a student to pay the same instructional fees as a North Carolina resident. Request to change one's residency status should be submitted to the Admissions Office. More information on residency requirements can be obtained from the Admissions Office.

The qualify for in-state tuition, a legal resident must have maintained residency in North Carolina for at least the twelve months immediately preceding the date of first enrollment in an institution of higher education in this state.

The legal residence of a person under eighteen (18) years of age at the time of first enrollment in an institution of higher learning in this state is that of his/her parents, surviving parent, or legal guardian. In cases where parents are divorced or legally separated, the minor's domicile is deemed to be North Carolina for the time period that either parent, as a North Carolina legal resident, may claim and does claim the minor as a tax dependent.

CHANGE OF ADDRESS

A student should report a change of address on forms available in the Student Records Office.

Financial Information

COST TO ATTEND GASTON COLLEGE

Gaston College, supported by the taxpayers of North Carolina and Gaston County, maintains modest instructional and general fees which are subject to change by the State of North Carolina and the Board of Trustees of Gaston College.

CURRICULUM COURSES

Instructional Fee Per Quarter Hour of Credit

North Carolina Residents	Out-of-State Residents
$13.25	$107.50

The maximum quarterly instructional fee for residents of North Carolina is $185.50 for 14 or more credit hours. The maximum quarterly instructional fee for out-of-state residents is $1505 for 14 or more credit hours.

CONTINUING EDUCATION COURSES

There is a $35 registration fee per person per course for occupational courses. Academic, practical skills courses, and avocational (special interest) courses vary in cost.

Continuing Education students pay no activity fee; however, they do pay the current parking and publication fee.

EXCEPTIONS

Dual enrollment students pay no tuition (except for self-supporting continuing education classes). However, they do pay all other fees.

Students 65 or older do not pay registration or other fees (except for self-supporting continuing education classes).

OTHER GENERAL FEES

Student Activity Fee Per Quarter Hour of Credit

$.50

The maximum quarterly students activity fee is $4 for 8 or more credit hours for in-state and out-of-state residents. Student Activity Fee is not charged for the Summer Quarter.

Some courses may require an additional supply fee. Courses requiring additional fees will be identified in the quarterly schedule.

Usage Fee

$4 per quarter.

Graduation Fee

$15

Publication Fee

$2 per quarter

Lab Fee

$2 per lab hour

The maximum quarterly lab fee is $20 for in-state and out-of-state residents.

Malpractice Insurance

Approximately $18 per year
Individuals enrolled in nursing and health services programs are required to pay an annual malpractice premium.

American College Test

The current cost is $14 for those students required to take the American College Test for guidance purposes and is payable at the time the test is taken.

Returned Checks

A fee of $15 will be assessed any student whose check is returned.

Right to Change Fees

All college fees are subject to change without notice:

REFUNDS

Curriculum Programs

If a student withdraws from a class or classes before 20 percent date of class(es), a 75 percent tuition refund will be given for the class(es) dropped. Students must apply for the refund by marking the appropriate box on the withdrawal form. No refunds will be given after the 20 percent date. If a course fails to materialize, refunds are automatically processed.

(The refund policy is subject to change. Refunds of tuition will be issued in accordance with the current state and college policy.)

Continuing Education Courses

Refunds will not be made except in the following circumstances: 1.) For classes that are scheduled to meet four times or less, a full refund shall be made upon the request of the student if the student officially withdraws prior to or on the first day of the class(es). 2.) For classes that are scheduled to meet five or more times, a 75 percent refund shall be made upon the request of the student if the student officially withdraws prior to or in the official 20 percent point of the class(es). Fees for self-supporting courses will not be refunded unless the course is canceled.

ACCIDENT INSURANCE

Gaston College does not have insurance to cover students if they are injured on the Gaston College campus or in a college related activity. It is advisable, therefore, that students (especially those in areas which could be considered as potentially hazardous) make certain they have appropriate coverage under a personal accident policy or that of a parent.

For those who find they do not have accident insurance coverage, information on a student insurance program is available from the Business Office in the Administration Building.

FINANCIAL AID

GENERAL INFORMATION

Financial assistance is available in the form of scholarships, grants, loans, and work programs. Every effort is made by the institution to help students who need assistance. Financial aid is intended to supplement, not replace, financial contributions from the student and his or her family.

There are three types of financial aid: gift assistance, student loans, and work. Gift assistance includes grants and scholarships which do not have to be repaid. Loans and work are self-help programs. Loans are usually paid back after enrollment is terminated. Work enables students to pay part of their expenses through their own earnings.

HOW ELIGIBILITY IS DETERMINED

Gaston College uses the Free Application for Federal Student Aid (FAFSA) to assess the financial condition of financial aid applicants. Information entered onto the FAFSA is analyzed according to the requirements of the U.S. Congress and federal guidelines. This ensures that all applicants are treated fairly and equitably. Such items as income, assets, family size, marital status, number of family members in the household in college are used to determine eligibility.

Results of the FAFSA indicate the amount the student and his or her family can contribute toward the student's education. Most financial aid is based on need rather than on scholastic record. Financial need is the difference between the total education expenses and what the family is expected to contribute.

HOW TO APPLY FOR FINANCIAL AID

Students who are entering Gaston College and are in need of financial aid are requested to follow this application procedure:

1. After application for admission has been submitted (See Admissions), the student should contact the Financial Aid Office. Instructions for applying will be mailed to the applicant. Whenever possible, the student should request the application in person. It is to the student's advantage to apply as early as possible for financial assistance.
2. The student who wishes to apply for financial assistance must file a Free Application For Federal Student Aid (FAFSA) and must apply for a Federal Pell Grant. The student must complete and submit the Gaston College Financial Aid Application. The FAFSA is available at local high schools, the Lincoln Campus, and the Financial Aid Office on the main campus and near each divisional office (Liberal Arts and Sciences; Business, Computer Science and Public Service; Trade and Industrial; Nursing and Health Sciences; and Engineering Technologies).

3. The student applying should report for a personal interview when designated.
4. After determination of scholarship, loan, grant, or work-study award, the recipient will be notified by a Financial Aid Notification Letter.

Applicants may apply for a scholarship, grant, loan, work-study, or any combination of these. The total combined sum of these **must not** exceed total financial need. The awarding of aid is based on funds available.

In the event that a student receiving aid withdraws from the institution, the student will be responsible for repayment of a prorated amount of any portion of payments which were extended to the student for living expenses and which would no longer be attributed to meeting expenses related to attendance.

The student has the obligation to maintain the "Satisfactory Academic Progress Requirements" as defined specifically for financial aid recipients. Failure to maintain academic progress will result in the loss of eligibility for financial aid. Eligibility may be regained. Student coursework must be restricted to the major that is on file in the Registrar's Office. Courses taken outside of the approved major may require adjustment to Financial Aid Award.

FEDERALLY SPONSORED PROGRAMS

Eligibility

Students must meet the following requirements before they can receive federal financial aid funds:

1. have financial need, except for some loan programs.
2. have a high school diploma or a General Education Development (GED) certificate, or you must pass an independently administered test approved by the U.S. Department of Education, or meet other standards your state establishes that are approved by the U.S. Department of Education.
3. be enrolled as a regular student working toward a degree, diploma or certificate in an eligible program. (You may not receive aid for correspondence or telecommunications courses unless they are part of an associate-, bachelor-, or graduate-degree program.)
4. be a U.S. citizen or eligible noncitizen.
5. have a valid Social Security Number.
6. make satisfactory academic progress.
7. sign a statement of educational purpose/certification statement on refunds and default (found on the Student Aid Report).
8. sign a statement of undated information, if required (found on the Student Aid Report).
9. register with the Selective Services, if required.

Federal Pell Grant

The Federal Pell Grant program is designed to provide financial assistance to those who need it. The amount of the Federal Pell Grant is determined on the basis of the

student's and his/her family's financial resources, Expected Family Contribution (EFC).

The Federal Pell Grant Award is a grant and, unlike a loan, **does not** have to be repaid. Every student who is applying for financial aid at Gaston College is encouraged to apply for the Federal Pell Grant. Applications may be obtained at area high schools or from the Financial Aid Office.

Federal Supplemental Educational Opportunity Grant (FSEOG)

This program of direct grants of financial aid is for students of exceptional financial need who without the grants would be unable to continue their education.

Federal Stafford Loan (William D. Ford Federal Direct Loan Program)

This program enables the student to borrow directly from the federal government serviced by Gaston College Financial Aid Office. The educational loan is guaranteed by the federal government.

To apply for the federal loan, a student must submit a Free Application for Federal Student Aid (FAFSA) for the assessment of the financial condition. An authorized credit check is processed on site using the Southeastern Credit Bureau, Inc. software application and the "BEACON" rating system. No interest is charged while the student is in school or six months after he/she leaves school. Payments begin six months after the student graduates or leave school.

Applications are available in the Financial Aid Office and other locations on campus.

Federal College Work-Study Program (Federal/Institutional)

Gaston College participates in the college work-study program which provides on-campus work opportunities for students needing financial assistance to attend school. Work is available in the library, faculty offices, administrative offices, laboratories, shops, and building and ground maintenance. Students working under this program are paid monthly for the work performed. In arranging a job and determining how many hours a week a student may work under this program, the financial aid secretary will take into account the student's (1) need for financial assistance, (2) class schedule, (3) health, and (4) academic progress.

STATE-SUPPORTED PROGRAMS

North Carolina Student Incentive Grant

Legal residents of North Carolina who are enrolled full time and maintain academic progress may apply for the North Carolina Student Incentive Grant (NCSIG). Students must demonstrate "substantial financial need."

The NCSIG program is administered in North Carolina by the Free Application for Federal Student Aid. Application procedures include filing of a needs analysis system the FAFSA. Details of the application process are available from high school guidance counselors and from the Financial Aid Office. Application deadline is March 15 each year for the following academic year.

North Carolina Student Loan Program for Health, Science, and Mathematics

This program was formerly known as the North Carolina Medical Student Loan Program, and it is operated as a Special Program Department of the North Carolina State Education Assistance Authority. To be eligible for the loan, students must be legal residents of North Carolina who are enrolled full time in degree programs pursuing careers in health, mathematics, or science. Students may apply for this loan through the N.C. Education Assistance Authority. Students may attend a North Carolina post-secondary institution or eligible out-of-state institution. Award recipients are chosen according to major, academic capabilities, and financial need. Further information is available from the Financial Aid Office.

Nurse Education Scholarship Loan (NESLP)

The N.C. General Assembly created this program in the 1989 session in an attempt to alleviate the nursing shortage.

Recipients must be enrolled in the LPN or the RN program, by North Carolina residents, and demonstrate financial need. The repayment of the loan may be forgiven by working as a nurse in North Carolina. Recommendations are made by the Financial Aid Office.

Wachovia Technical Scholarship

This fund was established through a gift from the Wachovia Bank and Trust Company to the Department of Community Colleges.

To qualify as a candidate for this scholarship, a person must be a full time student enrolled in the second year of a two-year technical program, must demonstrate financial need and scholastic promise, and must use the scholarship to pay for books, tuition, and transportation. The recipient is selected by the Financial Aid Committee.

N.C. Community Colleges Scholarships

The 1984 General Assembly appropriated $2,000,000 to the Department of Community Colleges to be invested. The interest from the investment is used to fund scholarships at every member institution.

To qualify as a candidate for the scholarship, a person must be a North Carolina resident, must be enrolled full-time or part-time in curriculum courses, and must maintain a 2.0 GPA. The Department established priorities to be used in the selection process. The recipients are selected by the Financial Aid Committee.

Southern Bell Scholarship

In July 1986, the State Board of Community Colleges accepted a gift from Southern Bell Telephone and Telegraph Company to establish a scholarship program at selected community colleges located in Southern Bell service areas.

The recipients are selected using criteria established by the Department of Community Colleges. The recipients must be North Carolina residents enrolled in a course of study leading to a degree or diploma. They must maintain a 2.0 GPA. Students

with the greatest financial need will be given top priority. Secondary consideration is given to students whose job skills have become obsolete because of economic recession.

LOCALLY SUPPORTED PROGRAMS

Gaston College currently offers several locally supported scholarships. The sources of these scholarships (clubs, individuals, industries, businesses, foundation, etc.) determine what criteria are to be used in awarding them. Scholarships available are as follows:

John Reeves Gamble, M.D. Scholarship

This scholarship was established in 1965 as a memorial to Dr. John Reeves Gamble for years of service in the Lincoln County area. The recipient must be a Lincoln County resident and maintain a 2.0 GPA; need can be a determining factor.

Pearl Davidson Rhodes Scholarship

This scholarship was established in 1965 as a memorial to Mrs. Pearl Davidson Rhodes for years of service in the Lincoln County area. The recipient must be a Lincoln County resident and maintain a 2.0 GPA; need can be a determining factor.

David Belk Cannon Scholarship

This scholarship was established as a memorial to the family of Mr. David Belk Cannon. The selection is based on merit, and the recipient must maintain a 3.0 GPA. The recipient will be selected by the Gaston College Scholarship Committee.

Pearl Dixon Balthis Foundation Scholarship

This scholarship was established in 1971. The scholarships are awarded based on character, academic standing, and financial need. The recipients should be from Gastonia or Gaston County or from North Carolina at large if suitable applicants are not available from Gaston County. The recipients will be selected by the Financial Aid Scholarship Committee.

Mickey Joel Helms Scholarship

This scholarship was established in 1965. The scholarship is awarded each year to a Cherryville High School senior who will be attending Gaston College. The selection will be based on scholastic ability, personality, and need with no particular emphasis on any one factor. The recipient will be selected by the Financial Aid Scholarship Committee.

Hunter Huss Endowment Scholarship

This scholarship was established in 1968 in honor of Mr. Hunter Huss for years of service as an educator. The recipient must be a Gaston County high school graduate who has maintained suitable academic progress. The recipient will be selected by the Financial Aid Office.

Ruth and Harry Huss Endowment Scholarship

This scholarship was established in 1989 by Mr. and Mrs. Harry Huss. The recipients of this scholarship must exhibit financial need. The recipients will be selected by the Financial Aid Office.

Houser Endowment Scholarship

This scholarship was established in memory of Mr. Fred K. Houser. The number of recipients is determined by the amount of funds available. The recipients must be Cherryville High School graduates, show academic promise, and have financial need. Nominations are accepted from Cherryville High School. The recipients will be selected by the Financial Aid Scholarship Committee.

T. Jeffers Endowment Scholarship

This scholarship was established in honor of T. Jeffers, who was an educator in Gaston County and the mayor of Gastonia. The awards are based on academic merit and/or need. Applicants must pursue a degree, diploma, or certificate and satisfy all entry requirements at Gaston College for their proposed programs of study. The scholarships are not renewable. For more information, contact the Financial Aid Office.

Maurice Honigman Endowment Scholarship

This scholarship was established in memory of Mr. Maurice Honigman. The recipient must be a graduate of Ashbrook or Hunter Huss High School, must be a full-time student at Gaston College, must have financial need, and must possess the academic potential to complete his/her selected course of study.

Hershal Hoyle Beam Endowment Scholarship

This scholarship was established in memory of Mr. Hershal Hoyle Beam, Gaston County educator. The recipient must have graduated from Hershal Beam Elementary, Southwest Junior High, and Hunter Huss High schools. The scholarship is open to any degree seeking student who demonstrates financial need. The student must be enrolled full-time and maintain a grade point average (GPA) 2.5 - 3.0. Recipient of the scholarship is required to send thank you notification to family. For information, contact the Financial Aid Office.

Management Honors (Academic) Scholarship

These scholarships are designed for high school seniors who have demonstrated academic excellence and plan to attend Gaston College. The scholarships are not based on need. To be eligible for scholarships, applicants must have maintained a "B" average (85.0 on a 100 scale) and plan to attend Gaston College full time. Applicants must satisfy all requirements for their proposed programs of study. Applicants must be from Gaston and Lincoln Counties. Scholarships are renewable.

Career Scholarships

These scholarships are for high school seniors who intend to pursue careers in specified Engineering Technologies or Trade and Industrial Divisions majors and satisfy

all entrance requirements for their proposed programs of study at Gaston College. These scholarships are not based on need. To be eligible for the scholarships, applicants must present evidence of expectation of high school graduation and plan to attend Gaston College full time. Applicants must intend to pursue a degree, diploma, or certificate in the Engineering Technologies or Trade and Industrial Divisions. Scholarships are renewable but the award will not be extended beyond four quarters for a diploma program or seven quarters for a degree program. Off-campus co-op quarters will not be included in the scholarship.

VETERANS INFORMATION

Students may be eligible for educational benefits from the Department of Veterans Affairs (DVA) while attending Gaston College. Gaston College has been approved as an institution qualified and equipped to provide education in the arts and sciences and in the career program areas under the provisions of Chapter 30, 31, 32, 35 or 1606 of Title 38 of the U.S. Code.

Veterans in degree programs must show evidence of high school completion to be eligible for DVA certification and benefits. Veterans without a high school diploma who wish to enter degree programs on a probationary status must first satisfy the probationary requirements and obtain the approval of the State Approving Agency before they can be certified for the DVA educational benefits. Veterans entering the GED program must provide the college with their latest high school transcript.

A grade of "S" which is sometimes awarded in Developmental Studies courses may be awarded to veterans or to veterans' dependents receiving DVA educational benefits.

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

Veterans will accept the responsibility for overpayment made due to failure to follow school and/or Department of Veterans Affairs regulations. Any changes in the placement of a student must be justified in writing by a Gaston College counselor, department head, or instructor. This justification will be included in the student's academic records.

VOCATIONAL REHABILITATION

The State of North Carolina provides financial assistance for residents who have permanent handicaps. Information concerning such aid is available through the Director of Vocational Rehabilitation, N.C. Department of Public Instruction, Raleigh, North Carolina 27611.

Educational Programs

COLLEGE TRANSFER PROGRAMS

(Associate of Arts, Associate of Science, Associate of Fine Arts)

The college transfer curriculum includes a wide range of course offerings in liberal arts and sciences for all students at the college. Some students take only a few courses each quarter, but may enroll in a two-year sequence and earn the Associate of Arts, Associate of Fine Arts, or Associate of Science Degree. (See pages 58-63).

Students can plan their program in order to transfer to four-year colleges and universities. These students enroll in what is usually referred to as the transfer curriculum which offers courses that parallel those offered the first two years at four-year institutions. Most of the credits earned in this curriculum may be transferred to colleges and universities as the first and second year of a baccalaureate degree program. Students who intend to transfer their credits should plan their courses with a Gaston College counselor to be certain they will meet the current requirements at four-year colleges and universities. Students who have not decided upon a major but intend to transfer their credits toward a four-year degree should also meet with a counselor from the four-year school.

Students who select the Associate of Arts degree at Gaston College transfer to senior colleges to pursue such majors as the following:

Associate degrees are offered in the following areas:

- Anthropology
- Art
- Business Administration
- Education
- English
- French
- History
- Music
- Pre-Law
- Pre-Ministry
- Psychology
- Social Work
- Sociology
- Spanish

Students who select the Associate of Science degree at Gaston College transfer to senior colleges to pursue such majors as the following:

- Agriculture
- Architecture
- Business Administration
- Education
- Engineering
- Forestry
- Mathematics
- Nursing
- Physical Therapy
- Pharmacy
- Pre-Dentistry
- Pre-Medicine
- Pre-Optometry
- Pre-Veterinary Medicine
- Science-Biology, Chemistry, & Physics Options
- Textile-Chemistry or Textile Technology

Students who select the Associate of Fine Arts degree at Gaston College transfer to senior colleges to pursue such majors as the following:

- Art
- Art Education
- Commercial Art
- Commercial Music
- Drama
- Interior Design
- Music Education

The curriculum codes (used for academic advising and financial aid purposes) for these programs are:

C000	Pre-Agriculture	C001	Pre-Architecture
C003	Pre-Art	C004	Pre-Business Administration
C005	Pre-Dental	C006	Pre-Drama
C007	Pre-Engineering	C008	Pre-Forestry
C009	Pre-Journalism	C010	Pre-Law
C011	Pre-Liberal Arts	C012	Pre-Mathematics
C013	Pre-Medical	C014	Pre-Ministerial
C015	Pre-Music	C016	Pre-Optometry
C017	Pre-Pharmacy	C018	Pre-Science
C019	Pre-Social Work	C020	Pre-Teaching Elementary
C021	Pre-Veterinary Medicine	C022	Pre-Physical Therapy
C023	Pre-Nursing	C026	Pre-Business Education
C027	Pre-Public Administration	C028	Pre-Teaching Secondary
C031	Physical Education	C032	Pre-Textile Chemistry
C033	Pre-Textile Technology	C035	Early Childhood Education
C044	Pre-Psychology		

Each student should confer with a counselor or advisor about course selection prior to registration. Only with approval of the appropriate dean may students substitute courses for those specifically required for graduation and courses outside the area of specialization. Students are responsible for the proper completion of their academic programs based upon the requirements stated in the Gaston College Catalog in conjunction with the current schedule.

Counselors or advisors will provide assistance to students concerning transfer to other institutions. Transfer of credits from one institution to another is subject to change. Therefore, it is the responsibility of the transferring students to research their prospective senior institution. Students may contact the counseling department of Gaston College or the admissions office at the college to which they plan to transfer for information and guidance on transfer of credits. **Though faculty members, staff members, counselors, advisors and administrators are available to help students with planning, the responsibility rests upon the individual student.**

ASSOCIATE OF APPLIED SCIENCE

The Associate of Applied Science Degrees are two-year terminal programs that prepare the student for the job market. However, there are some senior institutions where these degrees are accepted as the first two years of a four year program. A few of the senior institutions which accept some of our Applied Science Degrees are

Appalachian State University
Belmont Abbey College
Gardner-Webb College
Mars Hill College
Pfeiffer College
University of NC at Charlotte
Western Carolina University
Winston-Salem State University

Some senior institutions will evaluate the Associate of Applied Science Degree on a course-to-course basis.

The minimum requirements for the Associate of Applied Science Degree vary with the field of concentration, ranging from 101 to 128 quarter hours of work numbered 101 or above (exceptions: CHM 110, PED 100). The completion of no fewer than thirty (30) quarter credit hours while in attendance at Gaston College is required.

A student is eligible to graduate with an Associate of Applied Science Degree upon completion of the curricula requirements for the particular program listed in this catalog.

A student must have a 2.00 grade point average on courses presented for graduation.

Associate of Applied Science degrees are offered in the following programs:

ALLIED HEALTH TECHNOLOGIES
T-139 Emergency Medical Science
T-058 Medical Assisting
T-059L Nursing-LPN to RN Conversion
T-059 Nursing-RN
T-004 Veterinary Medical Technology

BUSINESS TECHNOLOGIES
T-016 Accounting
T-030 Administrative Office Technology
T-112 Banking and Finance
T-018 Business Administration
T-022 Business Computer Programming
T-120 Paralegal Technology
T-020 Marketing and Retailing
T-032 Medical Office Technology
T-031 Secretarial-Legal

ENGINEERING TECHNOLOGIES
T-038 Civil Engineering Technology
T-045 Electronics Engineering Technology
T-047 Industrial Engineering Technology
T-049 Industrial Management Technology
T-051 Mechanical Engineering Technology

INDUSTRIAL TECHNOLOGIES
T-041 Architectural Technology
T-156 Automotive Service Technician
T-176 Automotive Technology
T-063 Fire Protection Technology
T-226 Mechanical Drafting Technology

LIBERAL ARTS and SCIENCES
T-120 Paralegal Technology
T-129 Criminal Justice Protective Services Technology
T-073 Early Childhood Associate
T-179 Radio and TV Broadcasting Technology

DIPLOMAS

A student is eligible to graduate with a diploma upon completion of the curriculum requirements for the particular program listed in this catalog.

A student must have a 2.00 grade point average on courses presented for graduation.

V-024 Air Conditioning, Heating and Refrigeration
T-176 Automotive Technology
T-073 Early Childhood Education
V-018 Electrical Installation and Maintenance
V-042 Electronics Servicing
T-165 General Office (Technical Specialty)
V-028 Industrial Maintenance Mechanic
V-032 Machinist
V-038 Practical Nursing
V-043 Radio and TV Broadcasting
V-050 Welding

CERTIFICATES

A minimum of 75 percent of the requirements for the certificate must be completed at Gaston College.

A student must have a 2.00 grade point average on courses presented for graduation.

T-030C Administrative Office Technology
T-176C Automotive Brakes and Suspension Systems
T-176C Automotive Engines and Power Trains
T-176C Automotive Fuel and Electrical Systems
T-022C Business Computer Programming, Basic
T-073C Child Care Administration
T-073C Child Care, Basic
T-073C Child Care Credentials
V-032C CNC and Conventional Machining
V-032 CNC Programming/Machinist
C-003C Commercial Art
T-045C Computer Aided Manufacturing, Advanced
T-022C Computer Skills, Basic
T-047C Industrial Engineering Technology
T-049C Operations Management Technology

C-011C General Education
C-031C Health and Physical Education
V-028C Industrial Maintenance Mechanic
V-032C Lathe and Milling Machine Operations
T-189 Law Enforcement Training/Criminal Justice Academy
V-072 Nursing Assisting
V-168 Phlebotomy
C-044C Psychology
V-050C Welding

CONTINUING EDUCATION PROGRAMS

As a non-credit arm of the college, Continuing Education has the flexibility to offer short-term courses, broad-based programs, and various services to the citizens of Gaston and Lincoln Counties.

COMMUNITY SERVICE PROGRAMS

Community Service programs include a wide variety of courses for the general public. Examples of these courses include language, literature, investments, sewing, bricklaying, traffic schools, painting, horseback riding, dancing, and arts and crafts.

PROFESSIONAL DEVELOPMENT INSTITUTE

The Professional Development Institute encompasses a broad range of programs designed for the training and education needs of managers and professionals. The institute offers certification and review courses for Certified Managers, APICS, and CPA's. PDI courses are basic lecture courses that require no prerequisites. Gaston College is registered with the North Carolina State Board of CPA Examiners as a sponsor of continuing professional education. *Complaints or comments regarding registered sponsors may be addressed to the North Carolina State Board of CPA Examiners, P.O. Box 12827, Raleigh, NC 27605-2827.*

FOCUSED INDUSTRIAL TRAINING

The Focused Industrial Training Center classes are designed for specific groups of workers who need to update their skills because of technological changes.

NEW AND EXPANDING INDUSTRY

The New and Expanding Industry Program encourages businesses to create more jobs by providing funding for specialized training courses. These courses are offered free of charge to industry and range from basic employee relations to highly sophisticated production skills.

OCCUPATIONAL EXTENSION

Occupational Extension courses teach occupational skills and provide licenses and certification. Courses include office skills, computer training, quality control, manufacturing techniques, and commercial driving license preparation. Courses may be offered on campus or at community locations.

SMALL BUSINESS CENTER

The Small Business Center is a specially funded program which provides no-fee consulting and seminars for small business owners and prospective small business owners. The Gaston College center is one of 58 small business centers comprising the N.C. Community College Small Business Network. The Small Business Center provides assistance in developing business plans to obtain financing. Assistance is also given toward marketing, accounting, personnel, financing, and management concerns relating to small business.

CRIMINAL JUSTICE ACADEMY

The Criminal Justice Academy serves the area law enforcement agencies by offering a wide range of law enforcement extension courses. Officer Survival, Defensive Tactics, Baton Training, Legal Updates, Bike Patrol, Pepper Spray, Chemical Immobilization, Animal Cruelty. Other various Inservice Training courses offered are Firearms and Driver Training. Some Inservice Training courses are offered upon demand. Programs which offer Certification from the North Carolina Criminal Justice Standards Division are: Radar Certification and Intoxilyzer Certification. Courses are offered on campus at the Regional Emergency Service Training Center and at various off-campus locations throughout Gaston and Lincoln counties.

EMERGENCY MEDICAL SERVICES

The Emergency Medical Services Program serves local emergency medical agencies in emergency training for initial certification and recertification of both basic and advanced life support courses. Training is offered in cooperation with the State of North Carolina Office of Emergency Medical Services and leads to state certification. In some instances, training may lead to national certification. Additional courses are offered (both on-campus and off-campus) to meet the needs of EMS agencies in Gaston and Lincoln Counties.

REGIONAL EMERGENCY SERVICES TRAINING CENTER

The Regional Emergency Services Training Center provides basic, continuing, and advanced training to all areas of emergency services—fire, rescue, law enforcement, and emergency medical services. The primary intent of the RESTC is to improve the training and level of expertise, within emergency services, across the state of North Carolina.

The facility began operation in January, 1991, and is located on 15 acres within the southern portion of the Gaston College campus. Within the RESTC is a 5-story, 21,000 square foot burn structure, which is the largest of its type in the United States. The burn structure houses a pitched-roof ventilation training area, industrial simulation areas, interior combustible liquid area, 5-story vertical confined space shaft, and 1800 square foot simulated smoke maze. In addition to the burn structure, there are also 12 flammable liquid/liquid petroleum gas pits, confined space areas, hazardous materials areas, emergency driving course, and training pavilion with fitness center.

FIRE & RESCUE TRAINING

Gaston College leads the state in the delivery of Fire and Rescue Training. This program assists local municipalities and volunteer fire departments and rescue squads in the overall training of firefighter and rescue personnel. Certification training is delivered in cooperation with the N.C. Fire and Rescue Commission and the National Fire Academy, utilizing standards of the National Fire Protection Association. Current available programs which offer North Carolina certification are: Firefighter-Levels I & II, Basic Rescue Technician, Advanced Rescue Technician, and Emergency Driver/Operator & Pumps. Courses are offered on-campus, at the Regional Emergency Services Training Center, and at various off-campus locations throughout Gaston and Lincoln counties.

INDUSTRIAL EMERGENCY RESPONSE TEAM & FIRE BRIGADE TRAINING

Gaston College leads the state in the delivery of Industrial Fire Brigade Training. This program provides training for local, regional, and national industry through the delivery of customized programs of training addressing the specific needs of each customer. These programs include on-site visits, consultations, and specialized courses in the areas of confined space, hazardous materials, basic and advanced fire suppression techniques, and rescue operations.

CONTINUING EDUCATION UNIT (CEU)

The Continuing Education Unit (CEU) is a nationally recognized measure of non-curriculum or non-credit educational achievement. College credits, either quarter or semester, are earned through successful endeavors in programs leading to degrees or diplomas. The Southern Association of Colleges and Schools requires its college members to participate in the CEU program.

Copies of CEU guidelines are available in each program office. Highlights are

—A course will have established objectives and content.

—A course will have standards of satisfactory performance and those standards will be announced at the first class meeting.

—Students may earn CEU's by satisfactorily meeting one of three standards:

1. A minimum of 90% attendance in courses not having quality assessments.
2. A combination of attendance and quality assessment.
3. A written quality assessment and a minimum of 70% attendance.

Note: Some of these highlights are program specific through a state certification process.

Transcripts for Continuing Education are available from the Continuing Education Records Office.

LIFE SKILLS PROGRAMS

Basic Skills Programs are offered through the Gaston College Life Skills Department and consist of several components such as *Adult Basic Education/General Educational Development (ABE/GED), Adult High School Diploma Program,* and *English As A Second Language.*

ADULT BASIC EDUCATION

The Adult Basic Education Program teaches skills in reading, English, and mathematics from the most basic level through high school level. Students may study to improve their basic skills or prepare for the GED exams. Upon successful completion of the five examinations (math, writing, literature, social studies, and science), participants will receive a certificate of High School Diploma Equivalency from the North Carolina Department of Community Colleges. These free classes are offered in various locations in Gaston and Lincoln Counties.

ADULT HIGH SCHOOL DIPLOMA PROGRAM

The Adult High School Diploma Program is available to Gaston and Lincoln County residents who need to earn high school units in order to receive a diploma. To earn these units, students must attend classes, meet the requirements of the course, and pass a comprehensive final exam that will demonstrate competency in the particular subject. The Adult High School is offered as a free service to the community.

ENGLISH AS A SECOND LANGUAGE

Gaston College offers ESL classes that teach written and conversational English to immigrants preparing them for citizenship and life in the community. The class is offered at no charge to the students; class locations and hours may vary quarter to quarter to better serve our students.

HUMAN RESOURCES DEVELOPMENT PROGRAM

The Human Resources Development Program is also offered by the Life Skills Department. Human Resources Development prepares the participants for the work place. In the eight-week course, students explore such topics as building positive attitudes and self-esteem, teamwork, and career opportunities in Gaston County. They also receive classroom instruction in the areas of math, English, and reading which improves their basic skills and prepares them, if necessary, for the GED exams. There is no fee for the HRD classes.

DEVELOPMENTAL EDUCATION

The Developmental Education program provides students with the opportunity to build academic skills and acquire the background which should facilitate success in their desired curriculum program. Applicants to degree, diploma, and some certificate programs are required to participate in the ASSET assessment program which provides placement information for reading, English, and math. Once the assessment scores are determined, students are counseled about the courses needed in order to reach their academic and career goals. Students placing into developmental courses may concurrently register for courses within their desired curriculum.

Developmental courses include basic college preparatory courses in reading, writing, and mathematics. In addition, the program offers a college orientation course which teaches strategies for successful learning.

Developmental Education Courses

	Credit Hours
ENG 092 - Fundamentals of Communication	5
ENG 095 - Essentials of English	5
MAT 094 - Basic Mathematics	3
MAT 095 - Essentials in Math	5
MAT 096 - Algebra I	5
MAT 098 - Algebra II	5

RED 094 - Essentials in Reading I	5
RED 095 - Essentials in Reading II	5
ORI 096 - Success Seminar	3

DISTANCE LEARNING

TWO-WAY CLASSROOM

A fiber optic, two-way interactive classroom has been established between Gaston College's Dallas Campus and the Lincoln Campus. The purpose of these classrooms is to allow small numbers of students to take classes that could not be offered at the distant campus. This system is being enhanced through a trial project with Southern Bell to include sites in Gaston and Lincoln Counties, Mecklenburg County high schools, UNC-Charlotte, and Central Piedmont Community College. The consortium will share instruction for students as well as staff development for instructors.

TELECOURSES

Telecourses are offered over commercial television through the UNC Public Television services. The courses carry college credits and can be used to meet Gaston College's credit program requirement for the divisions they serve.

COOPERATIVE EDUCATION

Cooperative Education (Co-op) is an academic program which integrates classroom study with practical experience in industry, business and public agencies. The work experience constitutes a regular and essential element in the educational process by allowing students to apply their studies in a real work environment.

The Co-op work experience is concurrent or alternates with academic studies. It is a paid work experience and students receive academic credit toward the degree or diploma requirements. Students work from one to four quarters in either part-time or full-time jobs with employers selected and/or approved by the college. Students are contacted and evaluated periodically by a faculty coordinator and receive on-the-job supervision by the employers.

Eligibility

Students may be accepted from various programs of study at Gaston College provided they meet the following general criteria:

1. Be enrolled in an approved Co-op curriculum.
2. Have a minimum 2.00 GPA (this minimum may be higher, depending on degree or diploma).
3. Have successfully completed specific courses pre-selected by faculty.
4. Be recommended by the Co-op faculty coordinator.
5. Be approved by the Cooperative Education Office.

(Note: Enrollment in the Co-op Program does not guarantee placement for every student.)

Application Procedure

Interested students should obtain a Cooperative Education application form from the Co-op Office, a copy of their college transcript from Student Records, and schedule an interview with the Cooperative Education Program Coordinator.

Presently Employed Students

Students may qualify to receive academic credit if they are already employed in an area directly related to their academic major. The following general criteria will be used to determine eligibility:

1. The student must be acquiring new skills or knowledge related to their academic major, and/or
2. The student must be developing a recently-learned skill or applying recently-learned knowledge related to their academic major, and/or
3. The student must be receiving increased levels of responsibility related to their academic major, and
4. The employer agrees to assist with an evaluation of the student's progress and to permit on-the-job visits by Co-op staff.

Students who are interested in Cooperative Education are invited to contact the Co-op Office to obtain additional information about the program. NOTE: Co-op options are listed within each participating curriculum course outline.

THE UNIVERSITY CENTER AT GASTON COLLEGE

Through the efforts of the University of North Carolina at Charlotte and Appalachian State University, Gaston College has been fortunate to have undergraduate and graduate level classes on its campus.

Since 1990, Appalachian State University has offered classes leading to a Bachelor of Technology in Business Leadership, with the University of North Carolina at Charlotte supporting this program by offering the necessary four-year level liberal arts courses.

The University of North Carolina at Charlotte also offers courses leading to a Bachelor of Science degree in Criminal Justice and graduate level classes for those in pursuit of a Master of Public Administration.

In addition, the University Center at Gaston College is pursuing the possibility of expanding its present offerings to include undergraduate courses for programs such as engineering, liberal arts, and business administration.

All undergraduate and graduate level classes offered at The University Center on the Gaston College Campus are advertised in the College's schedule of classes which is published quarterly. For additional information, please call 704-922-6447 or 6449.

Policies and Procedures

STUDENT RESPONSIBILITY

Gaston College has established a set of regulations, policies, and standards in order to provide an academic environment that will promote quality education and assure compliance with state, federal, accreditation, and certification directives and statutes.

Students are responsible for the proper completion of their academic programs based upon the requirements stated in the Gaston College Catalog in conjunction with the current schedule. Faculty members, staff members, counselors, and administrators are available to help students with planning, but the responsibility of fulfilling all requirements rests upon the individual student.

CLASS ATTENDANCE

The instruction work of the college is designed for class attendance. The responsibility for class attendance is placed specifically on the individual student. At the beginning of each course it is the responsibility of each instructor to notify students in writing of the attendance requirements.

A student who fails to maintain attendance requirements can be dismissed from a given class upon recommendation of the instructor.

The student is responsible for all material covered in each course for which he is registered. In no instance does absence from class relieve the student from the responsibility for the performance of any part of the course work. The student is further responsible for initiating any request to make up work because of class absence. The decision to assist the student with makeup work, including tests, in every case rests with the instructor. The instructor may require verification of medical and personal circumstances presented by the student to influence this decision. Course work not made up may cost a student grade advantage in the final evaluation since the instructor is not required to offer the student an opportunity to make up course work.

A student may seek reinstatement into a class by submitting a written request to the respective instructor. If the request is denied, the student can petition for reinstatement directly to the Dean for Curriculum and Instruction, who will make a final ruling upon the petition.

STANDARD OF HONESTY

The college is conducted on basis of common honesty. Dishonesty, cheating and plagiarism, or knowingly furnishing false information to the college are regarded by the college as serious offenses. It is expected that cases of dishonesty will first be considered at the department-faculty level, then the matter will follow procedures in accordance with the Code of Student Conduct.

THE STUDENT RECORDS OFFICE

The Office of Student Records and Registration handles registration each quarter for credit classes. This office provides transcripts of student academic records (official and student copies), and verification and certification of enrollment status. The office also mails final grade reports, processes grade changes, orders and issues diplomas, and processes name and address changes.

Specific registration information is contained in *Register*, the quarterly class schedule.

FAMILY RIGHTS AND PRIVACY ACT/ RELEASE OF STUDENT INFORMATION

Gaston College has a long-standing commitment to the concern for and protection of students' rights and privacy of information. Gaston College complies with the provisions of the Federal Family Educational Rights and Privacy Act, State of North Carolina Law and the State Department of Education Division of Community Colleges rules. These Federal and State requirements relate to accessibility and confidentiality of student records. Gaston College Procedures, Release of Student Information, provides pertinent and detailed information concerning classification of student records and access and release provisions. This procedure is available to students, faculty, administration and staff in the Dean of Students office and is also published in the Student Handbook.

Students have the right to inspect their educational records, correct such records if warranted, and students are protected from release of information without written consent. All student records are open for inspection and review by the student unless he or she waives this right. The parent(s) of a dependant student as defined in Title 26 U.S.C.S.s 152 Internal Revenue Code, also has this right to inspect records which are maintained by the college on behalf of the student.

There are three categories of records: (1) Directory Information Records, (2) Limited Access Records, and (3) Sole Possession Records.

(1) *Directory Information Records,* which may be made public, includes a student's name, address, last known address, telephone number, date and place of birth, major field of study, dates of attendance, degrees received. This information will only be released by the Office of the Dean of Students or designee after the requestor has demonstrated a legitimate need to have such information. Any student not wishing the release of directory information must complete a statement in the Student Records Office no later than the last day of drop/add. Otherwise, directory information may be disclosed for legitimate purposes by the college.

(2) *Limited Access Records* pertain to the permanent academic records of the student, disciplinary records, financial information and testing data. The college will not release information in limited access records except with the written permission of the student.

(3) *Sole Possession Records* pertain to records of instructional supervisory and administration personnel which are the sole possession of the make and are not accessible or revealed to any other person.

STUDENT RIGHT-TO-KNOW

The average rate of persistence toward degree completion of students at Gaston College is available in the Student Records Office.

REGISTRATION FOR CURRICULUM COURSES

HOW TO REGISTER

Registration is held each quarter according to scheduled dates and procedures published in the quarterly schedule. Students are responsible for registering each quarter.

The privilege of registering may be withheld by the college for the following reasons: unpaid fees, overdue loans, library books, or incomplete admission records. Exceptions may be made by the Dean of Students.

Students who experience academic difficulties (see Satisfactory Academic Progress on page 48) may be limited in their selection of courses and the number of credits for which they may register.

STUDENT CLASSIFICATION

Evening:	A student who is enrolled for a majority of course work scheduled after 4:30 p.m.
Day:	A student who is enrolled for a majority of course work scheduled before 4:30 p.m.
Full-time:	A student who is enrolled for twelve or more quarter hours.
Part-time:	A student who is enrolled for fewer than twelve quarter hours.
Freshman:	A student who has completed fewer than forty-two quarter hours of course work.
Sophomore:	A student who has completed forty-two or more quarter hours of course work.

CHANGE OF PROGRAM

Students may change their program by completing a Program Change Form available in the Student Records Office. The division dean for the new program will be asked to evaluate the student's transcript. Following the evaluation, the student's permanent record will indicate a change of program. Only one program change will be processed per year. Only the Gaston College grades accepted through the dean's evaluation will be considered in computing the Gaston College grade-point average for the new program. All grades for courses taken prior to this change will not be considered in computing the Gaston College grade-point average. Credits successfully earned prior to the change will be applied toward the new program.

(NOTE: Students planning to transfer to another college or university are cautioned that the receiving institution may use all grades earned in computing grade-point averages for admission or other purposes.)

As soon as the program change process is complete, the student should begin following the course requirements from the *current catalog*, regardless of when he or she first enrolled at Gaston.

AUDITING A COURSE

Auditing a course means that a student attends classes, but is not required to submit assignments or take examinations. An auditor, therefore, receives neither a grade nor course credit. The auditing fee, however, is the same as when a student is regularly enrolled for credit. The decision to audit cannot be reversed.

Students should register for the course to be audited during the registration period, then complete an audit form, obtain the signature of the instructor and submit it to the Student Records Office. Audit status may be declared up through the seventh week of class.

WITHDRAWAL

Withdrawal from a course for academic reasons must be initiated by a student prior to the seventh week of the quarter. The student must complete an official withdrawal form available from the Student Records Office.

After the seventh week of classes, withdrawals are granted for the following reasons:

Medical—for reasons of accidents or illness

Administrative—for unusual or unavoidable circumstances

After the seventh week, withdrawal requires the approval of both the instructor and division dean.

If the instructor and division dean refuse to withdraw a student, a grade will be issued. The student may appeal the grade through the grade process.

(NOTE: A student who stops attending classes for any reason should not expect the instructor to drop him or her. It is the student's responsibility to withdraw officially by completing a withdrawal form in the Student Records Office by the deadline date published in the quarterly schedule. Failure to do so could result in an F grade).

CREDIT HOURS AND COURSE LOADS

FULL-TIME/PART-TIME STATUS

A student must take at least 12 quarter credits to be considered a full-time student. Although the normal course load for a full-time student is 16 quarter credits, a counselor or advisor may recommend a heavier or lighter load depending on ability and/or past performance. Permission from the division dean is necessary to enroll for more than 20 quarter credits.

Each credit hour taken usually requires a minimum of two hours of outside study each week. A student employed full-time should not attempt to carry more than two

courses per quarter. A student working part-time should carry a course load in proportion to the hours of employment.

COURSE OVERLOAD

No student may carry in excess of twenty credit hours except with the written permission of the appropriate division dean.

GETTING CREDITS WITHOUT TAKING THE COURSE

CREDIT BY EXAMINATION

During the period of enrollment in a given course at Gaston College, a student may petition the course instructor and department chairperson for permission to seek course credit by examination. If both grant their permission, the department chairperson, upon the student's successful completion of the examination, will notify the division dean and the registrar of this outcome. Credit by examination is not permitted for courses numbered less than 100. No student may request credit by examination for more than eighteen credit hours. The student must be registered and have paid for the course for which the examination is requested.

Recommendations For Credit By Exam

1. Students who are considering CE must take the exam during the first 10 days of the quarter.
2. Students who are on any type of financial aid should confer with the Financial Aid Office before attempting credit by exam.

LPN-RN and EMS students are exempt from the college's policy on maximum CE credits. Because of the nature of the program, many of these students will exceed the maximum of eighteen CEs allowed by the college policy.

To be entered in the student's record in a given quarter, the examination must be completed during the first 10 days of the quarter and the registrar must be notified in writing of the successful completion by the end of the third week of classes.

The grade of CE will be earned by successful completion of the examination. The student may take the examination only once. Credits by examination will be applied toward graduation requirements. Quality points are not computed for the grade CE.

ADVANCED PLACEMENT

A student may be granted advanced placement by presenting scores on the College Board Advanced Placement Examination. Students with scores of 4 or 5 will be given college credit (but no academic grade) for beginning courses.

TRANSFERRING TO GASTON COLLEGE FROM ANOTHER COLLEGE

Students are eligible to transfer from accredited colleges and universities. Transfer students whose status with the institution last attended is other than "Good Standing" or whose accumulative grade point average is below the sliding scale used by Gaston College may be admitted on probation. If the transfer student is not eligible to return to the institution from which he wishes to transfer, he may be refused admission to Gaston College.

Gaston College accepts transfer credits from institutions of higher education which are accredited by the Southern Association of Colleges and Schools and other regional agencies recognized by the Council on Postsecondary Accreditation as described in the current edition of Transfer Credit Practices of Designated Educational Institutions published by the American Association of Collegiate Registrars and Admissions Officers. Transcripts will be evaluated by deans of the curricular divisions for transfer credit. Transcripts will not be evaluated until student has applied for admission to Gaston. The student should contact the Student Records office to determine which credits accepted in transfer will apply toward the degree sought. This procedure is initiated in the Admissions Office. Some departments at Gaston College require an examination to validate transfer credit. These examinations are administered by the department or division involved.

TRANSFERRING TO ANOTHER COLLEGE FROM GASTON COLLEGE

Counselors and other members of the college staff will advise and assist any student planning to transfer to a four-year institution. However, it is the student's responsibility to follow the admissions requirements closely. These requirements are indicated in the particular institution's catalog. Reference copies of various catalogs are available in the campus library and counseling offices.

Because of the highly specialized nature of courses in career programs, many of the courses are not designed for transfer to a four-year institution. Students also should note that courses with numbers 100 or lower usually do not transfer.

Students are strongly advised to see a counselor regularly if they are planning to transfer to a four-year college or university. Representatives from four-year colleges often visit the campus to help Gaston College students plan their transfer programs.

TRANSCRIPTS OF GRADES

Information on a student's academic performance is available on a quarterly basis via direct mailings and transcript records.

Transcripts are sent only upon written request of the student. No transcript will be furnished for any student or alumnus who has a financial obligation to the college

such as unpaid fees or overdue library books. Transcripts may also be held for incomplete admissions records. There is no fee for transcripts.

It is the policy of Gaston College NOT to issue transcripts of other colleges and schools. "Official Transcripts" will be mailed to other institutions by written request only.

TAKING CLASSES AT OTHER CHARLOTTE-AREA COLLEGES

Gaston College is a member of the Charlotte Area Educational Consortium, which includes twelve other area colleges and universities. A cross-registration program provided by the consortium allows Gaston College students to take certain courses at other colleges if not available at Gaston. Information on cross-registration is available in the Student Records Office.

HOW THE GRADING SYSTEM WORKS

THE QUARTER HOUR

The quarter hour is defined as the unit of credit value of work involved in attending lectures for one class meeting a week for one quarter, or for laboratory sessions varying from two to three hours a week for one quarter.

GRADE SYMBOLS

A final grade is the instructor's evaluation of the student's work and achievement throughout the course. Grades and marks are given at the discretion of the instructor and they may change grades and marks on forms provided by the Student Records Office whenever errors occur.

Factors upon which the final grade may be based are attendance, recitation, written and oral quizzes, reports, papers, final examination, and other class activities. At the beginning of each course it is the responsibility of each instructor to notify students in writing the grading practices which will be used. The evaluation will be expressed according to the following letter system:

Grades		**Quality Points**
A	Superior	4 per quarter hour
B	Above Average	3 per quarter hour
C	Average	2 per quarter hour
D	Lowest Passing Grade	1 per quarter hour
F	Failure	0 per quarter hour
CE	Credit by Examination Grade	0 per quarter hour
I	Incomplete	0 per quarter hour
WA	Withdrawal after the 20% date	0 per quarter hour
WB	Withdrawal before the 20% date	0 per quarter hour
AU	Audit	0 per quarter hour
X	No grade reported by instructor	0 per quarter hour

X	Satisfactory	0 per quarter hour
U	Unsatisfactory	0 per quarter hour
TR	Transferred from another school or university	0 per quarter hour

Grades followed by an asterisk on the student grade report indicate a change of program.

Grades preceded by an "R" on the grade report indicate the course has been repeated.

WHAT THE GRADES MEAN

F Grades—the grade F is recorded if the student has failed on the combined evaluation of work through the quarter.

CE Grade—During the period of enrollment in a given course at Gaston College, a student may petition the course instructor and department chairperson for permission to seek course credit by examination. If both grant their permission, the department chairperson, upon the student's successful completion of the examination, will notify the division dean and registrar of this outcome. Credit by examination is not permitted for courses numbered less than 100. No student may request credit by examination for more than eighteen credit hours. (NOTE: LPN-RN and EMS students are exempt from the college's policy on maximum CE credits. Because of the nature of the program, many of these students will exceed the maximum of eighteen CEs allowed by the college policy.)

The grade of CE will be earned by successful completion of the credit by examination and entered in the student's record. The student may take the examination only once. Credit by examination will be applied toward graduation requirements. Quality points are not computed for the grade CE.

TR Grade—The TR grade is assigned to credits accepted in transfer by the appropriate curricular dean or other credits granted. The grade authorizes credit without further qualification of student performance. The TR grade does not affect a student's grade-point average in any way and is not used in determining whether a student qualifies to graduate with academic honors.

I Grade—When a student has failed to complete the requirements of a course, the student may be given an "Incomplete" or "I" grade. To be awarded this grade, the student must present to the instructor valid reasons for not having completed the course requirements. The instructor and the student then complete an Incomplete Grade Agreement form. This agreement will determine the requirements for a course grade which must be completed by the eighth week of the next quarter. The grade "I" is not computed into the grade point average.

WA/WB Mark—A student who wishes to withdraw from a course or courses within the first seven weeks of the quarter may do so without the credit hours being computed as hours attempted.

Withdrawal from a course or courses after the first seven weeks for other than an appropriate cause determined by medical, counseling, or administrative circumstances shall be counted as a grade earned and computed in the grade-point average.

The mark WA/WB indicates that student withdrew from the course within the first seven weeks or at a later date for appropriate cause determined by medical, counseling, or administrative circumstances.

A student wishing to withdraw from a course or courses must follow the official procedure which is initiated in the Student Records Office.

AU Mark—Students who wish to audit courses must follow the regular registration procedures and declare the audit status to the respective course instructor. A student who registers for an audit may not receive a grade for the course. The fees are the same as for regular college credit. The decision to audit cannot be reversed.

S Mark—S indicates satisfactory progress toward the completion of course work involving individually guided study, internship, externships, and independent study. When the work has been concluded, the S is changed to a regular letter grade and computed accordingly. The "S" progress grade allows a student in an individualized instruction course, who has attended regularly and made satisfactory progress, to continue the course in a subsequent quarter until all the course requirements are met. The student must re-register for the course in the subsequent quarter. The hours credit and hours attempted will not be given until the first quarter the student enrolls in an individualized course. Exceptions to continue the "S" into a third quarter must have written permission of the instructor and the division dean. (See also "Satisfactory Academic Progress").

A grade of "S" may be awarded to veterans or to veteran's dependents receiving VA educational benefits.

GRADE POINT AVERAGE (GPA)

Each letter grade has a point value. A student may determine the grade points for each course by multiplying the number of points a grade is worth times the number of credits the course carries. Thus a "B" (worth 3 points) in a 3 credit course is worth 9 grade points and an "A" (worth 4 points) in the same 3 credit course is worth 12 grade points.

The grade point average is found by adding the total grade-point values for all course and dividing by the total number of credits attempted during the same period of time.

Only course work taken at Gaston College is used in computing grade-point averages.

SATISFACTORY ACADEMIC PROGRESS

Satisfactory academic progress is determined by examining the ratio of quality points to quarter hours attempted. Quality points averages are computed by dividing the total number of quality points earned by the total number of quarter hours attempted. Since a quality point average of 2.00 on all courses presented is required for graduation, students should endeavor at all times to have at least twice as many quality points as quarter hours attempted.

REPEATING A COURSE

A student may repeat a course taken at Gaston College in order to improve the cumulative grade point average. The credit is given for the highest grade earned when repeating a course. Repeated courses will appear on the student's transcript. Both course attempts will be shown, but the cumulative grade point average will be computed again to count only the course with the highest grade. Upon completion of the repeated course the student must submit a copy of his transcript to the Dean for Curriculum and Instruction for final approval.

Specific requirements for repeating a course:

1. A student may repeat a course for credit or audit or a combination of the two no more than three times within a five year period.
2. A student may repeat a course when a S mark indicating satisfactory progress toward the completion of the course is awarded no more than four times within a five year period.
3. A student may not re-enroll for a course in which credit by examination (CE) has been awarded.
4. A student may not re-enroll for a course in which an incomplete (I) has been awarded until that I is removed.
5. A student who is awarded a (WB) withdrawal before the 20 percent date will not be considered as repeating.

ACADEMIC ALERT

Any student who maintains less than a 2.00 grade point average is placed on academic alert. A student on academic alert must meet with his/her assigned advisor no later than the end of the drop/add period of the current quarter to develop a plan for removing the alert status.

If after two successive quarters the academic alert status has not been removed, the student will be placed on academic suspension and will not be allowed to re-enroll for one quarter.

During the suspension period, the student is encouraged to meet with a counselor or the appropriate divisional retention specialist. If the student chooses another program, a change of program form must be initiated by the student. A student must petition the Dean for re-enrollment in the same program or meet with the divisional retention specialist to complete a major change program for a new program of study.

GROUNDS FOR STUDENT DISMISSAL

Academic standards and compliance with accreditation and legal requirements are maintained, in part, through regulations and policies related to student behavior both in and out of the classroom, i.e., matriculation for scholarly pursuit and citizenship. The college has the right to dismiss a student in violation of regulations or policies.

A student may be dismissed from a course or a program under academic regulations or from the college for violations of citizenship regulations.

Dismissal from Gaston College for academic reasons is initiated by faculty, chairpersons, divisional deans, or the student's advisor upon petition to the Dean of Students.

Academic dismissal based upon the concept of "Satisfactory Progress" in a specific course or program is stated in terms of minimum grades, completion of course sequences, and the achievement of certain knowledges, skills, and abilities.

Reinstatement of a dismissed student is possible only by permission of the Dean of Students. Note: Dismissal is to be distinguished from academic alert. Academic alert is a temporary sanction administered by the student's advisor or the department chairperson in terms of a "Satisfactory Progress" statement. That department chairperson establishes the condition of the alert, i.e., duration, remediation, proficiency demonstration. Appeal of a alert is presented to the Dean of Curriculum and Instruction by the divisional dean.

DISMISSAL FROM AN OCCUPATIONAL PROGRAM

If the department chairperson determines that a student is not a safe and dependable practitioner in the lab, shop, clinic or field area in the progress of a course, then the student may be dismissed from the program with the concurrence of the Dean of Curriculum and Instruction through the due process procedure.

Due to the fact that certain courses of many occupational programs are prescribed in a one or two-year sequential pattern and are offered only once during the sequence, a student has no opportunity to repeat one of these courses or to elect a substitute course. Therefore, a student who fails one of these courses will be dismissed from the program at the end of the quarter in which the failure occurs.

Students dismissed from an occupational program under this policy may petition for enrollment in a later class.

HONORS LIST

PRESIDENTS LIST

The Presidents List is a quarterly honor roll for students attaining a grade-point average of 4.00 on twelve or more hours of work (not including CE credits) in any given quarter and with no withdrawals and/or incompletes being recorded.

DEANS LIST

In order to qualify for the Deans List, a student must take a minimum course load of not fewer than twelve quarter hours (not including CE credit), and maintain at least a 3.50 average with no grade lower than a B and with no withdrawals or incompletes being recorded.

HONORS LIST

The Honors List is a quarterly honor roll for part-time students attaining a grade-point average of 3.5 on eight to eleven quarter hours of work (not including CE

credit) in any given quarter and with no withdrawals and/or incompletes being recorded.

GRADUATION

Requirements for the degree, diploma or certificate will vary according to the curriculum. Students should refer to their particular program requirements.

At least thirty (30) credit hours for an associate degree or diploma must be completed in attendance at Gaston College.

Courses numbered less than 100 do not count for graduation credit.

GRADUATION PROCEDURES

Students are expected to file graduation applications with the Student Records Office at least one quarter preceding the completion of degree requirements. Commencement exercises to award degrees and diplomas to students in respective divisions are at the conclusion of the spring and summer quarters. A graduation fee of $15.00 is charged to each graduation student. The specific date of the commencement exercise is listed in the college calendar in front of this catalog.

GRADUATION WITH HONORS

Gaston College recognizes excellent scholarship by designating the status of HONOR or HIGH HONOR to selected graduates receiving associate degrees or diplomas. To be eligible for graduation with HONOR, a student must have a grade-point average of 3.50 or above but below 3.80 on all work presented for graduation.

To be eligible for graduation with HIGH HONOR, a student must have a grade-point average of 3.80 or above on all work presented for graduation.

GRADUATION MARSHALS

Twenty rising sophomores who have attempted 36-50 credit hours at Gaston College, and who have maintained the highest scholastic averages during their freshman year, are honored by being asked to serve as graduation marshals. The marshal who has earned the highest academic record is designated chief marshal.

Student Services

THE BOOKSTORE

The bookstore is located on the first floor of the Myers Center. The bookstore accepts personal checks, MasterCard and VISA. Personal checks should be imprinted with current address, telephone, I.D. number and driver's license number. Banks charge a significant penalty on all returned checks, which is passed on to the customer.

TEXTBOOK REFUND POLICY

A refund will be given only during the first ten calendar days of each quarter.

To obtain a full refund on textbooks:

1. You must have your cash register receipt and your drop slip.
2. If you purchase a book and then drop a course—or the class is canceled—a refund will be given during the first ten calendar days of the quarter provided the book has no marks, erasures or soiled spots.
3. Books must have been bought for the current quarter. Refunds are not given for textbooks bought for prior quarters.

All sales of workbooks, study aids, disks, lab manuals, consumable books and key notes are final.

Any defective book will be replaced free of charge. Please return it as soon as possible.

COLLEGE RADIO STATION

Gaston College radio station WSGE (91.7 FM), with studios and transmitter on campus, signed on the air in October 1980. The station offers educational, instructional and entertainment programming to an area that includes over 2.6 million people. WSGE is operated by the Broadcasting Department of Gaston College and uses the talents of students and volunteers.

COUNSELING AND CAREER DEVELOPMENT CENTER

The Counseling and Career Development Center provides two major services to Gaston College students: counseling and job placement. The Center is located on the second floor of the Myers Center.

COUNSELING

The counseling staff provides professional guidance and counseling services. After completing admission requirements, each student is invited to visit a member of the counseling staff. The counselors offer assistance in choosing an appropriate program of study. Thereafter, it is recommended that students meet with a counselor or adviser on a regular basis to review plans and progress.

Some of the counseling services provided are personal counseling, career and academic advisement, assessment (achievement, aptitude, career, interest, personality, self-directed search, values inventory), college transfer information, student activities information, tutorial services, academic placement testing (ACT, ASSET, and SAT).

STUDENT EMPLOYMENT SERVICES

Student Employment Services helps students and alumni who are seeking employment.

The director assists students and alumni by making them aware of the range of career opportunities available, helping them present themselves effectively as candidates, and aiding them in finding part-time, full-time, temporary, and summer employment.

Some of the specific services offered are an annual Career Day (employer campus visits); resume writing information/workshops; interviewing techniques information/workshops; and posting of part-time, full-time and temporary job openings on the bulletin board outside the Myers Center cafeteria and in the Counseling and Career Development Center.

EARLY CHILDHOOD DEVELOPMENT CENTER/SUMMER CAMP

The Early Childhood Development Center on the campus of Gaston College provides year-round child care in a creative learning environment for children ages six weeks to five years. In addition, Summer Camp is offered for school-aged children in June, July, and August. Children of faculty, staff, students, and the community are accepted and enrolled according to the date of application and availability of space. The hours of the center are 7:30 a.m. to 10:15 p.m.

FOOD SERVICE

Food service is available in the cafeteria on the first floor of the Myers Center. Hot meals are available from 7:30 a.m. through 1:30 p.m., Monday through Friday. Vending machines are located throughout the campus.

HOUSING

Gaston College is a commuter institution designed to serve residents of the surrounding area and does not provide housing for its students.

STUDENT ACTIVITIES

Gaston College recognizes the value of student activities. The college provides a well-balanced program developed in response to student requests and needs.

A large measure of responsibility for campus affairs is in the hands of the students advised by the Chief Student Services Officer and faculty members. The students plan and present many co-curricular campus activities. Activities may vary from quarter to quarter depending upon student choice.

Participation in college governance by students may include membership on numerous college and campus committees including college committees on curriculum, degree requirements, and academic calendar; affirmative action and campus grievance programs.

Among the many activities and organizations at Gaston College campus each quarter are

Bands
Dances and other social functions
Interest groups
Intramural-extramural sports
Political clubs
Professional organizations
Religious groups
Student Government Association

More information about student activities is available in the Office of the Chief Student Services Officer.

STUDENT IDENTIFICATION CARD

Each student is requested to have a Gaston College identification (ID) card. It is required for registration activities, for library checkout, and for admittance to athletic and social events.

Each student will receive a Gaston College ID card. The Gaston College ID card is non-transferable and is void unless it is signed by the student and validated for the current term.

Loss or theft of a Gaston College ID card should be reported within 24 hours to the Chief Student Services officer. The cost for a replacement ID card is $1.00.

Curricula

Degree Programs

ASSOCIATE OF ARTS

Associate of Arts Degree

An Associate of Arts degree will be granted to the students completing the following requirements:

A. General Education Requirements
   1. The satisfactory completion of no fewer than 96 quarter hours.
   2. The completion of no fewer than 30 of the above 96 hours while in attendance at Gaston College. A student is to attain a C (2.00) average on all work presented for graduation.
   3. Proficiency in reading is required of degree-seeking students in the Liberal Arts and Sciences Division. This includes students who plan to complete the A.A. and A.F.A. degrees.
      This proficiency can be demonstrated by one of the following:
      a. Pass RED 104, Critical Thinking and Reading.
      b. Receive credit by examination for RED 104, Critical Thinking and Reading. (RED 104 should be completed during the first quarters of enrollment.)

B. Specific Graduation Requirements
   1. Completion of 10 quarter hours of English in the following sequence:
      ENG 101 and ENG 102
   2. Completion of 18 quarter hours from at least two different disciplines of the following humanities courses:
      a. ART 101, 103, 290
      b. DRA 101, 102, 290
      c. ENG 103, 190, 201, 202, 203, 204, 290
      d. FRE 101, 102, 201, 202
      e. MUS 101, 201, 290
      f. PHI 200, 201, 203, 290
      g. RED 104 (Required)
      h. **REL 101, 102, 103, 210, 290
      i. SPA 101, 102, 201, 202
   3. Completion of 10 quarter hours of mathematics chosen from the following:
      MAT 101, 103, 104, 105, 106, 107, 205, 206, 207, 208, 210, 290
   4. Completion of 12 quarter hours of a biological or physical laboratory science* from the following courses:
      a. BIO 101, 108, 121, 122, 290
      b. BOT 106
      c. CHM 101, 102, 107, 211, 212, 270, 290
      d. ECL 105
      e. ESC 101
      f. GEL 102
      g. GEO 101, 290
      h. PHS 101, 102, 270
      i. PHY 211, 212, 213
      j. ZOO 107

*Most four year colleges and universities require that a student have two laboratory courses in the same discipline or three courses in different disciplines. Students are advised to check catalogs from institutions to which they intend to transfer.

5. Completion of 15 quarter hours from at least two different disciplines of the following social/behavioral sciences courses:
   a. ANT 190, 201, 204, 206, 211, 280, 290, 291
   b. GEO 104, 110, 204, 205, 290
   c. HIS 101, 102, 103, 104, 201, 202, 203, 204, 210, 211, 280, 290, 291
   d. PHI 203
   e. POL 110, 201, 203, 280, 290
   f. PSY 103, 201, 203, 204, 205, 206, 210, 215, 229, 230, 250, 253, 254, 290
   g. **REL 101, 102, 103, 210, 290
   h. SOC 102, 103, 110, 202, 210, 225, 280, 290
6. Completion of 3-6 hours of physical education, including at least 3 activity courses chosen from the following:
   a. Activity Courses - PED 100, 101, 102, 103, 104, 105, 106, 107, 108, 111, 112, 113, 114, 118, 119, 120, 121, 122, 225, 227, 231, 290 (activity only).
   b. Lecture Courses - PED 210, 230, 231, 290

C. Elective Graduation Requirements
   1. A total of no fewer than 25 quarter hours of electives to be selected from any of the following areas:
      a. Humanities (to be chosen from courses listed in B-2.)
      b. Mathematics (to be chosen from courses listed in B-3.)
      c. Science (to be chosen from courses listed in B-4 or CON 205 or CHM 110)
      d. **Social/Behavioral Sciences (to be chosen from courses listed in B-5)
      e. Business (ACC 210, 211, 212;
         CSC 121, 141, 142, 150, 181;
         ECO 201, 202)
      f. Education Courses (EDU 203, 290 or CAS 161)
   2. Courses used to satisfy the preceding B-1, B-2, B-3, B-4, B-5, or B-5 requirements may not be used again for this elective requirements.

**Students may not use the same course to satisfy the requirements for B-2, B-5, and C-1.

ASSOCIATE OF SCIENCE

Associate of Science Degree

An Associate of Science degree will be granted to the students completing the following requirements:

A. General Education Requirements
   1. The completion of no fewer than 96 quarter hours.
   2. The completion of no fewer than 30 of the above 96 hours while in attendance at Gaston College. A student is to attain a C (2.00) average on all work presented for graduation.
   3. Proficiency in reading is required of AS degree-seeking students. This proficiency can be demonstrated by one of the following:
      a. Pass RED 104, Critical Thinking and Reading
      b. Receive credit by examination for RED 104, Critical Thinking and Reading
      c. A score of 46 or higher on the ASSET exam

B. Specific Graduation Requirements
   1. Skills in composition as verified by the following sequence:
      English 101, 102
   2. Completion of 6 quarter hours from the following humanities courses:
      a. ART 101, 103, 290
      b. DRA 101, 102, 290
      c. ENG 103, 201, 202, 203, 204, 218, 290
      d. MUS 101, 201, 290
      e. PHI 200, 201, 203, 290
      f. REL 101, 102, 103, 210, 290
   3. Completion of 20 quarter hours of mathematics from the following list: MAT 101, 104, 105, 106, 107, 206, 207, 208, 210, 290
   4. Completion of 24 quarter hours natural/laboratory science* from the following courses:
      a. BIO 101, 108, 121, 122, 290
      b. BOT 106
      c. CHM 101, 102, 107, 211, 212, 270, 290
      d. ECL 105
      e. GEL 102
      f. GEO 101, 290
      g. PHS 101, 102, 270
      h. PHY 211, 212, 213
      i. ZOO 107
   5. Completion of 9 quarter hours of social/behavioral sciences from the following courses:
      a. ANT 201, 204, 206, 280, 290, 291
      b. GEO 104, 110, 204, 205, 290
      c. HIS 101, 102, 103, 104, 201, 202, 203, 210, 280, 290, 291
      d. POL 110, 201, 203, 280, 290
      e. PSY 103, 201, 203, 204, 205, 206, 210, 215, 229, 230, 250, 253, 254, 290
      f. REL 101, 102, 103, 210, 290
      g. SOC 102, 103, 110, 202, 210, 280, 290
   6. Completion of 3-6 hours of physical education, including at least 3 activity courses, chosen from the following:
      a. Activity Courses - PED 100, 101, 102, 103, 104, 105, 106, 107, 108, 111, 112, 113, 114, 118, 119, 120, 121, 122, 225, 227, 260
      b. Lecture Courses - PED 210, 230, 231, 290

C. Elective Graduation Requirements
   1. A total of no fewer than 21 quarter hours of electives to be selected from any of the following areas:
      a. Humanities (to be chosen from courses listed in B-2 or FRE 101, 102, 201, 202 or SPA 101, 102, 201, 202)
      b. Mathematics (to be chosen from courses listed in B-3)
      c. Science (to be chosen from courses listed in B-4 or CON 205 or GEO 290, BIO 134, BIO 290 or CHM 290)
      d. Social/Behavioral Sciences (to be chosen from courses listed in B-5)
      e. Business Courses (CSC 121, 141, 142, 143, 150, ECO 201, 202)
      f. Engineering Courses (DFT 101, 102; EGR 205, 206)
      g. Education Courses (CAS 161)
   2. Courses used to satisfy the preceding B-1, B-2, B-3, B-4, B-5, or B-6 requirements may not be used again for this elective requirements.

D. Pre-Engineering students should follow the C-007 curriculum and the elective courses in Humanities* must be selected from:
   English
   Philosophy (except PHI 203)
   Religion

   and the electives in Social Science* must be selected from:
   Anthropology
   History
   Political Science
   Psychology
   Sociology

*Students are advised to check the catalog from the institution to which they intend to transfer.

ASSOCIATE OF FINE ARTS

Associate of Fine Arts Degree

An Associate of Fine Arts degree will be granted to the students completing the following requirements:

A. General Education Requirements
   1. The satisfactory completion of no fewer than 96 quarter hours.
   2. The completion of no fewer than 30 of the 96 hours while in attendance at Gaston College. A student is to attain a C (2.00) average on all work presented for graduation.
   3. Proficiency in reading is required of degree-seeking students in the Liberal Arts and Sciences Division. This includes students who plan to complete the A.A. and A.F.A. degrees.
      This proficiency can be demonstrated by one of the following:
      a. Pass RED 104, Critical Thinking and Reading
      b. Receive credit by examination for RED 104, Critical Thinking and Reading. (RED 104 should be completed during the first quarters of enrollment)

B. Specific Graduation Requirements
   1. Completion of 10 quarter hours of English in the following sequence:
      English 101, 102
   2. Completion of 12 quarter hours* from at least two different disciplines of the following humanities courses:
      a. ART 101, 103, 290
      b. DRA 101, 102, 290
      c. ENG 103, 190, 201, 202, 203, 204, 290
      d. FRE 101, 102, 201, 202
      e. MUS 101, 201, 290
      f. PHI 200, 201, 290
      g. RED 104 (Required)
      h. **REL 101, 102, 103, 210, 290
      i. SPA 101, 102, 201, 202
   3. Completion of 5 quarter hours in mathematics from the following courses:
      MAT 101, 103, 290
   4. Completion of 5 quarter hours in natural science from the following courses:
      a. BIO 101, 108, 121, 122
      b. BOT 106
      c. CHM 101, 102, 110
      d. ECL 105
      e. ESC 101
      f. GEL 102
      g. GEO 101, 205
      h. PHS 101, 102
      i. ZOO 107

*Pre-art students may not take ART 101 (Art Appreciation) to fulfill degree requirements.

   5. Completion of 9 quarter hours of social/behavioral sciences from at least two different disciplines of the following courses:
      a. ANT 190, 201, 204, 211, 280, 290, 291
      b. GEO 104, 110, 204, 205, 290
      c. HIS 101, 102, 103, 104, 201, 202, 203, 204, 210, 280, 290, 291
      d. PHI 203

e. POL 110, 201, 203, 280, 290
f. PSY 103, 201, 203, 204, 205, 215, 230, 250, 253, 254, 290
g. **REL 101, 102, 103, 210, 290
h. SOC 102, 103, 110, 202, 280, 290

6. Completion of 3 hours of physical education activity courses chosen from the following:
   a. PED 100, 101, 102, 103, 104, 105, 106, 107, 108, 111, 112, 113, 114, 117, 118, 119, 120, 121, 122, 125, 210, 227, 260, 290
7. A total of no fewer than 36 quarter hours of professional courses in art, or music (depending upon major) to be chosen from the following:

Pre-Visual Art Major

a. ART 103 required
b. CER 121 required
c. DES 110, 111, 112, all required
d. ART 131, 141, 151, 161, all required
e. ART 102
f. ART 104
g. JCR 109, 113
h. DES 114
i. ART 115, 116, 117, 215
j. CER 122, 123, 125
k. ART 132, 133
l. ART 142, 143, 145
m. ART 152, 153, 155
n. ART 162, 163, 165
o. ART 290

Pre-Music Major

a. MUS 101, 201, both required
b. MUS 111, 112, 113, all required
c. MUS 211, 212, 213, all required
d. MUS 134, 135, 136, all required
e. MUS 131, 141, 161, one required
f. MUS 125, 126, 127
g. MUS 142, 143, 144
h. MUS 154, 155, 156

C. Elective Graduation Requirements

1. A total of no fewer than 16 quarter hours of electives should be selected from any of the following areas:
   a. Humanities (to be chosen from courses listed in B-2)
   b. Science/Mathematics (to be chosen from courses listed above in B-3 or B-4)
   c. Social Science (to be chosen from courses listed above in B-5)
   d. Education (CAS 161)
   e. Health and Physical Education
2. Courses used to satisfy the preceding B-1, B-2, B-3, B-4, B-5, or B-6 requirements may not be used again for these electives.

**Students may not use the same course to satisfy the requirements for B-2, B-5, and C-1.

ACCOUNTING

Associate of Applied Science Degree in Accounting (T-016)

Curriculum Description

The Accounting curriculum is designed to provide students with knowledge and skills necessary for employment and growth in the accounting profession. Often referred to as the "language of business," accounting serves as an informational system for organizations. Accountants assemble, analyze, and communicate essential information about financial operations.

The course of study places emphasis on accounting principles, theories, and practices and includes study in business law, finance, management, and economics. Skills related to the applications of accounting principles are developed through study of communications, computer applications, interpersonal skills development, decision making principles, and ethics.

The curriculum is designed to prepare individuals for entry-level accounting positions in all types of organizations, including CPA firms, small businesses, manufacturing firms, insurance companies, banks and non-profit organizations such as hospitals, colleges, school systems, and governmental agencies. With work experience and additional education, an individual may advance to positions such as accountant, controller, and auditor.

QUARTER SEQUENCE

			Class	Lab	Credit
		FIRST QUARTER			
ACC	210	Principles of Accounting I	4	3	5
BUS	111	Business Mathematics	5	0	5
ENG	101	Freshman Grammar and Composition	5	0	5
		Related Course	5	0	5
			19	3	20
		SECOND QUARTER			
ACC	211	Principles of Accounting II	4	3	5
BUS	209	Business Law	5	0	5
		Related Courses	8	0	8
		Free Elective	3	0	3
			20	3	21
		THIRD QUARTER			
ACC	212	Principles of Accounting III	4	3	5
BUS	213	Principles of Finance	5	0	5
		Related Courses	5	0	5
		Math or Natural Science	5	0	5
			19	3	20
		FOURTH QUARTER			
ACC	213	Intermediate Accounting I	4	3	5
ACC	216	Federal Income Tax	4	3	5
ACC	218	Managerial Accounting	5	0	5
		Related Course	5	0	5
			18	6	20

		FIFTH QUARTER			
ACC	214	Intermediate Accounting II	4	3	5
ACC	219	Auditing	4	3	5
ECO	101	Economic Concepts I *OR*	5	0	5
		ECO 201 Principles of Economics			
		Related Course	5	0	5
			18	6	20
		SIXTH QUARTER			
ACC	215	Cost Accounting	4	3	5
ECO	102	Economic Concept II *OR*	5	0	5
		ECO 202 Principles of Economics			
		Humanities	3	0	3
		Related Course	5	0	5
			17	3	18
		Total Hours Required for Graduation			119

RELATED COURSES

A student may select 33 credit hours from the following courses:

BUS	104	Introduction to Business	5	0	5
BUS	120	Personal Finance	5	0	5
BUS	121	Principles of Management	5	0	5
BUS	167	Small Business Management	5	0	5
BUS	210	Business Law	5	0	5
BUS	233	Personnel Management	3	0	3
CAS	180	Microcomputer Applications	3	4	5
CAS	230	Information Analysis	3	4	5
CSC	150	Computer Fundamentals	3	2	4
CSC	173	Spreadsheet and Data Base	3	4	5
OSC	126	Communications II	3	4	5
OSC	141	Keyboarding	3	2	4

Humanities Courses: Art, Literature, (except ENG 102), Modern Language, Music, Philosophy (except PHI 203), Religion.

ADMINISTRATIVE OFFICE TECHNOLOGY

Associate of Applied Science Degree
Administrative Office Technology (T-030)

Curriculum Description

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

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

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

Any student seeking two or more degrees within the Office Technology Curricula will need advisement from the department chair as to course credits transferable from one curriculum to another.

Technical courses (OSC and CSC) may be transferred into Office Technology within five years of completion of the course(s).

QUARTER SEQUENCE

			Class	Lab	Credit
OSC	141	Keyboarding I	3	2	4
CSC	148	IBM/PC/DOS-OS/2	3	4	5
BUS	111	Business Math	5	0	5
BUS	104	Introduction to Business	5	0	5
OSC	142	Keyboarding II	3	2	4
ENG	101	Freshman Grammar and Composition	5	0	5
OSC	125	Communications I	3	4	5
		Math or Natural Science Elective	5	0	5
OSC	126	Communications II	3	4	5
OSC	230	Records Management	3	4	5
OSC	220	Word Processing I	3	4	5
		Technical Elective*	5	0	5
OSC	221	Word Processing II	3	4	5
ENG	103	Public Speaking	5	0	5
OSC	219	Machine Transcription	3	4	5
ACC	210	Principles of Accounting I	4	3	5
BUS	242	Human Relations in Business	3	0	3
OSC	127	Professional Development	3	4	5
BUS	209	Business Law	5	0	5
		Humanities Elective	5	0	5

			Class	Lab	Credit
		Social Science Elective	3	0	3
OSC	152	Critical Issues in Office Technology	5	0	5
OSC	223	Administrative Office Procedures	3	4	5
		Technical Elective*	5	0	5
		Elective	5	0	5
		Total Hours Required for Graduation			119

Technical Electives 10 Hours Included in Major

Students should select ten hours of technical electives from the list below:

BUS	130	Organizational Behavior	5	0	5
CSC	175	Spreadsheet Programming (Excel)	3	4	5
CSC	177	Data Base Processing (Access)	3	4	5
OSC	143	Keyboarding III	3	2	4
OSC	153	Resumes/Interviews	1	2	2
OSC	222	Word Processing III (Microsoft Office)	3	4	5
OSC	231	Desktop Publishing (PageMaker)	3	4	5
OSC	263	Ten-Key	1	2	2

Humanities courses: Art, Literature, Modern Language, Music, Philosophy, Religion, and Reading.

Social Science Courses: Anthropology, Economics, Geography, History, Political Science, Psychology, and Sociology.

Math or Natural Science Elective (Prefix of: MAT, CHM, GEO, GEL, PHS. PHY, or BIO)

*Qualified students may elect to take up to five credit hours of Cooperative Education for Technical Elective credit.

ARCHITECTURAL TECHNOLOGY

Associate of Applied Science Degree
Architectural Technology (T-041)

Curriculum Description:

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

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

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

ASSET placement test and a high school diploma or GED are required for admission. A mechanical aptitude test is recommended.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
*BPR	111	Architectural Blueprint Reading	3	0	3
ARC	113	Architectural Drafting Fund	3	9	6
ENG	121	Composition I	3	0	3
MAT	110	Technical Math	5	3	6
			14	12	18

SECOND QUARTER

DFT	150	CAD I	3	3	4
ARC	212	Residential Architecture	3	9	6
ENG	124	Composition II	3	3	4
MAT	121	Algebra and Trigonometry I	4	2	5
			13	17	19

THIRD QUARTER

ARC	124	Commercial Architecture I	3	9	6
PHY	132	Principles of Technology	3	3	4
ARC	142	Building Codes and Laws	3	0	3
ARC	120	Architectural Sections I	3	3	4
			12	15	17

FOURTH QUARTER

ARC	144	Commercial Architecture II	3	6	5
CSC	148	IBM PC 1 DOS-OS/2	3	4	5
ARC	164	Steel Detailing	3	3	4
DFT	154	CAD II	3	3	4
			12	16	18

ARCHITECTURAL TECHNOLOGY

		FIFTH QUARTER			
*ARC	126	Architectural Estimating I	3	3	4
ARC	225	Architectural Sections II	3	3	4
SRV	101	Surveying	3	6	5
		Humanities Elective	3	0	3
		Elective	3	0	3
			15	12	19
		SIXTH QUARTER			
ARC	127	Architectural Estimating II	2	3	3
DFT	157	CAD III - Architectural	3	3	4
CIV	206	Fundamentals of Hydrology	2	3	3
*DFT	112	Civil Drafting	0	6	2
SPH	223	Public Speaking	3	0	3
			10	15	15
		SEVENTH QUARTER			
		Social Science Elective	3	0	3
ARC	237	Commercial Architecture III	3	6	5
SRV	102	Surveying II	3	6	5
ENG	125	Report Writing	3	3	4
			12	15	17
		Total Hours			123

*Students may choose the following in lieu of these courses:

COE	101	Cooperative Work Experience I	0	10	1
COE	102	Cooperative Work Experience II	0	10	1
COE	103	Cooperative Work Experience III	0	10	1
COE	104	Cooperative Work Experience IV	0	10	1
COE	201	Co-op I	0	20	2
COE	202	Co-op II	0	20	2

AUTOMOTIVE SERVICE TECHNICIÁN

Associate of Applied Science in Automotive Service Technician (T-156)

Curriculum Description

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

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

ASSET placement test and a high school diploma or GED are required for admission. A mechanical aptitude test is recommended.

A minimum grade of "C" and satisfactory performance are required to pass each course with an AUT prefix. Re-admission will be considered on an individual and space available basis.

QUARTER SEQUENCE (Day Program Only)

			Class	Lab	Credit
		FIRST QUARTER			
AUT	401	Gasoline Combustion Engine I	3	3	4
PHY	132	Principles of Technology I	3	3	4
MAT	110	Technical Math	5	3	6
ENG	121	Composition I	3	0	3
AUT	121	Preventative Maintenance & NC Safety Inspection	2	2	3
CAS	129	Automotive Computer Software	1	2	2
			17	13	22
		SECOND QUARTER			
AUT	122	Gasoline Combustion Engine II	3	3	4
AUT	315	Auto Manual Power Trains	3	3	4
ELC	233	Basic Electricity/Electronics	3	3	4
ENG	124	Composition II	3	3	4
AUT	301	Automotive Fuels I	3	3	4
			15	15	20
		THIRD QUARTER			
COE	301	Cooperative Work Experience I	0	30	3

AUTOMOTIVE SERVICE TECHNICIAN

		FOURTH QUARTER			
PHY	142	Principles of Technology II	3	3	4
AUT	302	Auto Electrical/Electronics I	3	3	4
AUT	325	Auto Suspension Systems I	3	3	4
AUT	307	Auto Climate Control Systems I	3	3	4
AUT	144	Auto Braking Systems I	3	3	4
			15	15	20
		FIFTH QUARTER			
COE	302	Cooperative Work Experience III	0	30	3
		SIXTH QUARTER			
AUT	317	Automatic Transmission/Transaxles	3	6	5
AUT	412	Electronic Fuel Injection Systems	3	3	4
AUT	347	Auto Electrical/Electronics II	3	3	4
PSY	103	Psychology of Human Relations	3	0	3
		Humanities Elective	3	0	3
		Elective	3	0	3
			18	12	22
		SEVENTH QUARTER			
AUT	409	Auto Climate Control Systems II	3	3	4
AUT	457	Auto Braking Systems II	1	3	2
SPH	223	Public Speaking	3	0	3
AUT	349	Auto Electrical/Electronics III	3	3	4
AUT	329	Auto Suspension Systems II	3	3	4
ENG	125	Report Writing	3	3	4
			16	15	21
		EIGHTH QUARTER			
COE	303	Cooperative Work Experience III	0	30	3
		Total Hours Required for Graduation			114

AUTOMOTIVE TECHNOLOGY

Associate of Applied Science Degree in Automotive Technology (T-176)

Curriculum Description

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

ASSET placement test and a high school diploma or GED are required. A mechanical aptitude test is recommended.

QUARTER SEQUENCE (Evening Program Only)

FIRST QUARTER

			Class	Lab	Credit
AUT	401	Gasoline Combustion Engine I	3	3	4
PHY	132	Principles of Technology I	3	3	4
MAT	110	Technical Math	5	3	6
ENG	121	Composition I	3	0	3
AUT	121	Preventive Maintenance and NC Inspection and Shop Safety	2	2	3
CAS	129	Automotive Computer Software	1	2	2
			17	13	22

SECOND QUARTER

AUT	122	Gasoline Combustion Engine II	3	3	4
AUT	315	Auto Manual Power Trains	3	3	4
ELC	233	Basic Electricity/Electronics	3	3	4
ENG	124	Composition II	3	3	4
AUT	301	Automotive Fuels I	3	3	4
			15	15	20

THIRD QUARTER

AUT	143	Automotive Servicing I	3	9	6

FOURTH QUARTER

PHY	142	Principles of Technology II	3	3	4
AUT	302	Auto Electrical/Electronics I	3	3	4
AUT	325	Auto Suspension Systems I	3	3	4
AUT	307	Auto Climate Control Systems I	3	3	4
AUT	144	Auto Braking Systems I	3	3	4
			15	15	20

		FIFTH QUARTER			
AUT	145	Automotive Servicing II	3	9	6
		SIXTH QUARTER			
AUT	317	Automatic Transmission/Transaxles	3	6	5
AUT	412	Electronic Fuel Injection Systems	3	3	4
AUT	347	Auto Electrical/Electronics II	3	3	4
PSY	103	Psychology of Human Relations	3	0	3
		Elective	3	0	3
		Humanities Elective	3	0	3
			18	12	22
		SEVENTH QUARTER			
AUT	409	Auto Climate Control Systems II	3	3	4
AUT	457	Auto Braking Systems II	1	3	2
SPH	223	Public Speaking	3	0	3
AUT	349	Auto Electrical/Electronics III	3	3	4
AUT	329	Auto Suspension Systems II	3	3	4
ENG	125	Report Writing	3	3	4
			16	15	21
		Total Hours for Graduation			117

BUSINESS ADMINISTRATION/MANAGEMENT

Associate of Applied Science Degree in Business Administration (T-018)

Curriculum Description

The Business Administration Curriculum provides a broad education in business principles and practices. This curriculum is designed to prepare individuals for entry-level business positions.

In this program of study, the student will gain knowledge of basic business principles and concepts through a study of management functions, marketing, accounting, and finance, economics, human resources development, and legal and ethical aspects of business. Skills related to the applications of these business principles are developed through study of communications, mathematics, computer applications, and decision-making principles.

Additional training through practice in classroom activities which develop team-building skills will prepare graduates to function as contributing members of management teams. Graduates may find employment in large and small businesses, not-for-profit service organizations, government agencies, and financial institutions.

QUARTER SEQUENCE

			Class	Lab	Credit
FIRST QUARTER					
BUS	104	Introduction to Business	5	0	5
BUS	111	Business Math	5	0	5
CAS	180	Microcomputer Applications	3	4	5
		Related Course	5	0	5
			18	4	20
SECOND QUARTER					
ACC	210	Principles of Accounting	4	3	5
BUS	121	Principles of Management	5	0	5
CAS	230	Information Analysis	3	4	5
ENG	101	Freshman Grammar & Composition	5	0	5
			17	7	20
THIRD QUARTER					
ACC	211	Principles of Accounting II	4	3	5
CAS	185	Business Software Applications	3	4	5
CAS	231	Information Analysis II	3	4	5
		Related Course	5	0	5
		Free Elective	3	0	3
			18	11	23
FOURTH QUARTER					
BUS	209	Business Law	5	0	5
CSC	177	Database Programming	3	4	5
Eco	101	Economic Concepts ***Or***	5	0	5
ECO	201	Principles of Economics			
		Math/Natural Science	3	0	3
			16	4	18

BUSINESS ADMINISTRATION/MANAGEMENT

		FIFTH QUARTER			
BUS	210	Business Law	5	0	5
Eco	102	Economic Concepts II ***Or***	5	0	5
ECO	202	Principles of Economics			
		Humanities Elective	3	0	3
		Related Course	5	0	5
			18	0	18
		SIXTH QUARTER			
BUS	130	Organizational Behavior	5	0	5
BUS	223	Principles of Finance	4	3	5
BUS	275	Business Strategy	4	2	5
		Related Course	5	0	5
			17	7	20
		Total Hours Required For Graduation			119

RELATED COURSES

ACC	212	Principles of Accounting III	4	3	5
ACC	216	Federal Income Tax	4	3	5
ACC	218	Managerial Accounting	5	0	5
BUS	120	Personal Finance	5	0	5
BUS	167	Small Business Management	5	0	5
CSC	144	Program Concepts I	3	4	5
MKT	120	Principles of Marketing	5	0	5
MKT	212	Retailing	5	0	5
OSC	141	Keyboarding	3	2	4

BUSINESS COMPUTER PROGRAMMING

Associate of Applied Science Degree in Business Computer Programming (T-022)

Curriculum Description

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
CSC	150	Computer Fundamentals	3	2	4
CSC	144	Programming Concepts I	3	4	5
BUS	104	Introduction to Business	5	0	5
MAT	101	College Algebra	5	0	5
			16	6	19
		SECOND QUARTER			
CSC	141	Cobol Programming I	3	4	5
CSC	145	Programming Concepts II	3	4	5
CSC	148	IBM PC/DOS-OS/2	3	4	5
ENG	101	Freshman Grammar and Composition	5	0	5
			14	12	20
		THIRD QUARTER			
CSC	142	Cobol Programming II	3	4	5
CSC	XXX	Spreadsheet and Database Elective	3	4	5
ACC	210	Principles of Accounting I	4	3	5
		Humanities Elective	5	0	5
			15	11	20
		FOURTH QUARTER			
CSC	181	RPG Programming I	3	4	5
CSC	244	Cobol Programming III	3	4	5
ECO	101	Economic Concepts I *OR* ECO 201 Principles of Economics	5	0	5
ACC	211	Principles of Accounting II	4	3	5
			15	11	20

		FIFTH QUARTER			
CSC	264	UNIX/C Programming I	3	4	5
CSC	274	CICS Programming	3	4	5
CSC	282	RPG Programming II	3	4	5
MAT	210	Elementary Statistics	5	0	5
			14	12	20
		SIXTH QUARTER			
CSC	266	UNIX/C Programming II	3	4	5
CSC	280	Data Communications	3	0	3
CSC	285	Advanced Topics in Programming	3	4	5
SPH	223	Public Speaking	3	0	3
		Free Elective	3	0	3
			15	8	19
		Total Hours Required for Graduation			118

The Spreadsheet/Database elective may be taken from one of the following:

CSC	173	Spreadsheet and Database Processing	3	4	5
CSC	175	Spreadsheet Programming	3	4	5
CSC	177	Database Programming	3	4	5

Humanities electives must be taken from the following prefixes: ART, DRA, ENG, FRE, MUS, PHI, RED, REL, SPA

CIVIL ENGINEERING TECHNOLOGY

Associate of Applied Science Degree in Civil Engineering Technology (T-038)

Curriculum Description

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

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

This curriculum is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

QUARTER SEQUENCE

FIRST YEAR

FIRST QUARTER (Fall)

			Class	Lab	Credit
SRV	101	Surveying I	3	6	5
DFT	101	Engineering Drawing I	0	6	2
CSC	221	Technical Computer Programming	3	3	4
ENG	121	Composition I	3	0	3
MAT	121	Algebra and Trigonometry I	4	2	5
			13	17	19

SECOND QUARTER (Winter)

DFT	112	Civil Drafting	0	6	2
ENG	124	Composition II	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
PHY	151	Mechanics	3	3	4
SPH	223	Public Speaking	3	0	3
			13	14	18

		THIRD QUARTER (Spring)			
SRV	102	Surveying II	3	6	5
ENG	125	Report Writing	3	3	4
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	152	Heat, Sound and Light	3	3	4
			13	14	18
		FOURTH QUARTER (Summer)			
		Elective, Humanities	3	0	3
		Elective, Social Sciences	3	0	3
SRV	103	Surveying III	3	3	4
MEC	110	Engineering Mechanics	3	3	4
MAT	124	Analytic Geometry and Calculus II	4	2	5
			16	8	19

SECOND YEAR

		FIFTH QUARTER (Fall)			
CIV	212	Construction Methods and Equipment	3	3	4
CIV	232	Soils and Foundations	3	3	4
MEC	120	Strength of Materials	3	3	4
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			12	12	16
		SIXTH QUARTER (Winter)			
CIV	214	Construction Management	3	0	3
CIV	223	Construction Estimates and Costs	3	3	4
CIV	263	Basic Structural Design	3	3	4
		Free elective			3
CIV	253	Basic Hydrology	2	3	3
			11+	9+	17
		SEVENTH QUARTER (Spring)			
CIV	211	Properties of Engineering Materials	2	3	3
CIV	231	Contracts and Specifications	3	0	3
CIV	242	Properties of Concrete	3	3	4
		Professional Elective			4
ECO	213	Engineering Economic Analysis	3	0	3
			11+	6+	17
		Total Hours Required for Graduation	89+	80+	124

Students will be expected to accumulate four credits from the professional electives listed below.

CIV	233	Design of Roads & Pavements	3	3	4
COE	101	Cooperative Work Experience I	0	10	1
COE	102	Cooperative Work Experience II	0	10	1
COE	103	Cooperative Work Experience III	0	10	1
COE	104	Cooperative Work Experience IV	0	10	1
COE	201	Co-Op I	0	20	2
COE	202	Co-Op II	0	20	2
ECL	231	Industrial Ecology Analysis	2	3	3
ENV	251	Basic Environmental Technology	3	3	4

CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY

Associate of Applied Science Degree in Criminal Justice Protective Services Technology (T-129)

Curriculum Description

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

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

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
ENG	101	Freshman Grammar and Composition	5	0	5
CJC	111	Function of Judicial Process	5	0	5
CJC	101	The Criminal Justice System	5	0	5
		Related Course	5	0	5
			20	0	20

SECOND QUARTER

ENG	102	Freshman Literature	5	0	5
CJC	110	Introduction to Criminology	5	0	5
CJC	115	Criminal Law	5	0	5
		Related Course	5	0	5
			20	0	20

CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY

		THIRD QUARTER			
ENG	103	Public Speaking	5	0	5
CJC	117	Constitutional Law I	5	0	5
CJC	210	Criminal Investigation	5	0	5
		Related Course	5	0	5
			20	0	20
		FOURTH QUARTER			
CJC	205	Criminal Evidence	5	0	5
PSY	229	Abnormal Psychology	5	0	5
CJC	220	CJC Organization and Management	5	0	5
		Related Course	5	0	5
			20	0	20
		FIFTH QUARTER			
CJC	118	Constitutional Law II	5	0	5
CJC	109	Juvenile Delinquency	5	0	5
*MAT	101	College Algebra	5	0	5
		Elective	5	0	5
*May substitute another Math or Logic			20	0	20
		SIXTH QUARTER			
CJC	211	Criminalistics	4	2	5
CJC	262	Issues in Criminal Justice	5	0	5
SOC	102	Introduction to Sociology	5	0	5
PHI	200	Introduction to Philosophy	3	0	3
		Related Course	3	0	3
			20	2	21
		Total Hours Required for Graduation			121

Related Courses

A student may select 23 hours from the following courses:

BIO	101	General Biology*
BOT	106	General Botany*
BUS	209	Business Law
BUS	210	Business Law
CHM	101	Principles of Chemistry*
CHM	102	Principles of Chemistry*
CSC	150	Computer Fundamentals
GEL	102	Introduction to Geology*
GEO	101	Physical Geography*
MAT	210	Elementary Statistics*
PHI	203	Introduction to Logic
POL	108	Nature and Function of Law in Sociology
POL	110	Introduction to American Federal Government
POL	203	State and Local Government
PSY	201	General Psychology
PSY	215	Psychology of Addiction
SOC	202	Contemporary Social Problems
SPA	101	Elementary Spanish*

CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY

SPA	102	Elementary Spanish*
ZOO	107	General Zoology*

*Students considering transferring to a senior institution following graduation should consider selecting their related courses from those marked with an asterisk (*). At least two lab sciences, one foreign language, and two math courses should be considered.

Associate of Applied Science Degree in Early Childhood Associate (T-073)

Curriculum Description

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

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

QUARTER SEQUENCE

			Class	Lab	Clinical	Credit
FIRST QUARTER						
MAT	103	Fundamentals of Mathematics	5	0	0	5
EDU	118	Child Care Credential I	3	0	0	3
EDU	121	Child Development and Class Mgt	3	0	0	3
RED	104	Critical Thinking and Reading	5	0	0	5
SOC	103	Marriage and Family Relations	3	0	0	3
			19	0	0	19
SECOND QUARTER						
EDU	119	Child Care Credential II	3	0	0	3
EDU	114	Health, Safety and Nutrition	3	0	0	3
ENG	101	Freshman Grammar and Composition	5	0	0	5
EDU	109	Seminar/Practicum I	1	10	0	2
BIO	134	Basic Nutrition	3	0	0	3
SOC	109	Community Resources	3	0	0	3
			18	10	0	19
THIRD QUARTER						
SPH	223	Public Speaking	3	0	0	3
EDU	116	Communication Activities I	4	0	2	5
EDU	207	Physical/Creative Activities	4	0	2	5
ENG	218	Children's Literature	5	0	0	5
			16	0	4	18
FOURTH QUARTER						
EDU	211	Exploratory Activities I	4	0	2	5
EDU	208	Creative Activities	4	0	2	5
ENG	201	Freshman Literature	5	0	0	5
EDU	140	Seminar/Practicum II	1	10	0	2
			14	10	4	17

EARLY CHILDHOOD ASSOCIATE

		FIFTH QUARTER				
EDU	213	Communication Activities II	4	0	2	5
EDU	212	Exploratory Activities II	4	0	2	5
CAS	161	Introduction to Computers	2	0	0	2
PSY	201	General Psychology	5	0	0	5
EDU	203	The Exceptional Child	3	0	0	3
			18	0	4	20
		SIXTH QUARTER				
PED	230	First Aid and CPR	3	0	0	3
EDU	215	Internship	1	20	0	3
EDU	205	Child Care Administration	3	0	0	3
PSY	203	Child Psychology	5	0	0	5
		Elective	3	0	0	3
			15	20	0	17
		Total Hours Required for Graduation				110

Associate of Applied Science Degree in Electronics Engineering Technology (T-045)

Curriculum Description

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

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

This curriculum is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

(This program can be completed using either a day or evening sequence)

QUARTER SEQUENCE

FIRST YEAR

			Class	Lab	Credit
FIRST QUARTER (Fall)					
DFT	101	Engineering Drawing I	0	6	2
CSC	221	Technical Computer Programming	3	3	4
ELC	101	Electrical Fundamentals	3	3	4
ENG	121	Composition I	3	0	3
MAT	121	Algebra and Trigonometry I	4	2	5
			13	14	18
SECOND QUARTER (Winter)					
ELC	102	Direct-Current Circuits	3	3	4
ELC	122	Techniques of Fabrication	0	3	1
ENG	124	Composition II	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
PHY	151	Mechanics	3	3	4
			13	14	18
THIRD QUARTER (Spring)					
DFT	123	Electrical Drawing	0	6	2
ELC	103	Alternating-Current Circuits	3	3	4
ELN	104	Electronics I	3	3	4
ENG	125	Report Writing	3	3	4
MAT	123	Analytic Geometry and Calculus I	4	2	5
			13	17	19

ELECTRONICS ENGINEERING TECHNOLOGY

		FOURTH QUARTER (Summer)			
ELN	241	Digital Principles	2	3	3
ELN	252	Field Effect Transistors	2	3	3
		Elective, Humanities	3	0	3
MAT	124	Analytic Geometry and Calculus II	4	2	5
PHY	152	Heat, Sound and Light	3	3	4
			14	11	18

SECOND YEAR

		FIFTH QUARTER (Fall)			
ELC	221	Electrical Machines	3	3	4
ELN	204	Electrical Circuits I	3	3	4
ELN	211	Electronics II	3	3	4
ELN	242	Microprocessors I	2	3	3
PHY	153	Electricity, Magnetism & Modern Physics	3	3	4
			14	15	19
		SIXTH QUARTER (Winter)			
ELN	205	Electrical Circuits II	3	0	3
ELN	212	Electronics III	3	3	4
ELN	243	Microprocessors II	3	3	4
		Free Elective			4
SPH	223	Public Speaking	3	0	3
			12+	6+	18
		SEVENTH QUARTER (Spring)			
ELN	213	Electronics IV	3	3	4
ELN	244	Microprocessors III	3	3	4
		Professional elective			4
ELN	283	Integrated Circuits	2	3	3
		Elective—Social Sciences	3	0	3
			11+	9+	18
		Total Hours Required for Graduation	90+	86+	128

Students will be expected to accumulate four credits from the professional electives listed below. No more than four credits may be earned in co-op education courses.

ELC	223	Electrical Control Systems I	3	3	4
ELC	224	Electrical Control Systems II	3	3	4
ELN	253	Communications Circuits	3	3	4
ELN	271	Pulse Circuits	3	3	4
COE	101	Cooperative Work Experience I	0	10	1
COE	102	Cooperative Work Experience II	0	10	1
COE	103	Cooperative Work Experience III	0	10	1
COE	104	Cooperative Work Experience IV	0	10	1
COE	201	Co-Op I	0	20	2
COE	202	Co-Op II	0	20	2

ELECTRONICS ENGINEERING TECHNOLOGY

QUARTER SEQUENCE (Evening Program)

Fall Quarter 1993 4th year

			Class	Lab	Credit
ELC	221	Electrical Machines	3	3	4
ENG	121	Composition I (If not already taken)	3	0	3
MAT	124	Analytic Geometry and Calculus II	4	2	5
			7-10	5	8-12
			Graduation		
		OR 2nd and 3rd year			
ELC	103	Alternating-Current Circuits	3	3	4
MAT	124	Analytic Geometry and Calculus II	4	2	5
			7	5	9
		OR 1st year			
ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
			8	3	9
		Winter Quarter 1993-94 4th year			
Elective		Social Science or Humanities	3	0	3
ENG	124	Composition II	3	3	4
			3-6	3	3-7
		OR 2nd and 3rd year			
ELN	104	Electronics I	3	3	4
PHY	152	Heat, Sound, and Light	3	3	4
			6	6	8
		OR 1st year			
Elective		Social Science or Humanities	3	0	3
ENG	124	Composition II	3	3	4
			6	3	7
		Spring Quarter 1994 1st and 4th year			
Elective		Social Science or Humanities	3	0	3
ENG	125	Report Writing	3	3	4
			6	3	7
		OR 2nd and 3rd year			
DFT	101	Engineering Drawing I	0	6	2
ELN	241	Digital Principles	2	3	3
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			5	12	9
		Summer Quarter 1994 1st and 4th year			
Elective		Free		0	4
SPH	223	Public Speaking	3	0	3
			3+	0	7
				(Graduation)	
		OR 2nd and 3rd year			
DFT	123	Electrical Drawing	0	6	2
ELN	252	Field Effect Transistors	2	3	3
ELN	204	Electrical Circuits I	3	3	4
			5	12	9

ELECTRONICS ENGINEERING TECHNOLOGY

		Fall Quarter 1994 3rd and 4th year			
ELC	221	Electrical Machines	3	3	4
ELN	211	Electronics II	3	3	4
ELN	242	Microprocessors I	2	3	3
			8	9	11
		OR 1st and 2nd year			
ELC	101	Electrical Fundamentals	3	3	4
MAT	110	Technical Mathematics	5	3	6
			3-8	3-6	4-10
		Winter Quarter 1994-95 3rd and 4th year			
ELN	205	Electrical Circuits II	3	0	3
ELN	212	Electronics III	3	3	4
ELN	243	Microprocessors II	3	3	4
			9	6	11
		Or 1st and 2nd year			
MAT	121	Algebra and Trigonometry I	4	2	5
ELC	102	Direct-Current Circuits	3	3	4
			7	5	9
		Spring Quarter 1995 3rd and 4th year			
ELN	244	Microprocessors III	3	3	4
Elective		Professional	3	3	4
			6	6	8
		OR 1st and 2nd year			
CSC	221	Technical Computer Programming	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
			7	5	9
		Summer Quarter 1995 3rd and 4th year			
ELN	213	Electronics IV	3	3	4
ELN	283	Integrated Circuits	2	3	3
			5	6	7
				Graduation	
		OR 1st and 2nd year			
ELC	122	Techniques of Fabrication	0	3	1
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	151	Mechanics	3	3	4
			7	8	10
		Fall Quarter 1995 4th year			
Elective		Humanities / Social Sciences	3	0	3
ENG	121	Composition I	3	0	3
			6	0	6
		OR 2nd and 3rd year			
ELC	103	Alternating-Current Circuits	3	3	4
MAT	124	Analytic Geometry and Calculus II	4	2	5
			7	5	9

ELECTRONICS ENGINEERING TECHNOLOGY

		OR 1st year			
ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
			8	3	9
		Winter Quarter 1995-96 4th year			
Elective		Social Science or Humanities	3	0	3
ENG	124	Composition II	3	3	4
			6	3	7
		OR 2nd and 3rd year			
ELN	104	Electronics I	3	3	4
PHY	152	Heat, Sound, and Light	3	3	4
			6	6	8
		OR 1st year			
Elective		Social Science or Humanities	3	0	3
ENG	124	Composition II	3	3	4
			6	3	7
		Spring Quarter 1996 1st and 4th year			
Elective		Social Science or Humanities	3	0	3
ENG	125	Report Writing	3	3	4
			6	3	7
		OR 2nd and 3rd year			
DFT	101	Engineering Drawing I	0	6	2
ELN	241	Digital Principles	2	3	3
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			5	12	9
		Summer Quarter 1996 1st and 4th year			
Elective		Free		0	4
SPH	223	Public Speaking	3	0	3
			3+	0	7
				(Graduation)	
		OR 2nd and 3rd year			
DFT	123	Electrical Drawing	0	6	2
ELN	252	Field Effect Transistors	2	3	3
ELN	204	Electrical Circuits I	3	3	4
			5	12	9
		Fall Quarter 1996 3rd and 4th year			
ELC	221	Electrical Machines	3	3	4
ELN	211	Electronics II	3	3	4
ELN	242	Microprocessors I	2	3	3
			8	9	11
		OR 1st and 2nd year			
ELC	101	Electrical Fundamentals	3	3	4
MAT	110	Technical Mathematics	5	3	6
			3-8	3-6	4-10

ELECTRONICS ENGINEERING TECHNOLOGY

		Winter Quarter 1996-97 3rd and 4th year			
ELN	205	Electrical Circuits II	3	0	3
ELN	212	Electronics III	3	3	4
ELN	243	Microprocessors II	3	3	4
			9	6	11
		OR 1st and 2nd year			
MAT	121	Algebra and Trigonometry I	4	2	5
ELC	102	Direct-Current Circuits	3	3	4
			7	5	9
		Spring Quarter 1997 3rd and 4th year			
ELN	244	Microprocessors III	3	3	4
Elective		Professional	3	3	4
			6	6	8
		OR 1st and 2nd year			
CSC	221	Technical Computer Programming	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
			7	5	9
		Summer Quarter 1997 3rd and 4th year			
ELN	213	Electronics IV	3	3	4
ELN	283	Integrated Circuits	2	3	3
			5	6	7
					(Graduation)
		OR 1st and 2nd year			
ELC	122	Techniques of Fabrication	0	3	1
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	151	Mechanics	3	3	4
			7	8	10

Associate of Applied Science Degree in Emergency Medical Science (T-139)

Curriculum Description

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

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

Graduates may be employed in ambulance or rescue squad services, flight transport services, specialty care areas of hospitals, industry, medical supply companies, educational institutions, and governmental agencies.

Individuals desiring a career in emergency medical science should take biology and mathematics. It would be beneficial to have had chemistry prior to entering the program.

SPECIFIC PROGRAM REQUIREMENTS

1. Applicant must hold a current/valid driver's license.
2. A minimum grade of "C" (80%) in each Emergency Medical Science course (EMS prefix) is required in order to pass each course and to remain in the program. Readmission will be considered on an individual and space available basis.
3. In addition to meeting the college admission requirements, applicants to the Associate Degree Emergency Medical Science Program must meet the following:
   a. Complete APPLICATION FOR EMS PROGRAMS-—obtainable from the EMS department chairperson.
   b. Must submit a physician's statement, including record of immunizations and physical and emotional status (forms available from the EMS Department).
   c. Hepatitis B Vaccine (HBV) series must be completed before beginning any clinical experience. Also accepted: (1) documentation of prior series completion, or (2) waiver of vaccine from a physician.
   d. Schedule an appointment with the program director for a formal interview for entry into the EMS Program.
4. Professional liability insurance and accident insurance is REQUIRED for students in the EMS Program and is arranged through the EMS Department. The insurance is renewed every year and must be paid BEFORE beginning any clinical experiences.

EMERGENCY MEDICAL SCIENCE

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Clinical	Credit
*EMS	101	Fundamentals of Emergency Medical Science	4	2	0	5
*EMS	102	Emergency Assessment and Intervention	2	0	3	3
ENG	101	Freshman Grammar and Composition	5	0	0	5
BIO	121	Anatomy and Physiology I	3	2	0	4
			14	4	3	17

SECOND QUARTER

EMS	103	Principles of Extrication and Rescue	4	2	0	5
+EMS	104	Injury Management	4	2	0	5
+EMS	105	Clinical Seminar and Practicum I	1	0	9	4
BIO	122	Anatomy and Physiology II	3	2	0	4
			12	6	9	18

THIRD QUARTER

+EMS	108	Clinical Seminar and Practicum II	2	0	9	5
MAT	103	Fundamentals of Mathematics	5	0	0	5
EMS	112	Emergency Vehicle Operations and Maintenance	2	2	0	3
PSY	201	General Psychology	5	0	0	5
			14	2	9	18

FOURTH QUARTER

EMS	213	Communications and Documentation for EMS	4	2	0	5
SOC	102	Introduction to Sociology	5	0	0	5
PSY	229	Abnormal Psychology	5	0	0	5
EMS	110	Pharmacology for EMS	4	0	0	4
			18	2	0	19

FIFTH QUARTER

-EMS	201	Advanced Life Support I	4	2	0	5
-EMS	202	Clinical Seminar and Practicum III	2	0	9	5
-EMS	203	Emergency Psychiatric Care	3	0	0	3
CSC	150	Computer Fundamentals	3	2	0	4
			12	4	9	17

SIXTH QUARTER

-EMS	205	Advanced Life Support II	4	2	0	5
-EMS	206	Clinical Seminar and Practicum IV	2	0	9	5
-EMS	207	OB, Newborn, Pediatric, and Geriatric Emergencies	3	0	0	3
CSC	173	Spreadsheet and Database	3	4	0	5
			12	6	9	18

		SEVENTH QUARTER				
-EMS	211	Clinical Seminar and Practicum V	2	0	9	5
EMS	273	EMS Management	5	0	0	5
ENG	103	Public Speaking	5	0	0	5
BUS	233	Personnel Management	3	0	0	3
		Electives	3	0	0	3
			18	0	9	21
		Total Hours Required for Graduation				128

*EMT Certification may elect to *challenge by exam* EMS 101, EMS 102 for curriculum credit or repeat course material for credit.

+EMT-I Certification may elect to *challenge by exam* EMS 104, 105 for curriculum credit or repeat course material for credit.

- EMT-Paramedic Certification may elect to *challenge by exam* EMS 108, EMS 201, EMS 202, EMS 203, EMS 205, EMS 206, EMS 207 and EMS 211 for curriculum credit or repeat course material for credit.

FIRE PROTECTION TECHNOLOGY

Associate of Applied Science Degree in Fire Protection Technology (T-063)

Curriculum Description

The Fire Protection Technology curriculum is designed to enable individuals to draw on technical and professional knowledge in making effective decisions concerning fire protection. Through technical education, the individual acquires specialized knowledge in this field of public service and develops specific competencies for the performance of fire service administrative and supervisory duties. The curriculum includes areas such as the scientific understanding of fire hazards and their control and general courses that prepare one to work with people harmoniously.

Opportunities are excellent for the individual with adequate training and ability. Students seeking employment may be hired by governmental agencies, industrial firms, educational organizations and insurance rating organizations. Employed persons should have opportunities for positions requiring increased skill and responsibility as they increase their job competence.

Each class session is offered twice weekly to accommodate shift schedules-students may choose the session they wish to attend each week. Local fire department lodging could possibly be arranged.

QUARTER SEQUENCE

			Class	Lab	Credit
		FIRST QUARTER			
FIP	101	Intro. to Fire Protection Hazards	3	0	3
FIP	102	Municipal Fire Protection	3	0	3
FIP	115	Fire Prevention Programs	3	0	3
ENG	121	Composition I	3	0	3
			12	0	12
		SECOND QUARTER			
FIP	211	Grading of Fire Defenses	3	0	3
FIP	201	Fire Detection & Investigation	3	0	3
FIP	208	Municipal Public Relations	3	0	3
ENG	124	Composition II	3	3	4
BUS	242	Human Relations in Business	3	0	3
			15	3	16
		THIRD QUARTER			
FIP	104	Construction Codes and Material Rating	3	0	3
FIP	106	Applied Electricity for Fire Protection	3	0	3
FIP	121	Municipal Finance	3	0	3
MAT	103	Fundamentals of Math	5	0	5
			14	0	14

		FOURTH QUARTER			
FIP	135	Training Prog. & Methods of Instruction	3	0	3
FIP	206	Industrial Hazards	3	0	3
FIP	219	Chemistry of Hazardous Materials	3	0	3
PSY	201	General Psychology	5	0	5
			14	0	14
		FIFTH QUARTER			
FIP	221	Firefighting Strategy	3	0	3
FIP	225	Fire Protection Law	3	0	3
FIP	226	Industrial Safety	3	0	3
PHY	132	Principles of Technology	3	3	4
SPH	223	Public Speaking	3	0	3
			15	3	16
		SIXTH QUARTER			
FIP	228	Hydraulics & Water Dist. Systems	3	0	3
FIP	229	Sprinkler & Standpipe Systems	3	0	3
FIP	250	Fire Management I	3	0	3
BUS	272	Principles of Supervision	3	0	3
ENG	125	Report Writing	3	3	4
			15	3	16
		SEVENTH QUARTER			
FIP	234	Inspection Principles & Practices	3	0	3
FIP	246	Automatic Alarm & Ext. Systems	3	0	3
FIP	251	Fire Management II	3	0	3
CSC	150	Computer Fundamentals	3	2	4
CHM	110	An Introduction to Chemical Concepts	3	2	4
			15	4	17
		EIGHTH QUARTER			
FIP	247	Public Education Programs	3	0	3
FIP	252	Fire Management III	3	0	3
CSC	173	Spreadsheet & Data Base Entry	3	4	5
BPR	111	Architectural Blueprint Reading	3	0	3
			12	4	14

Elective: Student must choose an elective with at least (2) credit hours.

TOTAL HOURS REQUIRED FOR GRADUATION: 121

INDUSTRIAL ENGINEERING TECHNOLOGY

Associate of Applied Science Degree in Industrial Engineering Technology (T-047)

Curriculum Description

The Industrial Engineering Technology Curriculum prepares graduates for employment as technicians in the production phase of modern industry. Emphasis is placed on the study and application of methods and techniques for developing, improving and implementing integrated systems involving people, materials, equipment and information.

Areas of specialization and study will include mathematical and statistical techniques for analyzing industrial systems, manufacturing costs and production economics, quality assurance methods and techniques, facilities planning and material handling, flexible manufacturing systems and the use of computers as problem solving tools.

Coursework includes the study of technical mathematics, applied statistics, applied physics, machine processes, manufacturing methods, engineering methods, computer applications and written and oral communications.

Industrial engineering technicians are employed in a wide range of production, manufacturing, and service industries.

This curriculum is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

(This program can be completed using either a day or evening sequence.)

QUARTER SEQUENCE

FIRST YEAR

FIRST QUARTER (Fall)

			Class	Lab	Credit
DFT	101	Engineering Drawing I	0	6	2
CSC	221	Technical Computer Programming	3	3	4
ENG	121	Composition I	3	0	3
MAT	121	Algebra and Trigonometry I	4	2	5
MEC	101	Production Technology I	3	3	4
			13	14	18

SECOND QUARTER (Winter)

DFT	102	Engineering Drawing II	0	6	2
ENG	124	Composition II	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
MEC	102	Production Technology II	3	3	4
ISC	115	Industrial Leadership	3	0	3
			13	14	18

INDUSTRIAL ENGINEERING TECHNOLOGY

THIRD QUARTER (Spring)

ECO	213	Engineering Economic Analysis	3	0	3
ENG	125	Report Writing	3	3	4
		Elective, Humanities	3	0	3
MEC	103	Physical Metallurgy	3	3	4
PHY	151	Mechanics	3	3	4
			15	9	18

FOURTH QUARTER (Summer)

ACC	250	Technical Accounting	3	4	5
ISC	201	Production Planning	3	0	3
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	152	Heat, Sound and Light	3	3	4
			13	9	17

SECOND YEAR

FIFTH QUARTER (Fall)

ATR	241	Robotics I	3	3	4
ISC	113	Industrial Safety	3	0	3
ISC	222	Methods Analysis	2	3	3
MAT	124	Analytic Geometry and Calculus II	4	2	5
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			15	11	19

SIXTH QUARTER (Winter)

		Free Elective			3
ISC	202	Industrial Systems	3	3	4
ISC	212	Profit Improvement	3	3	4
MEC	252	Fundamentals of Mechanical Design	3	0	3
SPH	223	Public Speaking	3	0	3
			12+	6+	17

SEVENTH QUARTER (Spring)

		Elective, Social Sciences	3	0	3
ISC	103	Plant Layout and Materials Handling	0	6	2
ISC	213	Statistics and Quality Control	3	3	4
ISC	224	Work Measurement	2	3	3
		Professional elective			3
ISC	256	System Design	0	4	2
			8+	16+	17
		Total Hours Required for Graduation	89+	79+	124

Students will be expected to accumulate three credits from the professional electives listed below. No more than four credits may be earned in co-op education courses.

ELC	283	Electric Circuits and Machines	2	3	3
ISC	233	Industrial Organization and Management	3	0	3
COE	101	Cooperative Work Experience I	0	10	1
COE	102	Cooperative Work Experience II	0	10	1
COE	103	Cooperative Work Experience III	0	10	1
COE	104	Cooperative Work Experience IV	0	10	1
COE	201	Co-Op I	0	20	2
COE	202	Co-Op II	0	20	2
MEC	261	Plastics Technology I	3	3	4

INDUSTRIAL ENGINEERING TECHNOLOGY

QUARTER SEQUENCE (Evening Program)

Fall Quarter 1993 4th year

			Class	Lab	Credit
ISC	103	Plant Layout and Materials Handling	0	6	2
MAT	124	Analytic Geometry and Calculus II	4	2	5
			4	8	7
				(Graduation)	
		OR 4th year			
ISC	103	Plant Layout and Materials Handling	0	6	2
ENG	121	Composition I (If not already taken)	3	0	3
or MEC	103	Physical Metallurgy	3	3	4
			6	9	9
		OR 2nd and 3rd year			
MAT	124	Analytic Geometry and Calculus II	4	2	5
MEC	103	Physical Metallurgy	3	3	4
			7	5	9
		OR 1st year			
ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
or Elective		Social Science or Humanities	3	0	3
			8-9	0-3	9
		Winter Quarter 1993-94 4th year			
Elective		Free			3
ENG	124	Composition II	3	3	4
			3-6	3-12	7
		OR 2nd and 3rd year			
ATR	241	Robotics I	3	3	4
PHY	152	Heat, Sound, and Light	3	3	4
			6	6	8
		OR 1st year			
ENG	124	Composition II	3	3	4
ISC	222	Methods Analysis	2	3	3
			5	6	7
		Spring Quarter 1994 4th year			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8
		OR 2nd and 3rd year			
DFT	101	Engineering Drawing I	0	6	2
ISC	115	Industrial Leadership	3	0	3
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			6	9	9
		OR 1st year			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8

INDUSTRIAL ENGINEERING TECHNOLOGY

		Summer Quarter 1994 4th year			
Elective		Humanities / Social Science	3	0	3
SPH	223	Public Speaking	3	0	3
			6	0	6
				(Graduation)	
		OR 2nd and 3rd year			
DFT	102	Engineering Drawing II	0	6	2
ISC	113	Industrial Safety	3	0	3
ISC	201	Production Planning	3	0	3
			6	6	8
		OR 1st year			
ISC	224	Work Measurement	2	3	4
SPH	223	Public Speaking	3	0	3
			5	3	7
		Fall Quarter 1994 3rd and 4th year			
ACC	250	Technical Accounting	3	4	5
ISC	202	Industrial Systems	3	3	4
			6	7	9
		OR 1st and 2nd year			
MEC	101	Production Technology I	3	3	4
MAT	110	Technical Mathematics	5	3	6
or Elective		Humanities / Social Science	3	0	3
			6-8	3-6	7-10
		Winter Quarter 1994-95 3rd and 4th year			
ECO	213	Engineering Economic Analysis (if not taken)	3	0	3
ISC	212	Profit Improvement	3	3	4
ISC	103	Plant Layout and Materials Handling	0	6	2
			6	9	9
		OR 1st and 2nd year			
MAT	121	Algebra and Trigonometry I	4	2	5
MEC	102	Production Technology II	3	3	4
			7	5	9
		Spring Quarter 1995 3rd and 4th year			
Elective		Professional	3	3	4
ISC	256	Systems Design	0	4	2
MEC	252	Fundamentals of Mechanical Design	3	0	3
			6	7	9
		OR 1st and 2nd year			
CSC	221	Technical Computer Programming	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
			7	5	9
		Summer Quarter 1995 3rd and 4th year			
Elective		Social Science or Humanities	3	0	3
Elective		Free	3	0	3
			6	0	6
				(Graduation)	

INDUSTRIAL ENGINEERING TECHNOLOGY

		OR 1st and 2nd year			
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	151	Mechanics	3	3	4
			7	5	9
		Fall Quarter 1995 4th year			
ENG	121	Composition I	3	0	3
Elective		Free	3	0	3
			6	0	6
		OR 2nd and 3rd year			
MAT	124	Analytic Geometry and Calculus II	4	2	5
MEC	103	Physical Metallurgy	3	3	4
			7	5	9
		OR 1st year			
ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
or Elective		Humanities / Social Sciences	3	0	3
			6-8	0-3	6-9
		Winter Quarter 1995-96 4th year			
Elective		Social Science or Humanities	3	0	3
ENG	124	Composition II	3	3	4
ISC	222	Methods Analysis	2	3	3
			8	6	10
		OR 2nd and 3rd year			
ATR	241	Robotics I	3	3	4
PHY	152	Heat, Sound, and Light	3	3	4
			6	6	8
		OR 1st year			
ENG	124	Composition II	3	3	4
ISC	222	Methods Analysis	2	3	3
			5	6	7
		Spring Quarter 1996 4th year			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8
		OR 2nd and 3rd year			
DFT	101	Engineering Drawing I	0	6	2
ISC	115	Industrial Leadership	3	0	3
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			6	9	9
		OR 1st year			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8

INDUSTRIAL ENGINEERING TECHNOLOGY

		Summer Quarter 1996 4th year			
Elective		Social Science or Humanities	3	0	3
SPH	223	Public Speaking	3	0	3
ISC	224	Work Measurement	2	3	4
			8	3	10
				(Graduation)	
		OR 2nd and 3rd year			
DFT	102	Engineering Drawing II	0	6	2
ISC	113	Industrial Safety	3	0	3
ISC	201	Production Planning	3	0	3
			6	6	8
		OR 1st year			
ISC	224	Work Measurement	2	3	4
SPH	223	Public Speaking	3	0	3
			5	3	7
		Fall Quarter 1996 3rd and 4th year			
ACC	250	Technical Accounting	3	4	5
ISC	202	Industrial Systems	3	3	4
			6	7	9
		OR 1st and 2nd year			
MEC	101	Production Technology I	3	3	4
MAT	110	Technical Mathematics	5	3	6
or Elective		Humanities / Social Science	3	0	3
			6-8	3-6	7-10
		Winter Quarter 1996-97 3rd and 4th year			
ECO	213	Engineering Economic Analysis (if not taken)	3	0	3
ISC	212	Profit Improvement	3	3	4
ISC	103	Plant Layout and Materials Handling	0	6	2
			6	9	9
		OR 1st and 2nd year			
MAT	121	Algebra and Trigonometry I	4	2	5
MEC	102	Production Technology II	3	3	4
			7	5	9
		Spring Quarter 1997 3rd and 4th year			
Elective		Professional	3	3	4
ISC	256	Systems Design	0	4	2
MEC	252	Fundamentals of Mechanical Design	3	0	3
			6	7	9
		OR 1st and 2nd year			
CSC	221	Technical Computer Programming	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
			7	5	9
		Summer Quarter 1997 3rd and 4th year			
Elective		Social Science or Humanities	3	0	3
Elective		Free	3	0	3
			6	0	6
				(Graduation)	

INDUSTRIAL ENGINEERING TECHNOLOGY

		OR 1st and 2nd year			
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	151	Mechanics	3	3	4
			7	5	9

Associate of Applied Science Degree Mechanical Drafting Technology (T-226)

Curriculum Description

The Mechanical Drafting Technology curriculum is an industrial technology designed to prepare technicians for drafting mechanical parts, mechanisms, and components of mechanical and electromechanical systems.

Emphasis is placed on developing the student's ability to think and plan as well as on the development of technical skills. Computer aided drafting (CAD) skills will be stressed although conventional equipment will also be used.

Course work, in addition to technical drafting skills, will include machine processes, manufacturing materials, mechanical systems, applied physics, computer applications and written and oral communications.

Mechanical Drafting Technicians are employed in a wide range of manufacturing, fabrication, research and development and service industries.

ASSET placement test and a high school diploma or GED is required for admission. A mechanical aptitude test is recommended.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DFT	331	Technical Drafting I	3	6	5
ENG	121	Composition I	3	0	3
MAT	110	Technical Math	5	3	6
MEC	301	Basic Machining Processes	2	3	3
			13	12	17

SECOND QUARTER

DFT	150	CAD I	3	3	4
DFT	332	Technical Drafting II	3	6	5
ENG	124	Composition II	3	3	4
MAT	121	Algebra & Trigonometry I	4	2	5
			13	14	18

THIRD QUARTER

DFT	333	Technical Drafting III	3	6	5
ENG	125	Report Writing	3	3	4
MEC	105	Physical Metallurgy	3	0	3
PHY	151	Mechanics	3	3	4
			12	12	16

FOURTH QUARTER

CSC	148	IBM PC/DOS/OS2	3	4	5
DFT	154	CAD II	3	3	4
MEC	210	Applied Mechanics	3	3	4
DFT	334	Technical Drafting IV	3	6	5
			12	16	17

MECHANICAL DRAFTING TECHNOLOGY

		FIFTH QUARTER			
DFT	355	Technical Drafting V	3	6	5
MEC	211	Mechanics of Materials	3	3	4
		Social Sciences Elective	3	0	3
		Elective	3	0	3
		*Technical Elective	0	6	2
			12	15	17
		SIXTH QUARTER			
DFT	376	Technical Drafting VI	2	3	3
DFT	365	CAD III-Mechanical	1	6	3
DDF	226	Mechanical Design I	2	6	4
		*Technical Elective	0	6	2
SPH	223	Public Speaking	3	0	3
			8	21	15
		SEVENTH QUARTER			
DFT	366	CAD IV	1	6	3
DFT	377	Technical Drafting VII	3	6	5
DDF	227	Mechanical Design II	5	0	5
DDF	297	Design Project	0	6	2
		Humanities	3	0	3
			12	18	18
		Total Credits			119

*Students must take a total of four (4) credits from the following series of courses.

Technical Electives

DDF	201	Jib & Fixture Design	2	3	3
COE	201	Co-Op I	0	20	2
COE	202	Co-Op II	0	20	2
COE	203	Co-Op III	0	20	2
MEC	102	Production Technology II	3	3	4
COE	101	Cooperative Work Experience I	0	10	1
COE	102	Cooperative Work Experience II	0	10	1
COE	103	Cooperative Work Experience III	0	10	1
DDF	203	Tool & Die Design	2	3	3

Associate of Applied Science Degree in Mechanical Engineering Technology (T-051)

Curriculum Description

The Mechanical Engineering Technology curriculum prepares technicians to assist engineers in the design and development of machinery and other mechanical equipment and parts and to perform other activities which require technical knowledge of factors such as tolerances, stresses, strains, friction and vibration. The scope of subject matter covered prepares the graduate for employment in greatly diversified branches of the mechanical field.

The graduate may wish to work with testing experimental machinery and equipment and analyzing the results. Typical of such devices are internal combustion engines, steam turbines, jet and rocket engines, nuclear reactors, refrigeration and air conditioning equipment, missiles, spacecraft, marine equipment, motor vehicles, railroad equipment and machines for specialized industries such as textile mills. Another specialty area graduates may wish to pursue is that of the tool designer. Tool designers design tools and devices for the mass production of manufactured articles. They may also work with the instrumentation and design of machine tools or in equipping plants or mills which require special construction to accommodate power-producing or transmitting machinery.

This curriculum is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

(This program can be completed using either a day or evening sequence).

QUARTER SEQUENCE

FIRST YEAR

FIRST QUARTER (Fall)

			Class	Lab	Credit
CSC	221	Technical Computer Programming	3	3	4
DFT	101	Engineering Drawing I	0	6	2
ENG	121	Composition I	3	0	3
MAT	121	Algebra & Trigonometry I	4	2	5
MEC	101	Production Technology I	3	3	4
			13	14	18

SECOND QUARTER (Winter)

DFT	102	Engineering Drawing II	0	6	2
ENG	124	Composition II	3	3	4
MAT	122	Algebra & Trigonometry II	4	2	5
MEC	102	Production Technology II	3	3	4
PHY	151	Mechanics	3	3	4
			13	17	19

MECHANICAL ENGINEERING TECHNOLOGY

		THIRD QUARTER (Spring)			
ENG	125	Report Writing	3	3	4
		Elective, Humanities	3	0	3
		Elective, Social Sciences	3	0	3
MEC	103	Physical Metallurgy	3	3	4
PHY	152	Heat, Sound and Light	3	3	4
			15	9	18
		FOURTH QUARTER (Summer)			
		Free Elective			3
MAT	123	Analytic Geometry and Calculus I	4	2	5
MEC	110	Engineering Mechanics	3	3	4
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			10+	8	16

SECOND YEAR

		FIFTH QUARTER (Fall)			
ATR	241	Robotics I	3	3	4
HYD	242	Fluid Flow	3	0	3
MAT	124	Analytic Geometry and Calculus II	4	2	5
MEC	120	Strength of Materials	3	3	4
MEC	232	Thermodynamics	3	0	3
			16	8	19
		SIXTH QUARTER (Winter)			
DDF	225	Machine Design I	2	6	4
ELC	283	Electric Circuits and Machines	2	3	3
		Professional Elective			4
MEC	233	Industrial Instrumentation	3	3	4
SPH	223	Public Speaking	3	0	3
			10+	12+	18
		SEVENTH QUARTER (Spring)			
ATR	242	Robotics II	3	3	4
DDF	228	Machine Design II	5	0	5
DDF	299	MET Design Project	0	9	3
		Professional Elective			4
ISC	213	Statistics and Quality Control	3	3	4
			11+	15+	20
		Total Hours Required for Graduation	88+	83+	128

Students will be expected to accumulate eight credits from the professional electives listed below. No more than four credits may be earned in co-op education courses.

COE	101	Cooperative Work Experience I	0	10	1
COE	102	Cooperative Work Experience II	0	10	1
COE	103	Cooperative Work Experience III	0	10	1
COE	104	Cooperative Work Experience IV	0	10	1
COE	201	Co-Op I	0	20	2
COE	202	Co-Op II	0	20	2
ISC	103	Plant Layout & Materials Handling	0	6	2
ISC	222	Methods Analysis	2	3	3
DDF	201	Jig & Fixture Design	2	3	3

DDF	203	Tool & Die Design	2	3	3
MEC	261	Plastics Technology I	3	3	4
MEC	262	Plastics Technology II	3	3	4
MEC	263	Plastics Technology III	3	3	4
MEC	271	Computer-Aided Manufacturing Tech	3	3	4

QUARTER SEQUENCE (Evening Program)

First Quarter 1993 4th year

			Class	Lab	Credit
ISC	103	Plant Layout and Materials Handling	0	6	2
MAT	124	Analytic Geometry and Calculus II	4	2	5
HYD	242	Fluid Flow	3	0	3
			7	8	10
				(Graduation)	
		OR 2nd, 3rd, and 4th year			
ENG	121	Composition I (If not already taken)	3	0	3
MAT	124	Analytic Geometry and Calculus II	4	2	5
MEC	103	Physical Metallurgy	3	3	4
			7-10	5	9-12
		OR 1st year			
ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
or Elective		Social Science or Humanities	3	0	3
			6-8	0-3	6-9
		Winter Quarter 1993-94 4th year			
ENG	124	Composition II	3	0	3
HYD	242	Fluid Flow	3	3	4
ISC	222	Methods Analysis	2	3	3
			8	6	10
		OR 2nd and 3rd year			
ATR	241	Robotics I	3	3	4
HYD	242	Fluid Flow	3	0	3
PHY	152	Heat, Sound, and Light	3	3	4
			9	6	11
		OR 1st year			
ENG	124	Composition II	3	3	4
Elective		Social Science or Humanities	3	0	3
			6	3	7
		Spring Quarter 1994 1st and 4th year			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8
		OR 2nd and 3rd year			
DFT	101	Engineering Drawing I	0	6	2
MEC	232	Thermodynamics	3	0	3
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			6	9	9

MECHANICAL ENGINEERING TECHNOLOGY

		Summer Quarter 1994 1st and 4th year			
Elective		Social Science or Humanities	3	0	3
SPH	223	Public Speaking	3	0	3
			6	0	6
				(Graduation)	
		OR 2nd and 3rd year			
ATR	242	Robotics II	3	3	4
DFT	102	Engineering Drawing II	0	6	2
ELC	283	Electric Circuits and Machines	2	3	3
			5	12	9
		Fall Quarter 1994 3rd and 4th year			
MEC	110	Engineering Mechanics	3	3	4
MEC	233	Industrial Instrumentation	3	3	4
			6	6	8
		OR 1st and 2nd year			
MEC	101	Production Technology I	3	3	4
MAT	110	Technical Mathematics	5	3	6
Elective		Free	3	0	3
			6-8	3-6	7-10
		Winter Quarter 1994-95 3rd and 4th year			
MEC	120	Strength of Materials	3	3	4
Elective		Professional	3	3	4
			6	6	8
		OR 1st and 2nd year			
MAT	121	Algebra and Trigonometry I	4	2	5
MEC	102	Production Technology II	3	3	4
			7	5	9
		Spring Quarter 1995 3rd and 4th year			
DDF	225	Machine Design I	3	3	4
Elective		Professional	3	3	4
			6	6	8
		OR 1st and 2nd year			
CSC	221	Technical Computer Programming	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
			7	5	9
		Summer Quarter 1995 3rd and 4th year			
DDF	228	Machine Design II	5	0	5
DDF	299	MET Design Project	0	9	3
			5	9	8
				(Graduation)	
		OR 1st and 2nd year			
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	151	Mechanics	3	3	4
			7	5	9

MECHANICAL ENGINEERING TECHNOLOGY

		Fall Quarter 1995 4th year			
ENG	121	Composition I	3	0	3
		Free elective			3
					6
		OR 2nd and 3rd year			
MAT	124	Analytic Geometry and Calculus II	4	2	5
MEC	103	Physical Metallurgy	3	3	4
			7	5	9
		OR 1st year			
ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
or Elective		Humanities / Social Sciences	3	0	3
			6-8	0-3	6-9
		Winter Quarter 1995-96 1st and 4th year			
Elective		Social Science or Humanities	3	0	3
ENG	124	Composition II	3	3	4
			6	3	7
		OR 2nd and 3rd year			
ATR	241	Robotics I	3	3	4
HYD	242	Fluid Flow	3	0	3
PHY	152	Heat, Sound, and Light	3	3	4
			9	6	11
		Spring Quarter 1996 1st & 4th year			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8
		OR 2nd and 3rd year			
DFT	101	Engineering Drawing I	0	6	2
MEC	232	Thermodynamics	3	0	3
PHY	153	Electricity, Magnetism and Modern Physics	3	3	4
			6	9	9
		Summer Quarter 1996 4th year			
ELC	283	Electric Circuits and Machines	2	3	3
Elective		Social Science or Humanities	3	0	3
SPH	223	Public Speaking	3	0	3
			8	3	9
				(Graduation)	
		OR 2nd and 3rd year			
ATR	242	Robotics II	3	3	4
DFT	102	Engineering Drawing II	0	6	2
ELC	283	Electric Circuits and Machines	2	3	3
			5	12	9
		OR 1st year			
Elective		Social Science or Humanities	3	0	3
SPH	223	Public Speaking	3	0	3
			6	0	6

MECHANICAL ENGINEERING TECHNOLOGY

		Fall Quarter 1996 3rd and 4th year			
MEC	110	Engineering Mechanics	3	3	4
MEC	233	Industrial Instrumentation	3	3	4
			6	6	8
		OR 1st and 2nd year			
MEC	101	Production Technology I	3	3	4
MAT	110	Technical Mathematics	5	3	6
Elective		Free	3	0	3
			6-8	3-6	7-10
		Winter Quarter 1996-97 3rd and 4th year			
MEC	120	Strength of Materials	3	3	4
Elective		Professional	3	3	4
			6	6	8
		OR 1st and 2nd year			
MAT	121	Algebra and Trigonometry I	4	2	5
MEC	102	Production Technology II	3	3	4
			7	5	9
		Spring Quarter 1997 3rd and 4th year			
DDF	225	Machine Design I	3	3	4
Elective		Professional	3	3	4
			6	6	8
		OR 1st and 2nd year			
CSC	221	Technical Computer Programming	3	3	4
MAT	122	Algebra and Trigonometry II	4	2	5
			7	5	9
		Summer Quarter 1997 3rd and 4th year			
DDF	228	Machine Design II	5	0	5
DDF	299	MET Design Project	0	9	3
			5	9	8
				(Graduation)	
		OR 1st and 2nd year			
MAT	123	Analytic Geometry and Calculus I	4	2	5
PHY	151	Mechanics	3	3	4
			7	5	9

Associate of Applied Science Degree in Medical Assisting (T-058)

Curriculum Description

The Medical Assisting curriculum prepares the graduate to be a multi-skilled practitioner qualified to perform administrative, clinical and laboratory procedures. The administrative aspects of instruction cover scheduling appointments, processing insurance accounts, medical records, medical billing and collection, transcription, and computer operations. Clinical and laboratory aspects of study include preparation of the patient for examination, assessing vital signs, assisting with examination and treatment, performing routine lab tests, using the electrocardiograph machine, and administration of medication. Developing competencies in effective communication, managerial and supervisory skills, recognizing and responding to emergencies, and demonstrating adherence to ethical and legal standards of medical practices are emphasized.

Graduates of programs accredited by the Committee on Allied Health Education and Accreditation (CAHEA) may apply to take the certification examination administered by the Certifying Board of the American Association of Medical Assistants.

Graduates may be employed in a variety of health related services such as physicians' offices, hospitals, clinics, industries, insurance companies, public health departments, nursing homes and extended care facilities.

Individuals desiring a career as a medical assistant are encouraged to take biology, mathematics, and typing courses prior to entering the program.

The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on recommendation of the Committee on Accreditation for Medical Assistant Education.

PROGRAM REQUIREMENTS

A minimum grade of "C" (80%) in each MED prefix course is required in order to pass the course and to remain in the program. Readmission will be considered on an individual and space available basis.

A grade of "CE" will not be accepted in OSC 142. A medical assisting student must earn a minimum grade of "C" in OSC 142 or repeat the course.

A medical assisting student should complete all related courses prior to entering the sixth quarter of the program.

In addition to meeting the college admission requirements, applicants to the Medical Assisting program must meet the following criteria:

1. Must be a high school or GED graduate.
2. Attain a minimum composite score of 17 on the ACT examination or a minimum score of 710 on the SAT. (Exam scores must be current within 5 years prior to entry.)

3. Submit a satisfactory physical examination report from physician indicating physical and emotional status. (Must be current within six months prior to entry into the program.)
4. Schedule a personal interview with the program director.
5. Must pass proficiency test for OSC 141 before taking OSC 142. If keyboarding speed is less than 35 words per minute, the student will have to take OSC 141 prior to taking OSC 142.
6. Complete all remedial course requirements with a grade of "C" or better (ENG 95 and MAT 94, for example) prior to official entry into the program. Students must take ASSET to determine college placement needs and/or remedial course needs.
7. Must submit a satisfactory "Criminal Record Check" or a notarized statement stating no record exists from the Clerk of Superior Court at the county courthouse in his/her county of residence.

Students who have not met all of the above requirements may still be considered for possible *conditional admission* as determined by the Director of Medical Assisting on an individual basis.

Medical Assisting program enrollment is limited to 30 students. Applicants are advised to apply early.

QUARTER SEQUENCE

			Class	Lab	Clinical	Credit
FIRST QUARTER						
BIO	121	Anatomy and Physiology I	3	2	0	4
MAT	103	Fundamentals of Mathematics	5	0	0	5
ENG	101	Freshman Grammar and Composition	5	0	0	5
MED	104	Medical Terminology and Vocabulary I	3	0	0	3
MED	103	Orientation to Medical Assisting	3	0	0	3
			19	2	0	20
SECOND QUARTER						
BIO	122	Anatomy and Physiology II	3	2	0	4
OSC	142	Keyboarding II	3	2	0	4
MED	101	Medical Terminology and Vocabulary II	3	0	0	3
BIO	134	Nutrition	3	0	0	3
PSY	201	General Psychology	5	0	0	5
			17	4	0	19
THIRD QUARTER						
OSC	220	Word Processing I/Functions	3	4	0	5
ENG	103	Public Speaking	5	0	0	5
MED	102	Medical Terminology and Vocabulary III	3	0	0	3
MED	200	Medical Assisting I	3	6	0	6
SOC	109	Community Resources	3	0	0	3
			17	10	0	22

		FOURTH QUARTER				
MED	201	Medical Assisting II	3	6	0	6
MED	206	Laboratory Orientation I	3	6	0	6
MED	211	Medical Transcription	3	2	0	4
MED	220	Medical Assisting Administrative I	2	4	0	4
			11	18	0	20
		FIFTH QUARTER				
MED	202	Medical Assisting III	3	6	0	6
MED	207	Laboratory Orientation II	3	6	0	6
MED	221	Medical Assisting Administrative II	2	4	0	4
			8	16	0	16
		SIXTH QUARTER				
MED	208	Medical Assisting Externship	0	0	20	2
MED	210	Medical Assisting Seminar	6	0	0	6
MED	213	Medical Law and Ethics	3	2	0	4
			9	2	20	12
		Total Hours Required for Graduation				109

MEDICAL OFFICE TECHNOLOGY

Associate of Applied Science Degree in Medical Office Technology (T-032)

Curriculum Description

This curriculum prepares individuals to enter the medical secretarial profession. The medical secretary performs secretarial duties utilizing the knowledge of medical terminology and medical office and/or laboratory procedures.

Skills are taught in processing medical documents using computerized functions and/or manual functions. Compiling and recording medical charts, reports, case histories, and correspondence using the typewriter or automated office equipment, scheduling appointments, and preparing and sending bills to patients are duties performed in the medical office and taught in this curriculum.

Graduates of the curriculum may find employment opportunities with medical supply and equipment manufacturers, medical laboratories, the office of physicians, hospitals, and other medical care provides.

Limits to Transferable Credits—Technical courses (OSC and CSC) may be transferred into Office Technology within five years of the completion of the course(s).

QUARTER SEQUENCE

			Class	Lab	Credit
OSC	141	Keyboarding I	3	2	4
BUS	111	Business Math	5	0	5
CSC	148	IBM PC/DOS-OS/2	3	4	5
MED	104	Medical Terminology and Vocabulary I	3	0	3
OSC	125	Communications I	3	4	5
OSC	142	Keyboarding II	3	2	4
MED	101	Medical Terminology and Vocabulary II	3	0	3
ENG	101	Freshman Grammar and Composition	5	0	5
OSC	126	Communications II	3	4	5
		Social Science Elective	3	0	3
OSC	230	Records Management	3	4	5
OSC	220	Word Processing I	3	4	5
		Technical Elective	5	0	5
		Math or Natural Science Elective	5	0	5
OSC	221	Word Processing II	3	4	5
MED	211	Medical Transcription	3	2	4
ACC	210	Principles of Accounting	4	3	5
		Elective	5	0	5
BUS	242	Human Relations in Business	3	0	3
PSY	201	General Psychology	5	0	5
BUS	209	Business Law	5	0	5
		Humanities Elective	5	0	5
ENG	103	Public Speaking	5	0	5

*BUS	104	Introduction to Business	5	0	5
OSC	223	Administrative Office Procedures	3	4	5
		Technical Elective	5	0	5
		Total Hours Required for Graduation			119

Technical Electives 10 Hours Included in Major

Students should select ten hours of Technical Electives from the list below:

MED	102	Medical Terminology and Vocabulary III	3	0	3
OSC	222	Word Processing III (Microsoft Office)	3	4	5
OSC	231	Desktop Publishing (PageMaker)	3	4	5
OSC	127	Professional Development	5	0	5
OSC	143	Keyboarding III	3	2	4
OSC	152	Critical Issues in Office Tech	5	0	5
OSC	153	Resumes and Interviews	1	2	2
OSC	263	Ten-Key	1	2	2
BUS	130	Organizational Behavior	5	0	5
CSC	175	Spreadsheet Programming (Excel)	3	4	5
CSC	177	Database Programming (Access)	3	4	5

Humanities Courses: Art, Literature, Modern Language, Music, Philosophy, Religion, and Reading.

Social Science Courses: Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology.

Math or Natural Science Elective (Prefix of: MAT, CHM, GEO, GEL, PHS, PHY, or BIO)

*Qualified students may elect to take up to five credit hours of Cooperative Education in lieu of BUS 104.

NURSING (REGISTERED NURSING)

Associate of Applied Science Degree in Nursing (Registered Nursing) (T-059)

Curriculum Description

The Associate Degree Nursing curriculum is designed to prepare the graduate to assess, analyze, plan, implement, and evaluate nursing care. The graduate is eligible to apply to take the National Council Licensure Examination (NCLEX-RN) which is required for practice as a registered nurse.

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

The registered nurse may be employed in a wide variety of health care settings such as hospitals, long-term care facilities, clinics, physicians' offices, industry and community health agencies.

PROGRAM INFORMATION

Students applying for admission to the Gaston College nursing program must meet the requirements for general admission to the college:

1. Complete general admission application.
2. Completion of ASSET (required if student has not completed developmental or college level English and math).
3. Have the American College Test (ACT) or Scholastic Aptitude Test (SAT) score on file.
4. Submit official transcript of high school grades with graduation date or GED scores.
5. Submit official college transcript(s), when applicable.

In addition to meeting the general requirements, to be eligible to submit an application to the Associate Degree Nursing program a student:

1. Must have an overall college grade point average of 2.0 or above. Must have grades of "C" or better in all related courses. **Must have successfully completed units in algebra, biology, and chemistry if making application with only high school credits.***
2. Must submit a minimum composite score of 19 on the American College Test (ACT) or a minimum composite score of 910 (910 recentered score prior to April 1995 or 910 after April 1995) on the Scholastic Aptitude Test (SAT). The examination must have been taken within the past five years from date of application to the nursing program.
3. Must successfully complete high school chemistry *or* complete a college level chemistry course before making initial application.
4. Must submit a satisfactory "Criminal Record Check" or a notarized statement stating no record exists from the Clerk of Superior Court at the county courthouse in his/her county of residence.

Individuals interested in the nursing major should contact the nursing department for advisement and need to be aware that:

1. Certain required courses must have been completed within the past five years from the date of application to the nursing program. Contact the nursing department for specific information regarding these courses.
2. Students having a grade below "C" in any nursing curriculum course will be required to repeat that course in accordance with approved curriculum sequence guidelines if the applicant is admitted.*
3. Individuals planning to transfer to a four-year institution and/or who are receiving financial aid will need to contact the Health Sciences counselor regarding specific courses needed for transfer credit.

The following criteria will be implemented by the Admissions Committee of the nursing faculty in the selection process of recommending applicants to the nursing faculty for admission to the program:

1. The number of related courses completed .
2. Grade point average (GPA) in related courses.
3. ACT/SAT score.
4. Certification in a health-related field (CNA, CMA, EMT, etc.) with additional points awarded for six consecutive months of work experience in that field that occurred within the last two years.

The final selection of applicants admitted into the program is based on the above criteria. These criteria have been approved by an Admissions Committee composed of nursing faculty members. The Admissions Committee of the ADN program in collaboration with the program director will determine an applicant's eligibility for admission.

A completed health form documenting satisfactory emotional and physical health is required before entrance to the program. CPR certification is also required before a student can begin the nursing program.

*Effective for students applying to the Associate Degree Nursing program after September 1, 1996.

ASSOCIATE DEGREE NURSING

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Clinical	Credit
NUR	101	Foundations of Nursing	5	4	3	8
MAT	103	Fundamentals of Math	5	0	0	5
BIO	121	Anatomy and Physiology I	3	2	0	4
						17

SECOND QUARTER

NUR	102	Adult Health Nursing I	5	4	6	9
PSY	201	General Psychology	5	0	0	5
BIO	122	Anatomy and Physiology II	3	2	0	4
						18

THIRD QUARTER

NUR	104	Adult Health Nursing II	5	2	9	9
PSY	250	Life Span Development	5	0	0	5
BIO	115	Practical Microbiology	3	2	0	4
						18

FOURTH QUARTER

NUR	204	Mental Health Nursing	5	0	12	9
ENG	101	Freshman Grammar and Composition	5	0	0	5
		Free Elective				3
						17

FIFTH QUARTER

NUR	201	Maternal/Parent Health Nursing	4	4	9	9
ENG	102	Freshman Literature	5	0	0	5
		OR				
ENG	103	Public Speaking				
						14

SIXTH QUARTER

NUR	202	Child Health Nursing	4	4	9	9
SOC	102	Introductory Sociology	5	0	0	5
						14

SEVENTH QUARTER

NUR	203	Adult Health Nursing III	5	2	12	10
NUR	207	Professional Development	2	0	0	2
						12

Total Credit Hours Required for Graduation 110

Related courses are underlined.

Associate of Applied Science Degree in Nursing (LPN to RN Track) - T-059L

Curriculum Description

The Associate Degree Nursing Curriculum is designed to prepare the graduate to assess, analyze, plan, implement and evaluate nursing care. The graduate is eligible to apply to take the National Council Licensure Examination (NCLEX-RN) which is required for practice as a registered nurse. Individuals desiring a career in registered nursing should take biology, algebra and chemistry courses prior to entering the program. The registered nurse may be employed in a wide variety of health care settings such as hospitals, long term care facilities, clinics, physicians' offices, industry and community health agencies.

Students entering the program with the code of T-059L are licensed practical nurses who desire to pursue an Associate of Applied Science Degree in Nursing.

PROGRAM INFORMATION

Students applying for admission to the LPN-RN track of the Gaston College nursing program must meet the requirements for general admission to the college:

1. Complete general admission application.
2. Completion of ASSET (required if student has not completed developmental or college level English and math).
3. Have the American College Test (ACT) or Scholastic Aptitude Test (SAT) score on file.
4. Submit official transcript of high school grades with graduation date or GED scores.
5. Submit official college transcript(s), when applicable.

In addition to meeting the general admission requirements, to be eligible to submit an application to the LPN-RN track an applicant:

1. Must have a minimum of **12 months** of clinical nursing practice after graduation from the PNE program prior to entry into the nursing sequence of the associate degree curriculum.
2. Must successfully complete high school chemistry or a college level chemistry course before making initial application.
3. Must complete nine (9) hours of related course work before entrance to nursing sequence.
4. Must have an overall 2.0 or better grade point average in college courses. Must have grades of "C" or better in all related courses.
5. Must submit a satisfactory "Criminal Record Check" or a notarized statement stating no record exists from the Clerk of Superior Court at the county courthouse in his/her county of residence.
6. Must secure a recommendation from the current or most recent employer or supervisor OR secure recommendation from director or dean of school of nursing from which applicant graduated, within the past three years of application process.

7. Must provide the nursing department with a copy of current license to practice practical nursing in the State of North Carolina.
8. Must submit a minimum composite score of **19** on the American College Test (ACT) or a minimum composite score of 910 (910 recentered score prior to April 1995 or 910 after April 1995) on the Scholastic Aptitude Test (SAT). (Examination must have been taken within **seven** years of the date of application to the program.) If test score is below the minimum, must complete BIO 121, BIO 122, and BIO 115 with a 2.5 grade point average.

Individuals interested in the LPN-RN conversion program should contact the nursing department for advisement and need to be aware that:

1. Certain required courses must have been completed within the past five years from the date of application to the nursing program. Contact the nursing department for specific information regarding these courses.
2. Students having a grade below "C" in any nursing curriculum course will be required to repeat that course in accordance with approved curriculum sequence guidelines if the applicant is admitted.*
3. Individuals presenting graduate school entrance exam scores will be given consideration by the Admissions Committee regarding eligibility.
4. Individuals planning to transfer to a four-year institution and/or who are receiving financial aid will need to contact the Health Sciences counselor regarding specific courses needed for transfer credit.

The following criteria will be implemented by the Admissions Committee of the nursing faculty in the selection process of recommending applicants to the nursing faculty for admission to the program:

1. The number of related courses completed.
2. Grade point average (GPA) in related courses.
3. ACT/SAT score OR grade point average for BIO 121, BIO 122, and BIO 115.

The final selection of applicants admitted into the program is based on the above criteria. These criteria have been approved by an Admissions Committee composed of nursing faculty members. The Admissions Committee of the ADN program in collaboration with the program director will determine the applicants' eligibility for admission. A completed health form documenting satisfactory emotional and physical health is required before entrance to the program. CPR certification is also required before a student can begin the nursing program.

*Effective for students applying to the Associate Degree Nursing program after September 1, 1996.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Clinical	Credit
NUR	101*	Foundations of Nursing	5	4	3	8
MAT	103	Fundamentals of Math	5	0	0	5
BIO	121	Anatomy and Physiology I	3	2	0	4
						17

SECOND QUARTER

NUR	102	Adult Health Nursing I	5	4	6	9
PSY	201	General Psychology	5	0	0	5
BIO	122	Anatomy and Physiology II	3	2	0	4
						18

THIRD QUARTER

NUR	104	Adult Health Nursing II	5	2	9	9
PSY	250	Life Span Development	5	0	0	5
BIO	115	Practical Microbiology	3	2	0	4
						18

FOURTH QUARTER

NUR	204	Mental Health Nursing	5	0	12	9
ENG	101	Freshman Grammar and Composition	5	0	0	5
		Free Elective				3
						17

FIFTH QUARTER

NUR	201	Maternal/Parent Health Nursing	4	4	9	9
ENG	102	Freshman Literature	5	0	0	5
		OR				
ENG	103	Public Speaking				
						14

SIXTH QUARTER

NUR	202	Child Health Nursing	4	4	9	9
SOC	102	Introductory Sociology	5	0	0	5
						14

SEVENTH QUARTER

NUR	203	Adult Health Nursing III	5	2	12	10
NUR	207	Professional Development	2	0	0	2
						12

Total Credit Hours Required for Graduation 110

Related courses are underlined.

*LPN-RN students who receive a passing score on a challenge exam will receive a "Credit by Examination" (CE) grade for Nursing 101. Formal entrance into the nursing sequence for these students will be in winter (second) quarter.

OPERATIONS (INDUSTRIAL) MANAGEMENT TECHNOLOGY

Associate of Applied Science Degree in Operations (Industrial) Management Technology (T-049)

The Operations (Industrial) Management Technology curriculum is designed to educate individuals in the technical aspects of operations management for manufacturing and service industries. The curriculum emphasizes analytical reasoning, problem solving, and continuous improvement concepts required in today's dynamic business and industry environments. These concepts are developed through integrated study in quality and productivity, organizational management and effectiveness, financial analysis, and the management of human, physical, and information resources.

The Operations (Industrial) Management Technology curriculum is structured to meet the educational goals of individuals seeking leadership positions and those wishing to enhance their professional skills.

QUARTER SEQUENCE

FIRST YEAR

FIRST QUARTER (Fall)

			Class	Lab	Credit
DFT	101	Engineering Drawing I	0	6	2
ENG	121	Composition I	3	0	3
ISC	102	Principles of Industrial Management	5	0	5
MAT	110	Technical Mathematics	5	3	6
			13	9	16

SECOND QUARTER (Winter)

CSC	221	Technical Computer Programming	3	3	4
ISC	115	Industrial Leadership	3	0	3
*SOC	102	Introduction to Sociology	5	0	5
SPH	223	Public Speaking	3	0	3
			14	3	15

THIRD QUARTER (Spring)

*ECO	201	Principles of Economics	5	0	5
ECO	213	Engineering Economic Analysis	3	0	3
ENG	124	Composition II	3	3	4
*		Humanities Elective	3	0	3
ISC	103	Plant Layout & Materials Handling	0	6	2
			14	9	17

FOURTH QUARTER (Summer)

ENG	125	Report Writing	3	3	4
ACC	250	Technical Accounting	3	4	5
ISC	201	Production Planning	3	0	3
ISC	253	Management Problems	5	0	5
			14	7	17

OPERATIONS (INDUSTRIAL) MANAGEMENT TECHNOLOGY

SECOND YEAR

FIFTH QUARTER (Fall)

*ANT	204	General Cultural Anthropology	5	0	5
ATR	241	Robotics I	3	3	4
ISC	113	Industrial Safety	3	0	3
ISC	222	Methods Analysis	2	3	3
			13	6	15

SIXTH QUARTER (Winter)

*		Free Elective	3	0	3
ISC	202	Industrial Systems	3	3	4
ISC	212	Profit Improvement	3	3	4
MEC	252	Fundamentals of Mechanical Design	3	0	3
*PED	230	First Aid	3	0	3
			15	6	17

SEVENTH QUARTER (Spring)

*		Free Elective	5	0	5
ISC	213	Statistics and Quality Control	3	3	4
ISC	224	Work Measurement	2	3	3
ISC	233	Industrial Organization and Management	3	0	3
			13	6	15
		Total Hours Required for Graduation	96	43	112

*These courses may be taken in any quarter.

QUARTER SEQUENCE (Evening Program)

First Quarter 1993 (4th year)

			Class	Lab	Credit
ENG	121	Composition I (If not already taken)	3	0	3
ISC	103	Plant Layout and Materials Handling	0	6	2
*		Required Course	5	0	5
			5-8	0-6	7-10

OR (2nd and 3rd year)

*		Elective	3	0	3
*		Required Course	5	0	5
			8	0	8

OR (1st year)

ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
			8	3	9

Winter Quarter 1993-94 (2nd and 3rd year)

ATR	241	Robotics I	3	3	4
*		Required Course	5	0	5
			8	3	9

OR (1st and 4th year)

ENG	124	Composition II	3	3	4
ISC	222	Methods Analysis	2	3	3
			5	6	7

OPERATIONS (INDUSTRIAL) MANAGEMENT TECHNOLOGY

		Spring Quarter 1994 (2nd and 3rd year)			
DFT	101	Engineering Drawing I	0	6	2
ISC	115	Industrial Leadership	3	0	3
			3	6	5
		OR (1st and 4th year)			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8
		Summer Quarter 1994 (2nd and 3rd year)			
ISC	113	Industrial Safety	3	0	3
ISC	201	Production Planning	3	0	3
*		Required Course (If needed)	5	0	5
			6-11	0	6-11
		OR (1st and 4th year)			
ENG	223	Public Speaking	3	0	3
ISC	224	Work Measurement	2	3	3
			5	3	6
				(Graduation)	
		Fall Quarter 1994 (3rd and 4th year)			
ACC	250	Technical Accounting	3	4	5
ISC	202	Industrial Systems	3	3	4
			6	7	9
		OR (1st and 2nd year)			
Elective		Humanities	3	0	3
MAT	110	Technical Mathematics	5	3	6
or*		Required Course	5	0	5
			8-10	0-3	8-11
		Winter Quarter 1994-95 (3rd and 4th year)			
ECO	213	Engineering Economic Analysis (if not taken)	3	0	3
ISC	212	Profit Improvement	3	3	4
ISC	103	Plant Layout and Materials Handling	0	6	2
			6	9	9
		OR (1st and 2nd year)			
ISC	102	Principles of Industrial Management	5	0	5
*		Required Courses	3	0	3
			8	0	8
		Spring Quarter 1995 (3rd and 4th year)			
*		Required Course	5	0	5
			5	0	5
		OR (1st and 2nd year)			
CSC	221	Technical Computer Programming	3	3	4
ISC	253	Management Problems	5	0	5
			8	3	9
		Summer Quarter 1995 (3rd and 4th year)			
ISC	233	Industrial Organization and Management	3	0	3
*		Required Course	5	0	5
			8	0	8
				(Graduation)	

OPERATIONS (INDUSTRIAL) MANAGEMENT TECHNOLOGY

		OR (1st and 2nd year)			
*		Required Course	5	0	5
MEC	252	Fundamentals of Mechanical Design	3	0	3
			8	0	8
		Fall Quarter 1995 (4th year)			
ENG	121	Composition I (If not already taken)	3	0	3
ISC	103	Plant Layout and Materials Handling	0	6	2
*		Required Course	5	0	5
			5-8	0-6	7-10
		OR (2nd and 3rd year)			
*		Elective	3	0	3
*		Required Course	5	0	5
			8	0	8
		OR (1st year)			
ENG	121	Composition I	3	0	3
MAT	110	Technical Mathematics	5	3	6
			8	3	9
		Winter Quarter 1995-96 (2nd and 3rd year)			
ATR	241	Robotics I	3	3	4
*		Required Course	5	0	5
			8	3	9
		OR (1st and 4th year)			
ENG	124	Composition II	3	3	4
ISC	222	Methods Analysis	2	3	3
			5	6	7
		Spring Quarter 1996 (2nd and 3rd year)			
DFT	101	Engineering Drawing I	0	6	2
ISC	115	Industrial Leadership	3	0	3
			3	6	5
		OR (1st and 4th year)			
ENG	125	Report Writing	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
			6	6	8
		Summer Quarter 1996 (2nd and 3rd year)			
ISC	113	Industrial Safety	3	0	3
ISC	201	Production Planning	3	0	3
*		Required Course (If needed)	5	0	5
			6-11	0	6-11
		OR (1st and 4th year)			
ENG	223	Public Speaking	3	0	3
ISC	224	Work Measurement	2	3	3
			5	3	6
				(Graduation)	
		Fall Quarter 1996 (3rd and 4th year)			
ACC	250	Technical Accounting	3	4	5
ISC	202	Industrial Systems	3	3	4
			6	7	9

OPERATIONS (INDUSTRIAL) MANAGEMENT TECHNOLOGY

		OR (1st and 2nd year)			
Elective		Humanities	3	0	3
MAT	110	Technical Mathematics	5	3	6
or*		Required Course	5	0	5
			8-10	0-3	8-11
		Winter Quarter 1996-97 (3rd and 4th year)			
ECO	213	Engineering Economic Analysis (if not taken)	3	0	3
ISC	212	Profit Improvement	3	3	4
ISC	103	Plant Layout and Materials Handling	0	6	2
			6	9	9
		OR (1st and 2nd year)			
ISC	102	Principles of Industrial Management	5	0	5
*		Required Courses	3	0	3
			8	0	8
		Spring Quarter 1997 (3rd and 4th year)			
*		Required Course	5	0	5
			5	0	5
		OR (1st and 2nd year)			
CSC	221	Technical Computer Programming	3	3	4
ISC	253	Management Problems	5	0	5
			8	3	9
		Summer Quarter 1997 (3rd and 4th year)			
ISC	233	Industrial Organization and Management	3	0	3
I		Required Course	5	0	5
			8	0	8
				(Graduation)	
		OR (1st and 2nd year)			
*		Required Course	5	0	5
MEC	252	Fundamentals of Mechanical Design	3	0	3
			8	0	8

Associate of Applied Science Degree in Paralegal Technology (T-120)

Curriculum Description

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

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

QUARTER SEQUENCE

			Class	Lab	Credit
FIRST QUARTER					
BUS	209	Business Law	5	0	5
ENG	101	Freshman Grammar and Composition	5	0	5
LEX	101	Introduction to Paralegalism	3	0	3
LEX	203	Law Office Management	5	0	5
			18	0	18
SECOND QUARTER					
ENG	102	Freshman Literature	5	0	5
LEX	108	Nature and Function of Law	3	0	3
LEX	210	Business Organizations	5	0	5
OSC	211	Legal Terminology	2	4	4
			15	4	17
THIRD QUARTER					
CJC	115	Criminal Law	5	0	5
CSC	150	Computer Fundamentals	3	2	4
LEX	102	Tort Law	5	0	5
LEX	217	Bankruptcy	3	2	4
			16	4	18

PARALEGAL TECHNOLOGY

		FOURTH QUARTER			
CJC	111	Function of Judicial Process	5	0	5
LEX	218	Administrative Law	5	0	5
MAT	101	College Algebra	5	0	5
OSC	277	Word Processing I	3	2	4
			18	2	19
		FIFTH QUARTER			
LEX	202	Wills, Probate, and Trusts	5	0	5
OSC	278	Word Processing II	3	2	4
PSY	201	General Psychology	5	0	5
			13	2	14
		SIXTH QUARTER			
ENG	103	Public Speaking	5	0	5
LEX	105	Legal Research	4	2	5
LEX	220	Property Law	4	2	5
			13	4	15
		SEVENTH QUARTER			
LEX	120	Family Law	5	0	5
LEX	201	Litigation Preparation and Writing	4	2	5
		Elective	5	0	5
			14	2	15
		Total Hours Required for Graduation			116

Associate of Science Degree in Pre-Engineering (C-007)

Curriculum Description

This curriculum is designed to prepare students for transfer to an engineering school leading to a Bachelor of Science Degree in Engineering. This curriculum has been approved by the Subcommittee on Engineering Transfer for transfer to the engineering programs at North Carolina A & T State University, North Carolina State University, and the University of North Carolina at Charlotte. Other schools will also accept this curriculum.

			Class	Lab	Credit
		FIRST QUARTER			
CHM	101	Principles of Chemistry I	4	6	6
EGR	102	Introduction to Engineering	1	0	1
ENG	101	Freshman Grammar and Composition	5	0	5
MAT	105	Advanced Algebra and Trigonometry	5	0	5
PED		Physical Education Elective	0	2	1
			15	8	18
		SECOND QUARTER			
CHM	102	Principles of Chemistry II	4	6	6
DFT	101	Engineering Drawing I	0	6	2
ENG	102	Freshman Literature	5	0	5
MAT	106	Analytic Geometry and Calculus	5	0	5
			14	12	18
		THIRD QUARTER			
CSC	121	Fortran Programming [ME's]	3	4	5
or					
CSC	143	Pascal Programming [EE's]			
DFT	102	Engineering Drawing II	0	6	2
		Electives*-Humanities/Social Science	6	0	6
MAT	107	Analytic Geometry and Calculus	5	0	5
			14	10	18
		FOURTH QUARTER			
ECO	201	Principles of Economics	5	0	5
		Electives*-Humanities/Social Science	3	0	3
MAT	206	Analytic Geometry and Calculus	5	0	5
PED		Physical Education Elective	0	2	1
PHY	211	Mechanics	4	3	5
			17	5	19
		FIFTH QUARTER			
EGR	205	Statics	5	0	5
		Electives*-Humanities/Social Science	3	0	3
MAT	207	Analytic Geometry and Calculus	5	0	5
PHY	212	Heat, Sound and Light	4	3	5
			17	3	18

PRE-ENGINEERING

		SIXTH QUARTER			
EGR	206	Dynamics	5	0	5
		Electives*-Humanities/Social Science	3	0	3
MAT	208	Differential Equations	5	0	5
PED		Physical Education Elective	0	2	1
PHY	213	Electricity and Magnetism: Atomic Physics	4	3	5
			17	5	19
		Total Hours Required for Graduation			110

*The elective courses in humanities must be selected from:

English
Philosophy
Religion

*and the electives in social science must be selected from:

Anthropology
History
Political science
Psychology
Sociology

See the Dean of Engineering Technologies, Math and Physics for details regarding transferability of courses to specific university engineering programs.

RADIO/TELEVISION BROADCASTING TECHNOLOGY

Associate of Applied Science Degree in Radio/Television Broadcasting Technology Associate (T-179)

Curriculum Description

Students enrolled in the Radio and Television Broadcasting Technology curriculum have a variety of careers from which to choose. They learn to speak well on the microphone and on camera with and without scripts. They learn how to operate the camera, run the audio control board and direct the whole program. Courses in the curriculum also teach students the legal aspects of broadcasting, how to manage a broadcast operation, how to trouble shoot equipment, and how to write and produce both audio and video programming. Technical courses included are designed to give students an understanding of electronics and broadcast equipment.

Upon completion they are well prepared to write, produce, perform and direct production. They also can function as technicians and have an understanding of how equipment works.

Graduates of the curriculum may find employment in radio or television stations, cable television companies, public relations, advertising agencies, recording studios, production houses, and industrial or educational media.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
RTV	120	Radio Control Room Procedures	5	0	5
RTV	201	Theories of Mass Communication	5	2	6
RTV	203	Expression in the Media	5	0	5
RTV	206	Writing for Broadcasting	3	2	4
			18	4	20

SECOND QUARTER

ENG	101	Freshman Grammar and Composition	5	0	5
RED	104	Critical Thinking and Reading	5	0	5
RTV	211	Broadcast Journalism	5	6	8
			15	6	18

THIRD QUARTER

ENG	103	Public Speaking	5	0	5
PSY	201	General Psychology	5	0	5
MUS	101	*Music Appreciation OR			
DRA	101	*Introduction to Theatre			
		*(Choose either MUS 101 or DRA 101)	3	0	3
RTV	204	Radio Production	3	8	7
			16	8	20

RADIO/TELEVISION BROADCASTING TECHNOLOGY

		FOURTH QUARTER			
RTV	116	Introduction to Broadcast Sports	3	6	6
RTV	202	Advertising, Sales and Promotion	3	2	4
RTV	205	Broadcast Programming	3	0	3
RTV	212	Broadcast Management	3	0	3
RTV	218	Broadcast Law	3	0	3
			15	8	19
		FIFTH QUARTER			
GEO	110	World Geography	5	0	5
MAT	103	Fundamentals of Mathematics	5	0	5
RTV	215	Dynamics of Public Relations	2	0	2
RTV	220	Introduction to TV Systems	5	4	7
			17	4	19
		SIXTH QUARTER			
PED	230	First Aid and CPR	3	0	3
CAS	161	Introduction to Microcomputers	2	0	2
RTV	207	R/TV Production I	3	8	7
RTV	226	Supervised Work Experience I	2	20	4
		Elective			2
			10	28	18
		SEVENTH QUARTER			
RTV	209	R/TV Production II	2	8	6
RTV	227	Supervised Work Experience II	2	20	4
			4	28	10
		Total			124

Associate of Applied Science Degree in Secretarial-Legal (T-031)

Curriculum Description

The Secretarial-Legal curriculum prepares the individual to enter the legal secretarial profession through work in a lawyer's office, in city, county, state or government offices, provide an educational program for individuals wanting education for upgrading (moving from one legal secretarial position to another legal secretarial position); and provide an opportunity for individuals wanting to fulfill professional or general interest needs.

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

Limits to Transferable Credits—Technical Courses (OSC and CSC) may be transferred into Office Technology within five years of the completion of the course(s).

QUARTER SEQUENCE

			Class	Lab	Credit
OSC	141	Keyboarding I	3	2	4
BUS	111	Business Mathematics	5	0	5
OSC	125	Communications I	3	4	5
CSC	148	IBM/PC/DOS/OS/2	3	4	5
OSC	142	Keyboarding II	3	2	4
ACC	210	Principles of Accounting	4	3	5
ENG	101	Freshman Grammar and Composition	5	0	5
CJC	101	Criminal Justice Systems	5	0	5
OSC	220	Word Processing I	3	4	5
OSC	126	Communications II	3	4	5
POL	203	State and Local Government	5	0	5
		Technical Elective	5	0	5
ENG	103	Public Speaking	5	0	5
OSC	221	Word Processing II	3	4	5
OSC	219	Machine Transcription	3	4	5
		Social Science Elective	3	0	3
		Elective	3	0	3
BUS	209	Business Law	5	0	5
OSC	152	Critical Issues in Office Technology	5	0	5
		Humanities Elective	5	0	5
		Technical Elective	5	0	5
*BUS	210	Business Law	5	0	5
OSC	239	Records Management	3	4	5
OSC	127	Professional Development	3	4	5
		Math or Natural Science Elective	5	0	5
		Total Hours Required for Graduation			119

SECRETARIAL - LEGAL

Technical Electives 10 Hours Included in Major

Students should select ten hours of Technical Electives from the list below:

LEX	203	Law Office Management	5	0	5
OSC	143	Keyboarding III	3	2	4
OSC	153	Resumes and Interviews	1	2	2
OSC	223	Administrative Office Procedures	3	4	5
OSC	222	Word Processing III	3	4	5
OSC	263	Ten-Key	1	2	2
OSC	231	Desktop Publishing	3	4	5
CSC	175	Spreadsheet Programming	3	4	5
LEX	108	Nature and Function of Law in Society	3	0	3
LEX	210	Business Organizations	5	0	5

CJC 115-Criminal Law or CJC 110-Criminology may be substituted for CJC 101 if necessary.

Humanities Courses: Art, Literature, Modern Language, Music, Philosophy, Religion, and Reading 104.

Social Science Courses: Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology.

Math or Natural Science Elective (Prefix of: MAT, CHM, GEO, GEL, PHS, PHY, or BIO.)

*Qualified students may elect to take up to five credit hours of Cooperative Education in lieu of BUS 210.

Associate in Applied Science Degree Program
Veterinary Medical Technology (T-004)

Curriculum Description

The Veterinary Medical Technology curriculum prepares graduates to assist the veterinarian in small and large animal practices by obtaining and recording information about cases; preparing animals, instruments, equipment and medication for examination and surgery; collecting specimens; performing laboratory procedures; applying wound dressings and splints; and feeding animals and maintaining proper sanitation of animals and their environment. Students also learn skills in office management, record keeping and communications.

Graduates may work in private veterinarians' offices, diagnostic and research laboratories, veterinary supply businesses, and other areas dealing with animal care.

Graduates are eligible to write the State Licensing Examination given by the North Carolina Veterinary Medical Board for Veterinary Medical Technicians.

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

QUARTER SEQUENCE

			Class	Lab	Clinical	Credit
FIRST QUARTER						
ZOO	133	Veterinary Zoology	5	2	0	6
MAT	103	Fundamentals of Mathematics	5	0	0	5
MED	104	Medical Terminology & Vocabulary I	3	0	0	3
VET	106	Infectious Diseases	2	0	0	2
VET	109	Veterinary Office Practices	2	2	0	3
			17	4	0	19
SECOND QUARTER						
VET	101	Clinical Practices I	2	2	0	3
VET	107	Comparative Anatomy/Physiology I	3	2	0	4
MED	101	Medical Terminology/Vocabulary II	3	0	0	3
ENG	101	Freshman Grammar & Composition	5	0	0	5
CHM	110	Introduction to Chemical Concepts	3	2	0	4
VET	110	Veterinary Pharmacology	2	0	0	2
			18	6	0	21
THIRD QUARTER						
VET	108	Comparative Anatomy/Physiology II	3	2	0	4
VET	102	Clinical Practices II	2	2	0	3
VET	200	Parasitology	3	2	0	4
OSC	141	Keyboarding	3	2	0	4
SOC	102	Introduction to Sociology	5	0	0	5
			16	8	0	20

VETERINARY MEDICAL TECHNOLOGY

		FOURTH QUARTER				
VET	103	Clinical Practices III	3	4	0	5
VET	204	Laboratory Techniques I	2	4	0	4
VET	202	Animal Pathology	3	2	0	4
ENG	103	Public Speaking	5	0	0	5
			13	10	0	18
		FIFTH QUARTER				
VET	104	Clinical Practices IV	3	4	0	5
VET	205	Laboratory Techniques II	2	4	0	4
VET	203	Animal Nutrition	1	2	0	2
PSY	201	General Psychology	5	0	0	5
***		Free Elective	3	0	0	3
			14	10	0	19
		SIXTH QUARTER				
VET	105	Clinical Practices V	3	4	0	5
VET	206	Laboratory Techniques III	2	4	0	4
VET	210	Large Animal Clinical Practices	3	4	0	5
VET	211	Advanced Veterinary Office Practices	3	0	0	3
			11	12	0	17
		SEVENTH QUARTER				
VET	212	Veterinary Technician Externship	2	0	33	13
		Total Hours Required for Graduation			127	

Curricula

Diploma Programs

AIR CONDITIONING, HEATING, AND REFRIGERATION

Diploma in Trade and Industrial Programs in Air Conditioning, Heating and Refrigeration (V-024)

Curriculum Description

The Air Conditioning, Heating, and Refrigeration Curriculum develops an understanding of the basic principles involved in the construction, installation, operation and maintenance of climate control equipment. Courses in blueprint reading, duct construction, welding, circuits and controls, math, science and general education are included to help provide supporting skills necessary for the mechanic to function successfully in the trade.

The air conditioning, heating, and refrigeration mechanic installs, maintains, service, and repairs environmental control systems in residences, department and food stores, office buildings, industries, restaurants, institutions, and commercial establishments. Job opportunities exist with companies that specialize in air conditioning, heating, and commercial refrigeration installation and service. The graduate should be able to assist in installing mechanical equipment, duct work, and electrical controls necessary in residential and commercial projects. With experience the graduate should be able to service various air conditioning, heating and refrigeration components; troubleshoot systems; and provide the preventive maintenance required by mechanical equipment. This person may be employed in areas of maintenance, installation, sales, and service in the field of air conditioning, heating and cooling.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
AHR	1201	Refrigerant Recovery	2	0	2
AHR	1211	Principles of Refrigeration	4	6	6
ELC	1201	Air Conditioning Electricity	3	3	4
MAT	1101	Trade Math I	4	0	4
RED	1101	Reading Improvement	2	0	2
WLD	1111	Gas Welding Fundamentals	0	3	1
			15	12	19

SECOND QUARTER

AHR	1202	All Year Comfort Systems	3	6	5
AHR	1212	Automatic Controls I	4	3	5
BPR	1111	Basic Blueprint Reading	0	3	1
CAS	1102	Micro Computers	1	2	2
ENG	1102	Communication Skills	2	0	2
MAT	1102	Trade Math II	4	0	4
			14	14	19

		THIRD QUARTER			
AHR	1203	Principles of Air Conditioning	4	6	6
AHR	1213	Calculation of Heat Loss and Gain	2	6	4
*AHR	1223	Automatic Controls II	0	6	2
PSY	1102	Human Relations	2	0	2
			8	18	14
		FOURTH QUARTER			
AHR	1204	Domestic and Commercial Refrigeration	4	6	6
AHR	1214	Reverse Refrigeration	4	6	6
AHR	1224	Estimating	2	3	3
AHR	1234	Advanced AC Electrical Diagrams	1	3	2
			11	18	17

*COE 201 Co-Op I (0-20-2) may be substituted in lieu of AHR 1223 Automatic Controls II (2-0-2)

Total Hours Required for Graduation 69

QUARTER SEQUENCE (Evening Program)

			Class	Lab	Credit
		FALL 1st Quarter			
AHR	1221	Principles of Refrigeration Part A	2	3	3
ELC	1221	Air Conditioning Electricity-Part A	3	0	3
MAT	1101	Trade Math I	4	0	4
RED	1101	Reading Improvement	2	0	2
			11	3	12
		WINTER 2nd Quarter			
AHR	1201	Refrigerant Recovery	2	0	2
AHR	1232	Principles of Refrigeration Part B	2	3	3
ELC	1222	Air Conditioning Electricity-Part B	0	3	1
WLD	1111	Gas Welding Fundamentals	0	3	1
			4	9	7
		SPRING 3rd Quarter			
AHR	1233	Principles of Air Conditioning Part A	2	3	3
AHR	1243	Auto Controls I—Part A	2	3	3
MAT	1102	Trade Math II	4	0	4
			8	6	10
		SUMMER 4th Quarter			
AHR	1244	Auto Controls I-Part B	2	0	2
AHR	1254	Principles of Air Conditioning-Part B	2	3	3
BPR	1111	Blueprint Reading	0	3	1
CAS	1102	Micro Computers	1	2	2
ENG	1102	Communication Skills	2	0	2
			7	8	10
		FALL 5th Quarter			
AHR	1213	Calculation of Heat Loss and Gain	2	6	4
AHR	1224	Estimating	2	3	3
			4	9	7

AIR CONDITIONING, HEATING, AND REFRIGERATION

		WINTER 6th Quarter			
AHR	1205	All Year Comfort Systems-Part A	1	3	2
*AHR	1223	Auto Controls II	0	6	2
PSY	1102	Human Relations	2	0	2
			3	9	6
		SPRING 7th Quarter			
AHR	1204	Domestic and Commercial Refrigeration	4	6	6
AHR	1206	All Year Comfort Systems-Part B	2	3	3
			6	9	9
		SUMMER 8th Quarter			
AHR	1214	Reverse Refrigeration	4	6	6
AHR	1234	Advanced AC Electrical Diagrams	1	3	2
			5	9	8

*COE 201 Co-Op I (0-20-2) may be substituted in lieu of AHR 1223 Auto Controls II (2-0-2)

TOTAL REQUIRED FOR GRADUATION 69

Diploma in Trade and Industrial Programs in Automotive Technology (T-176D)

Curriculum Description

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

Automobile mechanics maintain and repair mechanical, electrical and body parts of passenger cars, trucks and buses. In some communities and rural areas they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition and use shop manuals and other technical publications as references for technical data. Persons completing this curriculum may find employment with franchised automobile dealers, independent garages, or may start their own business.

Neither a high school diploma nor ACT scores nor SAT scores is required.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
AUT	401	Gasoline Combustion Engine I	3	3	4
PHY	132	Principles of Technology I	3	3	4
MAT	1101	Trade Math I	4	0	4
ENG	1101	Reading Improvement	2	0	2
AUT	121	Preventive Maintenance and NC Inspection and Shop Safety	2	2	3
			14	8	17

SECOND QUARTER

AUT	122	Gasoline Combustion Engine II	3	3	4
AUT	315	Auto Manual Power Trains	3	3	4
ELC	233	Basic Electricity/Electronics	3	3	4
ENG	1102	Communication Skills	2	0	2
AUT	301	Automotive Fuels I	3	3	4
			14	12	18

THIRD QUARTER

PHY	142	Principles of Technology	3	3	4
AUT	302	Auto Electrical/Electronics I	3	3	4
AUT	325	Auto Suspension Systems I	3	3	4
AUT	307	Auto Climate Control Systems I	3	3	4
AUT	144	Auto Braking Systems I	3	3	4
			15	15	20

AUTOMOTIVE TECHNOLOGY

		FOURTH QUARTER			
AUT	317	Automatic Transmission/Transaxles	3	6	5
AUT	412	Electronic Fuel Injection Systems	3	3	4
AUT	347	Auto Electrical/Electronics II	3	3	4
PSY	1102	Human Relations	2	0	2
			11	12	15
		Total Credit Hours Required for Graduation			70

Diploma in Early Childhood Education (T-073)

Curriculum Description

The Diploma: Child Care Worker is designed to provide training in addition to that required by beginning workers. It does provide training as required by the State of North Carolina but at a level that helps the teacher learn to diagnose the needs of his/her children and prepare appropriate lessons according to those needs.

		TECHNICAL COURSES			
EDU	118	Child Care Credential I	3	0	3
EDU	119	Child Care Credential II	3	0	3
EDU	121	Child Development and Behavior Management	3	0	3
EDU	114	Health, Safety and Nutrition of Young Child	2	2	3
EDU	207	Physical/Creative Activities	4	2	5
EDU	208	Creative Activities	4	2	5
EDU	211	Exploratory Activities I	4	2	5
EDU	116	Communication Activities I	4	2	5
EDU	203	The Exceptional Child	3	0	3
EDU	218	Childrens Literature	5	0	5
EDU	109	Practicum/Internship I	1	10	2
SOC	109	Community Resources	3	0	3
		RELATED COURSES			
PED	230	First Aid and CPR	3	0	3
RED	104	Critical Thinking and Reading	5	0	5
SPH	223	Public Speaking	3	0	3
		GENERAL EDUCATION			
ENG	101	Freshman Grammar and Composition	5	0	5
PSY	201	General Psychology	5	0	5
		Total Hours Required for Graduation			66

Note: These courses may be offered over two years in concurrence with the degree program.

ELECTRICAL INSTALLATION AND MAINTENANCE

Diploma in Industrial and Trade Programs in Electrical Installation and Maintenance (V-018)

Curriculum Description

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
ELC	1101	DC Circuits	7	6	9
ELC	1151	Residential Wiring Methods	3	12	7
RED	1101	Reading Improvement	2	0	2
			12	18	18

SECOND QUARTER

ELC	1102	AC Circuits	3	12	7
ELC	1172	Electrical Codes and Blueprints	6	3	7
ENG	1102	Communication Skills	2	0	2
MAT	1112	Electrical Math	4	0	4
			15	15	20

THIRD QUARTER

ELC	1155	AC and DC Machines	4	9	7
ELC	1143	Electrical Controls	3	6	5
PSY	1102	Human Relations	2	0	2
ELC	1174	Power Distribution	3	3	4
			12	18	18

FOURTH QUARTER

ELC	1144	Commercial Wiring	3	6	5
ELC	1134	Industrial Wiring	6	9	9
ELN	1184	Industrial Electronics	3	3	4
			12	18	18

Total Hours Required for Graduation 74

Diploma in Trade and Industrial Programs in Electronics Servicing (V-042)

Curriculum Description

The curriculum in Electronic Servicing is designed to provide basic knowledge and skills required in the installation, maintenance and servicing of electronic components and systems. Laboratory time will be spent verifying electronic theory and principles, learning installation, maintenance and service techniques.

An electronic service technician will be able to install, maintain, and service electronic equipment including: radios, television, audio/visual recording and playback equipment, home entertainment systems, digital electronic systems, Master Antenna Television and Cable Television components and systems.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
ELC	1121	DC Circuits	7	6	9
ELN	1100	Introduction to Electronics	3	12	7
RED	1101	Reading Improvement	2	0	2
			12	18	18

SECOND QUARTER

ELC	1102	AC Circuits	3	12	7
ELC	1183	Printed Circuits and Soldering	3	3	4
ENG	1102	Communication Skills	2	0	2
MAT	1112	Electrical Math	4	0	4
			12	15	17

THIRD QUARTER

ELN	1143	Introduction to Semiconductors	3	12	7
ELN	1133	Power Supplies and Amplifiers	4	3	5
PSY	1102	Human Relations	2	0	2
ELN	1112	Trouble-Shooting Techniques I	0	3	1
ELN	1163	Introduction to Digital Logic	3	0	3
			12	18	18

FOURTH QUARTER

ELN	1144	Special Semiconductors and Microelectronics	3	12	7
ELN	1154	Oscillators Pulse Circuits & Modulation	6	3	7
ELN	1164	Trouble-Shooting Techniques	0	3	1
ELN	1174	Digital Techniques	3	0	3
			12	18	18

Total Hours Required for Graduation 71

GENERAL OFFICE (TECHNICAL SPECIALTY)

Diploma in General Office (Technical Specialty (T-165)

Curriculum Description

The General Office (Technical Specialty) curriculum is designed for the individual entering, upgrading or retraining in the office occupations relating to general and clerical duties. Special emphasis is on typing and basic office duties and responsibilities.

Through study in areas such as typewriting, oral and written communication, basic accounting, business machines and word processing, the individual will be able to function effectively as an office clerk, machine operator, typist, or receptionist.

QUARTER SEQUENCE

			Class	Lab	Credit
OSC	141	Keyboarding	3	2	4
BUS	111	Business Mathematics	5	0	5
OSC	125	Communications I	3	4	5
CSC	148	IBM PC/DOS/OS-2	3	4	5
OSC	142	Keyboarding II	3	2	4
OSC	126	Communications II	3	4	5
ENG	101	Freshman Grammar and Composition	5	0	5
OSC	127	Professional Development	3	4	5
OSC	220	Word Processing I	3	4	5
OSC	223	Administrative Office Procedures	3	4	5
ENG	103	Public Speaking	5	0	5
BUS	104	Introduction to Business	5	0	5
OSC	221	Word Processing II	3	4	5
OSC	219	Machine Transcription	3	4	5
OSC	230	Records Management	3	4	5
		Elective	3	0	3
		Total Hours Required for Graduation			76

ELECTIVES

Each student must choose three free elective hours.

Diploma in Industrial Maintenance Mechanic (V-028)

Curriculum Description

The Industrial Maintenance Mechanics curriculum introduces students to a wide range of skills needed to service, maintain and make repairs to machinery found in most production industries.

Course work includes basic theory and practical skills training in electricity, metal machining, welding, hydraulics/pneumatics, industrial rigging and heating and cooling systems.

Applied mechanics, motors and controls and programmable logic controllers will also be introduced.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
BPR	1111	Basic Blueprint Reading	0	3	1
ISC	1101	Industrial Safety	2	0	2
MAT	1101	Trade Math I	4	0	4
MEC	301	Basic Machine Process	2	3	3
PHY	132	Principles of Technology I	3	3	4
RED	1101	Reading Improvement	2	0	2
WLD	1111	Gas Welding Fundamentals	0	3	1
WLD	1112	Arc Welding Fundamentals	0	3	1
			13	15	18

SECOND QUARTER

ELC	1116	Basic Electrical I	3	3	4
ENG	1102	Communication Skills	2	0	2
MEC	1122	Maintenance Machine Shop	2	3	3
MNT	1119	Piping and Tubing	3	3	4
MNT	1146	Rigging and Moving	0	3	1
PME	1114	Small Engines	0	3	1
PSY	1102	Human Relations	2	0	2
			12	15	17

THIRD QUARTER

AHR	1118	Basic Refrigeration	3	6	5
CAS	1102	Micro Computers	1	2	2
ELC	1117	Basic Electrical II	3	3	4
ELC	1133	Electric Controls	3	3	4
MNT	1112	Mechanical Systems	2	3	3
			12	17	18

FOURTH QUARTER

ELC	1104	Electrical Wiring	3	6	5
HYD	313	Hydraulics and Pneumatics	3	3	4
MNT	1145	Pumps and Valves	1	3	2
MNT	1117	HVAC Systems	3	3	4
MNT	1113	Construction Fundamentals	2	0	2
			12	15	17

Total Hours for Graduation 70

MACHINIST

Diploma in Trade and Industrial Programs in Machinist (V-032)

Curriculum Description

The machinist curriculum gives individuals the opportunity to acquire basic skills and related technical information necessary to gain employment as machinists. The machinist is a skilled metalworker who shapes metal by using machine tools found in a modern shop. The machinist is able to select the proper tools and materials required for each job and to plan the cutting and finishing operations in their proper order so that the work can be finished according to blueprint or written specifications. The machinist makes computations relating to dimensions of work, tooling, feeds and speeds of machining. Precision measuring instruments are used to measure the accuracy of work. The machinist also must know the characteristics of metals so that annealing and hardening of tools and metal parts can be accomplished in the process of turning a block of metal into an intricate precise part.

QUARTER SEQUENCE (Day Program)

FIRST QUARTER

			Class	Lab	Credit
RED	1101	Reading Improvement	2	0	2
MEC	1200	Reading Precision Measuring Instruments	2	0	2
MEC	1201	Turning and Milling Machine Technology I	5	9	8
MAT	1101	Trade Math I	4	0	4
MEC	1205	Basic CNC Programming	2	3	3
BPR	1111	Basic Blueprint Reading	0	3	1
			15	15	20

SECOND QUARTER

MEC	1202	Turning and Milling Machine Technology II	3	12	7
MEC	1206	Computer Numerical Control-Turning Centers	2	13	3
MAT	1103	Algebra and Trigonometry	4	0	4
MEC	1220	Structure of Metals	3	0	3
ENG	1102	Communication Skills	2	0	2
			14	15	19

THIRD QUARTER

MEC	1215	Machine Technology III	2	9	5
MEC	1216	Computer Numerical Control-Machining Centers	2	3	2
MAT	1153	Machinist Mathematics	4	0	4
PSY	1102	Human Relations	2	0	2
MEC	1209	Grinding Operations	1	3	2
DFT	1181	Machinist Drafting I	1	3	2
			12	18	17

FOURTH QUARTER

MEC	1204	CNC & Conventional Machine Technology IV	3	6	5
MEC	1208	CAM Programming-Computer Aided Manufacturing	2	6	4
DFT	1182	Machinist Drafting II	2	3	3
*MEC	1210	Tool and Manufacturing Operations	0	6	2
			7	21	14
		Total Hours			70

*COE 201 Co-op I (0-20-2) may be substituted in lieu of MEC 1210 Tool and Manufacturing Operations (0-6-2)

QUARTER SEQUENCE (Evening Program)

FIRST YEAR

FIRST QUARTER (Fall)

			Class	Lab	Credit
RED	1101	Reading Improvement	2	0	2
MEC	1200	Reading Precision Measuring Instruments	2	0	2
MEC	1211	Turning and Milling Machine Technology I-Part A	4	3	5
MAT	1101	Trade Math I	4	0	4
			12	3	13

SECOND QUARTER (Winter)

MEC	1221	Turning and Milling Machine Technology I-Part B	1	6	3
MEC	1205	Basic CNC Programming	2	3	3
BPR	1111	Basic Blueprint Reading	0	3	1
			3	12	7

THIRD QUARTER (Spring)

MEC	1212	Turning and Milling Machine Technology II-Part A	3	3	4
MEC	1206	Computer Numerical Control-Turning Centers	2	3	3
			5	6	7

(Summer)

MAT	1103	Algebra and Trigonometry	4	0	4

SECOND YEAR

FOURTH QUARTER (Fall)

MEC	1222	Turning and Milling Machine Technology II-Part B	0	9	3
MEC	1220	Structure of Metals	3	0	3
			3	9	6

FIFTH QUARTER (Winter)

MEC	1214	Machine Technology III-Part A	0	6	2
MAT	1153	Machinist Math	4	0	4
			4	6	6

SIXTH QUARTER (Spring)

MEC	1223	Machine Technology III-Part B	2	3	3
MEC	1209	Grinding Operations	1	3	2
DFT	1181	Machinist Drafting I	1	3	2
ENG	1102	Communication Skills	2	0	2
			6	9	9

MACHINIST

		(Summer)			
MEC	1216	Computer Numerical Control Machining Centers	2	3	2

THIRD YEAR

		SEVENTH QUARTER (Fall)			
MEC	1204	CNC and Conventional Machine Technology IV	3	6	5
MEC	1217	CAM Programming-Computer Aided Manufacturing-Part A	2	3	3
PSY	1102	Human Relations	2	0	2
			7	9	10
		EIGHTH QUARTER (Winter)			
MEC	1210	Tool and Manufacturing Operations	0	6	2
MEC	1227	CAM Programming-Computer Aided Manufacturing-Part B	0	3	1
DFT	1182	Machinist Drafting II	2	3	3
			2	12	6
		Total Hours			70

Diploma in Practical Nursing (V-038)

Curriculum Description

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

Licensed practical nurses may be employed in hospitals, long term care facilities, clinics, doctors' offices, industry, and community health agencies.

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

PROGRAM INFORMATION

To be considered for admission to the program, the following requirements must be met:

In addition to meeting the general admission requirements, applicants to the Practical Nursing program must meet the following criteria:

1. Must have an overall 2.0 or better grade point average in college courses.
2. Must be a high school or GED graduate.
3. Must be admitted to Gaston College.
4. Must submit a minimum composite score of 16 on the American College Test (ACT). ACT must have been taken within the past 5 years.
5. Must schedule personal interview with the nursing faculty, if recommended.
6. Must submit a *completed* physician's statement including physical and emotional status.
7. Must submit a satisfactory "Criminal Record Check" or a notarized statement stating no record exists from the Clerk of Superior Court at the county courthouse in his/her county of residence.

The following criteria will be implemented by the Admission Committee of the nursing faculty in the selection process of recommending applicants to the nursing faculty for admission to the program:

1. The number of related courses completed.
2. Overall GPA (grade point average).
3. ACT score.
4. Personal interview with faculty, if recommended.

The final selection of applications admitted into the program is made by the nursing faculty.

PRACTICAL NURSING

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Clinical	Credit
BIO	121	Anatomy and Physiology I	3	2	0	4
PSY	201	General Psychology	5	0	0	5
NUR	1015	Fundamentals of Nursing I	6	2	6	9
BIO	134	Basic Nutrition	3	0	0	3
			17	4	6	21

SECOND QUARTER

BIO	122	Anatomy and Physiology II	3	2	0	4
NUR	1025	Fundamentals of Nursing II	6	2	15	12
NUR	1232	Pharmacology in Nursing	3	0	0	3
			12	4	15	19

THIRD QUARTER

NUR	1035	Maternal and Child Health Nursing	6	2	15	12
ENG	101	Freshman Grammar and Composition	5	0	0	5
			11	2	15	17

FOURTH QUARTER

NUR	1046	Medical-Surgical Nursing	6	2	15	12
NUR	1047	Perspectives in Practical Nursing	2	0	0	2
			8	2	15	14
		Total				71

*Related courses are underlined.

Diploma in Radio and Television Broadcasting (V-043)

Curriculum Description

The Radio and Television curriculum is designed to offer the student the opportunity to acquire basic skills and the related technical information necessary to gain employment in the non-technical areas of professional broadcasting.

The program of study provides the students with sufficient training to perform such duties as announcing, advertising, sales, copy writing, commercial and program production, studio and control room equipment operation, traffic and log maintenance, and news gathering, writing, and reporting. The graduate will find employment in the broadcasting industry.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
RTV	120	Radio Control Room Procedures	5	0	5
RTV	201	Theories of Mass Communication	5	2	6
RTV	203	Expression in the Media	5	0	5
RTV	206	Writing for Broadcasting	3	2	4
			18	4	20

SECOND QUARTER

ENG	101	Freshman Grammar and Composition	5	0	5
RED	104	Critical Thinking and Reading	5	0	5
RTV	211	Broadcast Journalism	5	6	8
			15	6	18

THIRD QUARTER

ENG	103	Public Speaking	5	0	5
PSY	201	General Psychology	5	0	5
MUS	101	*Music Appreciation OR			
DRA	101	*Introduction to Theatre			
		*(Choose either MUS 101 or DRA 101)	3	0	3
RTV	204	Radio Production	3	8	7
			16	8	20

FOURTH QUARTER

RTV	116	Introduction to Broadcast Sports	3	6	6
RTV	202	Advertising, Sales and Promotion	3	2	4
RTV	205	Broadcast Programming	3	0	3
RTV	212	Broadcast Management	3	0	3
RTV	218	Broadcast Law	3	0	3
			15	8	19
		Total Hours Required			77

Diploma in Trade and Industrial Programs in Welding (V-050)

Curriculum Description

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

Welding offers employment in practically any industry: automotive, aircraft, guided missiles, heavy equipment, railroads, construction, pipefitting, production shops, job shops and many others.

QUARTER SEQUENCE

			Class	Lab	Credit
FIRST QUARTER					
MAT	1101	Trade Math I	4	0	4
PHY	132	Principles of Technology I	3	3	4
RED	1101	Reading Improvement	2	0	2
WLD	1101	Basic Oxy-Fuel and Arc Weld	3	12	7
			12	15	17
SECOND QUARTER					
BPR	1111	Blueprint Reading	0	3	1
ENG	1102	Communication Skills	2	0	2
MAT	1102	Trade Math II	4	0	4
MEC	1220	Structure of Metals	3	0	3
PSY	1102	Human Relations	2	0	2
WLD	1102	Shielded Metal Arc Weld	3	12	7
			14	15	19
THIRD QUARTER					
WLD	1117	Gas Shielded Arc Welding (MIG and TIG)	3	12	7
WLD	1118	Certification and Testing	3	12	7
			6	24	14
FOURTH QUARTER					
WLD	1125	Welding Processes and Projects	3	12	7
WLD	1134	Pipe Welding	3	12	7
			6	24	14
		Total Hours Required for Graduation			64

Curricula

Certificate Programs

ADMINISTRATIVE OFFICE TECHNOLOGY

Certificate in Administrative Office Technology (T-030C)

The purposes of the certificate in Office Technology curriculum are to:

Prepare the individual to enter office technology occupations.

Provide programs for individuals who want to upgrade (move from one position to another) or who seek to retrain.

Provide an opportunity for individuals who want to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in communications (spoken, written, interpreted), keyboarding and computer applications. By accomplishing these skills, the individuals will be able to function effectively in office-related activities.

This is a nine-month program. Students may enroll in this program at the beginning of any quarter.

			Class	Lab	Credit
OSC	141	Keyboarding I	3	2	4
OSC	142	Keyboarding II	3	2	4
OSC	125	Communication I	3	4	5
OSC	126	Communication II	3	4	5
OSC	230	Records Management	3	4	5
OSC	153	Resumes/Interviews	1	2	2
OSC	220	Word Processing I/Functions	3	4	5
OSC	221	Word Processing II/Production	3	4	5
OSC	219	Machine Transcription	3	4	5
			25	30	40

AUTOMOTIVE BRAKES AND SUSPENSION SYSTEMS

Certificate Program in Automotive Brakes and Suspension Systems (T-176C)

Curriculum Description

This curriculum is designed to give the individual basic skills and related information needed to gain limited employment in the automotive industry.

The courses taken in this certificate program count as credit toward the full automotive diploma level program and the associate degree program with the exception of the related and general education courses.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
AUT	325	Automotive Suspensions Systems I	3	3	4
AUT	144	Automotive Braking Systems I	3	3	4
MAT	1101	Trade Math I	4	0	4
			10	6	12

SECOND QUARTER

AUT	329	Automotive Suspension Systems II	3	3	4
AUT	457	Automotive Braking Systems II	1	3	2
			4	6	6

AUTOMOTIVE ENGINES AND POWER TRAINS

Certificate Program in Automotive Engines & Power Trains (T-176C)

Curriculum Description

This curriculum is designed to give the individual basic skills and related information needed to gain limited employment in the automotive industry.

The courses taken in this certificate program count as credit toward the full automotive diploma level program and the associate degree program with the exception of the related and general education courses.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
AUT	401	Gasoline Combustion Engines I	3	3	4
AUT	315	Automotive Manual Power Trains	3	3	4
			6	6	8

SECOND QUARTER

AUT	122	Automotive Engines II	3	3	4
AUT	121	Preventive Maintenance/NC Inspection/Auto Shop Safety	2	2	3
			5	5	7

THIRD QUARTER

AUT	317	Automatic Transmissions/Transaxles	3	6	5
ENG	1102	Communication Skills	2	0	2
			5	6	7
					22

Certificate Program in Automotive Fuel & Electrical Systems (T-176C)

Curriculum Description

This curriculum is designed to give the individual basic skills and related information needed to gain limited employment in the automotive industry.

The courses taken in this certificate program count as credit toward the full automotive diploma level program and the associate degree program with the exception of the related and general education courses.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
AUT	301	Automotive Fuels I	3	3	4
ELC	233	Basic Electricity/Electronics	3	3	4
			6	6	8

SECOND QUARTER

AUT	302	Automotive Electrical/Electronics I	3	3	4
CAS	129	Automotive Computer Software	1	2	2
			4	5	6

THIRD QUARTER

AUT	412	Automotive Fuel Injection Systems	3	3	4
AUT	347	Auto Electrical/Electronics II	3	3	4
			6	6	8

FOURTH QUARTER

AUT	349	Auto Electrical/Electronics III	3	3	4
			3	3	4

Total Hours Required for Graduation 26

BUSINESS COMPUTER PROGRAMMING, BASIC

Certificate in Basic Business Computer Programming (T-022C)

Curriculum Description

The primary objective of the Certificate Program of the Business Computer Programming curriculum is to introduce students to the employment opportunities in the computer programming field. The objective is fulfilled through the study and application of programming languages and operation of computer equipment.

Entry level jobs in the computer field may become available. All courses taken in this program can count for full credit toward the two-year diploma program.

All courses will be taught both during the day and at night. Completion of the Certificate Program can be accomplished in 9 months—either as a day student or as a night student—taking 2 courses per quarter.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
CSC	150	Computer Fundamentals	3	2	4
CSC	144	Programming Concepts I	3	4	5
			6	6	9
		SECOND QUARTER			
CSC	141	COBOL Programming I	3	4	5
CSC	148	IBM PC/DOS - OS/2	3	4	5
			6	8	10
		THIRD QUARTER			
CSC	142	COBOL Programming II	3	4	5
CSC	173	Spreadsheet & Data Base	3	4	5
			6	8	10
		Total Hours Required for Graduation			29

Certificate Program in Child Care Administration (T-073C)

Curriculum Description

This certificate is designed to provide a minimum of business-oriented training (including the required 33 clock hours in Day Care Administration) to anyone who would like to own or manage a child care center. It also provides a foundation upon which additional training may be added.

			Class	Lab	Credit
*EDU	118	Child Care Credential I	3	0	3
*EDU	119	Child Care Credential II	3	0	3
EDU	121	Child Development and Classroom Management	3	0	3
EDU	114	Health, Safety and Nutrition for Young Child	2	2	3
EDU	205	Child Care Administration	3	0	3
PED	230	First Aid and CPR	3	0	3
BUS	233	Personnel Management	3	0	3
BUS	167	Small Business Management	5	0	5
BIO	134	Basic Nutrition	3	0	3
SOC	225	Interpersonal Skills and Group Processes	5	0	5
		Total Hours Required for Graduation	33	2	34

Note: These courses may be offered over two years in concurrence with the degree program.

*These classes are REQUIRED before Child Care Administration may be taken.

CHILD CARE CREDENTIAL

Certificate Program in Child Care Credential (T-073C)

Curriculum Description

Child Care Credential is the basic training recommended for childcare workers. It provides fundamental information on child development, discipline, activity planning, and nutrition which beginning teachers will use daily in the classroom setting.

			Class	Lab	Credit
EDU	118	Child Care Credential I	3	0	3
EDU	119	Child Care Credential II	3	0	3

These classes may be taken in either order or may be taken concurrently.

Certificate Program in Basic Child Care (T-073C)

Curriculum Description

The Certificate in Basic Child Care prepares students for initial experiences working with preschool children. It provides instruction in a variety of basic ideas and activities for application in a classroom setting. The classes are designed to meet the training requirements of the State of North Carolina and to provide opportunity for advanced training upon completion.

			Class	Lab	Credit
EDU	118	Child Care Credential I	3	0	3
EDU	119	Child Care Credential II	3	0	3
EDU	121	Child Development and Classroom Management	3	0	3
EDU	114	Health, Safety and Nutrition for Young Children	2	2	3
PED	230	First Aid and CPR	3	0	3
EDU	116	Communication Activities I	4	2	5
RED	104	Critical Thinking and Reading	5	0	5
		CHOOSE ONE			
EDU	207	Physical/Creative Activities	4	2	5
EDU	208	Creative Activities	4	2	5
		Total Hours Required for Graduation			30

Note: These courses may be offered over two years in concurrence with the degree program.

CNC AND CONVENTIONAL MACHINING

Certificate Program in CNC and Conventional Machining (V-032C)

Curriculum Description

This curriculum is designed to give an individual the necessary skills to operate and program (CNC) Computer Numerical Control Turning Centers and Machining Centers.

It is recommended that students have the necessary math and reading skills before enrollment in this program.

The courses taken in this certificate program can be counted toward the machinist diploma program (V-032)

			Class	Lab	Credit
MEC	1200	Reading Precision Measuring Instruments	2	0	2
MEC	1201	Turning & Milling Machine Technology I	5	9	8
MAT	1101	Trade Math I	4	0	4
MEC	1203	Basic CNC Programming	2	3	3
BPR	1111	Basic Blueprint Reading	0	3	1
MEC	1202	Turning & Milling Machine Technology II	3	12	7
MEC	1206	Computer Numerical Control-Turning Centers	2	3	3
			18	30	28

Certificate Program in CNC Programming/Machinist (V-032C)

Curriculum Description

This curriculum is designed to give an individual entry level skills needed to gain employment as a machinist or (CNC) Computer Numerical Control programmer.

The courses taken in this certificate program can be counted toward the Machinist diploma program (V-032)

			Class	Lab	Credit
MAT	1101	Trade Math I	4	0	4
MEC	1205	Basic CNC Programming	2	3	3
MEC	1206	Computer Numerical Control Turning Centers	2	3	3
MEC	1207	Computer Numerical Control-Machining Centers	1	3	2
MEC	1208	CAM Programming-Computer Aided Manufacturing	2	6	4
			11	15	16

COMMERCIAL ART

Certificate Program in Commercial Art (C-003C)

Curriculum Description

The Commercial Art Certificate Program is a one-year sequence of courses being offered for career-oriented students who wish to obtain, refresh, or improve knowledge and skills in commercial art. This curriculum will provide them with a foundation in the creative and the technical/mechanical areas of the visual communications profession and graphic arts industry.

The program is made up of six courses plus an elective. Two courses will be offered in the evening schedule during the fall, winter and spring quarters in concurrence with the Associate of Fine Arts degree program. Elective courses will be offered during the summer quarter for further study in specific areas.

The student will be trained in the development of the concept, physical design and production of promotional materials such as corporate symbols, business systems, ads, posters, signs, brochures, booklets, folders, and newsletters. The program of study will emphasize design and preparation of art for printing. A graduate portfolio will exhibit professional quality work which may be shown when seeking employment.

			Class	Lab	Credit
		FALL QUARTER			
ART	131	Drawing I	0	6	3
DES	114	Commercial Art Fundamentals	0	6	3
			0	12	6
		WINTER QUARTER			
PHO	101	Introduction to Photography	0	6	3
DFT	101	Engineering Drawing I	0	6	2
			0	12	5
		SPRING QUARTER			
ART	116	Lettering for Commercial Art	0	6	3
ART	115	Commercial Art Design	0	6	3
			0	12	6
		SUMMER QUARTER ELECTIVES			
ART	117	Illustration	0	6	3
ART	215	Commercial Art Techniques	0	6	3
ART	104	Investigation of Materials	0	6	3
PHO	102	Intermediate Photography	0	6	3
			0	6	3
		Total Hours	0	42	20

Two classes will be offered in the evening schedule each fall, winter, and spring in concurrence with the Associate of Fine Arts degree program. Students will choose one elective for more specialized study in the summer quarter.

Certificate Program in Advanced Computer Aided Manufacturing (CAM) Engineering Technology (T-045C)

Curriculum Description

This program is designed to upgrade the skills and knowledge base of present engineering personnel with at least an AAS degree in Electrical, Electronics, Mechanical or Industrial Engineering Technology. The recipient of the certificate will be well qualified to operate, repair, evaluate, apply and manage automated computer controlled processing and manufacturing equipment. Though not explicitly shown in the curriculum, computer aided drafting is included in this program. The student is not expected to take any of the courses in this curriculum for which he/she has already received credit.

The curriculum is to be arranged with the Dean and will include selected courses from the programs in which the student does not hold a degree. The program must include the robotics and CAM/CIM courses, control courses, and microprocessor and integrated circuits courses. The program will not be less than 62 quarter credits.

See the Dean of Engineering Technologies, Math and Physics for scheduling.

COMPUTER SKILLS

Certificate in Basic Computer Skills (T-022C)

Curriculum Description

The primary objective of the Certificate in Basic Computer Skills is to offer computer literacy and knowledge. This objective will be accomplished through the study of the various application packages currently being used on microcomputers today.

All courses will be taught during both day and evening. The program can be completed within 9 months.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
CSC	150	Computer Fundamentals	3	2	4
OSC	141	Keyboarding I	3	2	4
			6	4	8

SECOND QUARTER

CSC	148	IBM PC/DOS-OS/2	3	4	5
OSC	220	Word Processing I/Functions	3	4	5
			6	8	10

THIRD QUARTER

CSC	173	Spreadsheet/Database Processing	3	4	5
			3	4	5

Total Hours Required for Graduation 23

Certificate Program in General Education (C-011C)

Curriculum Description

The Liberal Arts and Sciences General Education Certificate is designed 1) to provide guidance for undecided students, 2) to serve as a goal for students transferring to four-year colleges after one year, and 3) to recognize completion of preliminary work done while awaiting entrance to other programs such as nursing.

CORE COURSES

			Credit
RED	104	Critical Thinking and Reading	5
CAS	161	Introduction to Microcomputers	2
ENG	101	Freshman Grammar and Composition	5
PSY	201	General Psychology	5
BIO	134	Basic Nutrition	3
		or BIO 101 General Biology	
MAT	103	Fundamentals of Mathematics	5
		or MAT 101 College Algebra	
PED	230	First Aid and CPR	3

ELECTIVES - 15 credit hours chosen from the Associate of Arts, Associate of Science, or Associate of Fine Arts, requirements, B-2.

RECOMMENDED FOR NURSES

BIO	108	General Microbiology	6
BIO	121	Anatomy and Physiology I	4
BIO	122	Anatomy and Physiology II	4
SOC	102	Introductory Sociology	5
PSY	229	Abnormal Psychology	5
**PSY	250	Life-Span Psychology	5
		PSY 203 Child Psychology	5
		PSY 204 Adolescent Psychology	5
		PSY 230 Adult Development and Aging	5

**Students planning to enter the nursing program are strongly advised to take the PSY 203, 204, 230 sequence since Psychology is heavily emphasized on the State Board Examinations.
**Students planning to enter the nursing program should consider adding a Certificate in Psychology.

HEALTH AND PHYSICAL EDUCATION

Certificate Program in Health and Physical Education (C-031C)

Curriculum Description

Physical Education is an important aspect of our lifestyles today. The certificate in health and physical education is designed to encourage students to obtain competencies needed to perform jobs in after-school programs, summer camps, and health centers.

MAJOR COURSES

BIO	134	Basic Nutrition	3
PED	210	Health Education	3
PED	225	Physical Fitness	1
PED	230	First Aid and CPR	3
PSY	201	General Psychology	5
			15

RELATED COURSES

8 credit hours to be chosen from the following:

SOC	103	Marriage and Family Relations	3
SOC	110	Human Sexuality	3
SOC	218	Group Dynamics	3
PSY	103	Human Relations	3
			8

ELECTIVES

12 credit hours to be chosen from the following:

PED100, 101, 102, 103, 104, 105, 106, 107, 108, 111, 113, 119, 120, 121, 122, 227, 228, 240, 260, 270

Total Hours	35

Certificate Program in Industrial Engineering Technology (T-047C)

Curriculum Description

The Industrial Engineering Technology certificate program is intended to provide the student with a nucleus of the courses required in the IET degree program. These classes provide a technical foundation designed to meet the needs of students entering business and industry in industrial engineering fields.

			Class	Lab	Credit
MAT	121	Algebra & Trigonometry	4	2	5
ENG	121	Composition I	3	0	3
MEC	101	Production Technology I	3	3	4
DFT	101	Engineering Drawing I	0	6	2
ISC	113	Industrial Safety	3	0	3
ISC	115	Industrial Leadership	3	0	3
ISC	201	Production Planning	3	0	3
ISC	212	Profit Improvement	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
ISC	222	Methods Analysis	2	3	3
ISC	xxx	*Professional Elective			3-4

*Professional electives to be selected from one of the following:

ISC	224	Work Measurement	2	3	3
ISC	202	Industrial Systems	3	3	4
ISC	233	Industrial Org & Mgmt	3	0	3

Total Hours Required for Graduation 37

INDUSTRIAL MAINTENANCE MECHANIC

Certificate Program in Industrial Maintenance (V-028C)

Curriculum Description

This curriculum is designed to give the individual basic skills and related information needed to gain limited employment in the Industrial Maintenance field.

The courses taken in this certificate program count as credit toward the full Industrial Maintenance Mechanic program (V-028).

QUARTER SEQUENCE (Evening Program Only)

FIRST QUARTER

			Class	Lab	Credit
BPR	1111	Basic Blueprint Reading	0	3	1
WLD	1111	Gas Welding Fundamentals	0	3	1
MAT	1101	Trade Math I	4	0	4
MEC	301	Basic Machine Processes	2	3	3
			6	9	9

SECOND QUARTER

ELC	1116	Basic Electrical I	3	3	4
ENG	1102	Communication Skills	2	0	2
MEC	1112	Mechanical Systems	2	3	3
			7	6	9

THIRD QUARTER

HYD	313	Hydraulics & Pneumatics	3	3	4
ELC	1133	Electric Controls	3	3	4
			6	6	8

FOURTH QUARTER

MEC	1145	Pumps & Valves	1	3	2
ELC	1104	Electrical Wiring	3	6	5
WLD	1112	Arc Welding Fundamentals	0	3	1
			4	12	8
					34

Certificate in Lathe and Milling Machine Operations (V-032C)

Curriculum Description

This curriculum is designed to give an individual entry level skills needed to gain employment in the metalworking industry.

The courses taken in this certificate program can be counted toward the Machinist Diploma Program. (V-032)

			Class	Lab	Credit
MEC	1200	Reading Precision Measuring Instruments	2	0	2
MEC	1201	Turning & Milling Machine Technology I	5	9	8
MAT	1101	Trade Math I	4	0	4
BPR	1111	Basic Blueprint Reading	0	3	1
MEC	1202	Turning & Milling Machine Technology II	3	12	7
			14	24	22

Criminal Justice Academy/Basic Law Enforcement Training (T-189)

NOTE: Students enrolling must meet certain requirements. Please see the Director of the Criminal Justice Academy for more information.

Curriculum Description

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

Candidates for this course are sometime employed by a police or sheriff's department before entry; however, this is not a requirement. The basic 494 hour course is set by the Criminal Justice Standards Division of the North Carolina Department of Justice.

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

Day Basic Law Enforcement Training classes are scheduled from 8:00 a.m. until 5:00 p.m., Monday through Friday and some Saturday classes. The day program runs approximately fourteen (14) weeks. Night Basic Law Enforcement Training classes are scheduled from 6:00 p.m. until 10:00 p.m., Monday through Thursday and most Saturdays. The night program runs approximately six months.

CJC 310: INTRODUCTION TO CRIMINAL JUSTICE

HOURS	COURSE DESCRIPTION
4	Course Orientation
4	Constitutional Law
16	Defensive Tactics
8	Juvenile Laws
40	Firearms
16	Patrol Techniques
10	Crisis Management

NOTE: TRANSFERS AS CJC 101 - The Criminal Justice System & Process (5 credits)

CJC 311: FUNDAMENTALS OF JUDICIAL SYSTEM

16	Laws of Arrest, Search & Seizure
8	Mechanics of Arrest: Arrest Procedures
4	Law Enforcement Communications
12	Electrical & Hazardous Materials
6	Techniques of Traffic Law Enforcement
20	Traffic Accident Investigation
44	Law Enforcement Driver Training
24	Civil Process
8	Supplemental Custody

NOTE: TRANSFERS AS CJC 111 - Function of Judicial Process (5 credits)

CJC 312: CRIMINAL LAW

24	Elements of Criminal Law
6	Mechanics of Arrest: Vehicle Stops
2	Mechanics of Arrest: Custody Procedures
4	Mechanics of Arrest: Processing Arrestee
4	ABC Laws
20	Motor Vehicle Laws

NOTE: TRANSFERS AS CJC 115 - Criminal Law (4 credits)

CJC 313: CRIMINAL INVESTIGATION

12	Field Notetaking & Report Writing
28	Criminal Investigation
6	controlled Substances
8	Interviews: Field and In Custody
12	Preparing for & Testifying in Court

NOTE: TRANSFERS AS CJC 210 - Criminal Investigation (5 credits)

CJC 314: ISSUES OF CRIMINAL JUSTICE

40	First Responder
4	Crime Prevention
12	Special Populations
8	Civil Disorders
4	Dealing with Victims & the Public
4	Ethics

NOTE: TRANSFERS AS CJC 262 - Issues in Criminal Justice (4 credits)

CJC 301: BLET CONDITIONING

43	Physical Fitness Training (2 credits)

TOTAL CREDITS EARNED 25

DAY & EVENING BLET PROGRAM COURSE LIST

1. Course Orientation	4
2. Constitutional Law	4
3. Law of Arrest, Search & Seizure	16
4. Mechanics of Arrest: Arrest Procedures	8
5. Law Enforcement Communications	4
6. Elements of Criminal Law	24
7. Defensive Tactics	16

8. Juvenile Law and Procedures	8
9. First Responder	40
10. Firearms	40
11. Patrol Techniques	16
12. Crime Prevention Techniques	4
13. Field Notetaking and Report Writing	12
14. Mechanics of Arrest: Vehicle Stops	6
15. Mechanics of Arrest: Custody Procedures	2
16. Mechanics of Arrest: Processing Arrestee	4
17. Crisis Management	10
18. Special Populations	12
19. Civil Disorders	8
20. Criminal Investigations	28
21. Interviews: Field and In-Custody	8
22. Controlled Substances	6
23. ABC Laws and Procedures	4
24. Electrical and Hazardous Materials	12
25. Motor Vehicle Laws	20
26. Techniques of Traffic Law Enforcement	6
27. Traffic Accident Investigation	20
28. Law Enforcement Driver Training	44
29. Preparing for Court and Testifying in Court	12
30. Dealing with Victims and the Public	4
31. Ethics	4
32. Physical Fitness Training	43
33. Civil Process	24
34. Supplemental Custody Procedures	8
35. Testing	13
TOTAL	494

Certificate in Nursing Assistant (V-072)

Curriculum Description

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

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

COURSE AND HOUR REQUIREMENTS:

			Class	Lab	Clin	Credit
NUR	3023	Nursing Assistant I	2	2	6	5
NUR	3024	Nursing Assistant II	3	4	9	8
NUR	3025	Home Care	2	2	0	3
		Total Credits				16

OPERATIONS MANAGEMENT TECHNOLOGY

Certificate Program in Operations Management Technology (T-049C)

Curriculum Description

The Operations Management Technology certificate program is intended to provide the student with a nucleus of the courses required in the Operations Management Technology degree program. These classes provide a foundation in the technical aspects of operations management. The Certificate program is designed to meet the needs of students entering business and industry in operations management fields.

			Class	Lab	Credit
MAT	110	Technical Mathematics	5	3	6
ENG	121	Composition I	3	0	3
DFT	101	Engineering Drawing I	0	6	2
ISC	102	Principles of Indust. Mgmt.	5	0	5
ISC	113	Industrial Safety	3	0	3
ISC	115	Industrial Leadership	3	0	3
ISC	201	Production Planning	3	0	3
ISC	212	Profit Improvement	3	3	4
ISC	213	Statistics and Quality Control	3	3	4
ISC	222	Methods Analysis	2	3	3
ISC	xxx	*Professional Elective			3-4

*Professional electives to be selected from one of the following:

ISC	224	Work Measurement	2	3	3
ISC	202	Industrial Systems	3	3	4
ISC	233	Industrial Org & Mgmt	3	0	3
		Total Hours Required for Graduation			39

Phlebotomy Technician Certificate Program (V-168)

Curriculum Description

The Phlebotomy Technician curriculum prepares the graduate to draw blood specimens from patients for the purpose of testing and analyzing blood. Phlebotomy involves duties related to the preparation and maintenance of equipment used in obtaining blood specimens, the use of appropriate communication skills when working with patients; the selection of venipuncture sites; the care of blood specimens; and the entry of the testing process into the computer, as well as clerical duties associated with record keeping of the blood tests.

SPECIFIC PROGRAM REQUIREMENTS

In addition to meeting the college admission requirements, applicants to the Phlebotomy Certificate Program must meet the following criteria:

1. Must be a high school or GED graduate.
2. Attain a minimum composite score of 15 on the ACT examination. (Exam scores must be current within 5 years prior to entry.)
3. Complete application form for Phlebotomy Program. (These forms may be obtained from the Medical Assisting Department.)
4. Schedule a personal interview with the Director of Medical Assisting.
5. Submit a satisfactory physical examination report from physician indicating physical and emotional status. (Must be current within six months prior to entry into the program.)
6. Must complete the (series of three) Hepatitis B vaccine. Two of the immunizations must be completed *prior* to admission.
7. A minimum grade of "C" (80%) in each MLA course is required to earn the Phlebotomy Certificate.
8. Must submit a satisfactory "Criminal Record Check" or a notarized statement stating no record exists from the Clerk of Superior Court at the county court hours in his/her county of residence. This must be submitted by the end of the first week of classes.

The Phlebotomy Certificate Program is limited to the number of students matching the number of internships recruited. This usually means that 12 to 15 students can be accepted. Individuals not accepted must repeat the application process to be considered for admission to the next class.

SPRING QUARTER SEQUENCE

ONE QUARTER: DAYTIME

			Class	Lab	Clinical	Credit
MLA	101	Basic Phlebotomy Concepts	12	4	0	14
MLA	102	Phlebotomy Internship	0	0	12	4
		Total Hours Required for Certificate				18

PHLEBOTOMY

Note: The program consists of a 51/2 week concentrated classroom experience between the hours of 8:00 a.m. and 2:00 p.m. followed by a 51/2 week internship experience in an area hospital laboratory or independent laboratory. (Internship hours will vary according to the facility to which the student is assigned. Hours may be between 5:00 a.m. and 1:00 p.m.; 7:00 a.m. and 3:00 p.m.; 2:30 to 10:30 p.m.; or 3:00 to 11:00 p.m.)

SELECTION PROCESS

All applicants must meet the admission criteria to be considered for admission. Selection will be made by the following method:

1. Acceptance of the 12-15 highest ACT composite scores.
2. In the event of a tie, the ACT score with the highest math component will be accepted first.
3. In the possible event of a tie for the math component, the English component will become the deciding factor.

Certificate Program in Psychology (C-044C)

Curriculum Description

The Certificate in Psychology prepares the student for a more comprehensive understanding of human behavior. The requirement of a minimum of 30 credit hours is comparable to a "minor" field of study one pursues for a baccalaureate degree. The certificate provides a solid base of courses from which the student may choose that incorporates basic as well as advanced knowledge of human behavior and mental processes. The student may choose 30 credit hours from the courses listed below in order to earn the certificate. The courses are arranged in major areas required, major areas recommended, and related areas.

Major Areas Required (Choose a minimum of 3 courses)

PSY 201	General Psychology (5-0-5)
PSY 203	Child Psychology (5-0-5)
PSY 205	General Psychology Lab (1-2-2)
PSY 210	Elementary Statistics (5-0-5)
PSY 229	Abnormal Psychology (5-0-5)
PSY 250	Life-Span Psychology (5-0-5)
PSY 253	Industrial Psychology (5-0-5)
PSY 254	Theories of Personality (4-2-5)

Major Areas Recommended

PSY 204	Adolescent Psychology (5-0-5)
PSY 206	Psychology of Adjustment (5-0-5)
PSY 215	Psychology of Addiction (5-0-5)
PSY 230	The Psychology of Adult Development and Aging (5-0-5)

Related Areas

SOC 102	Introductory Sociology (5-0-5)

WELDING

Certificate Program in Welding (V-050C)

Curriculum Description

This curriculum is designed to give the individual basic skills and related information needed to gain limited employment in the welding industry.

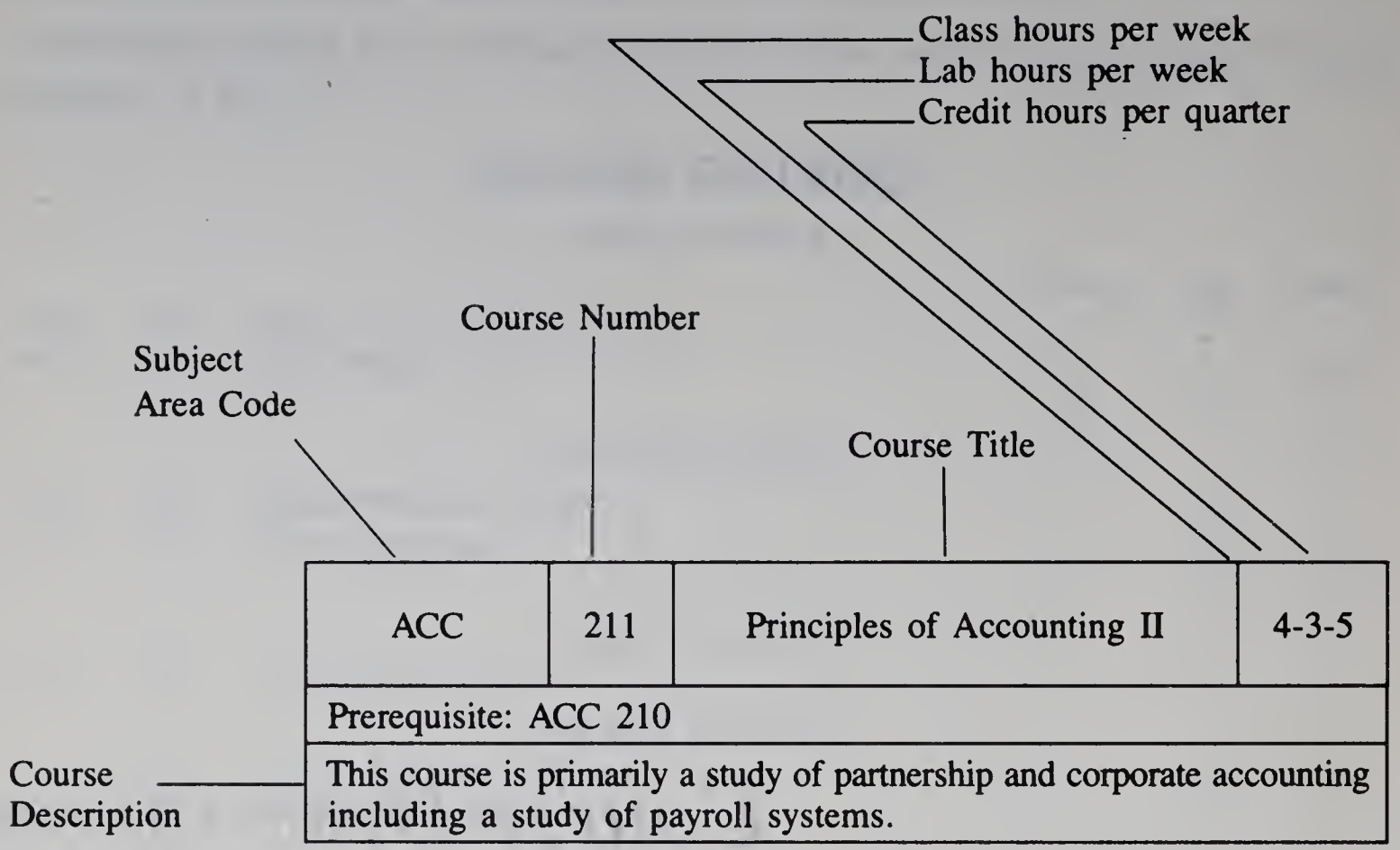
The courses taken in this certificate program count as credit toward the full Welding program. (V-050.)

QUARTER SEQUENCE

			Class	Lab	Credit
		FIRST QUARTER			
WLD	1101	Basic Oxy-Fuel and Arc Weld	3	12	7
MAT	1101	Trade Math I	4	0	4
			7	12	11
		SECOND QUARTER			
WLD	1102	Shielded Metal Arc Weld	3	12	7
BPR	1111	Blueprint Reading	0	3	1
			3	15	8
		THIRD QUARTER			
WLD	1117	Gas Shielded Arc Weld	3	12	7
		FOURTH QUARTER			
WLD	1125	Welding Processes & Projects	3	12	7
ENG	1102	Communication Skills	2	0	2
			5	12	9
		Total Hours			35

Course Descriptions

How to Read the Course Descriptions



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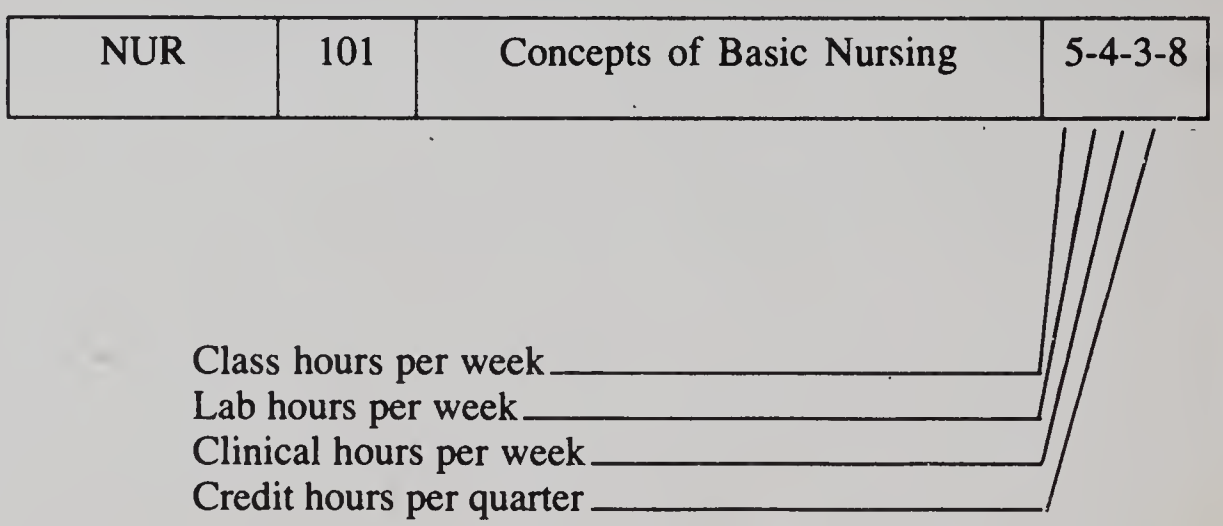

Accounting

ACC 210 Principles of Accounting I (4-3-5)
Prerequisite: None
This course covers the basic principles and practices of accounting. Emphasis is placed on recording, summarizing, analyzing, and reporting information for service and merchandising businesses. The student will be required to complete a series of problems utilizing the microcomputer.

ACC 211 Principles of Accounting II (4-3-5)
Prerequisite: ACC 210
This course is primarily a study of partnership and corporate accounting including a study of payroll systems. Emphasis is placed on the concepts and principles of accounting and on the recording, summarizing, interpreting of data for management control. The student will be required to complete a series of problems utilizing the microcomputer.

ACC 212 Principles of Accounting II (4-3-5)
Prerequisites: ACC 210, 211
This course includes a study of control accounting, management accounting, and financial statement analysis. Emphasis is placed on the accurate interpretation of financial data for control and decision making purposes. The student will be required to complete a series of problems utilizing the microcomputer.

ACC 213 Intermediate Accounting II (4-3-5)
Prerequisites: ACC 210, 211, 212
This course presents the basic concepts underlying modern accounting. The material includes principles, procedures, and methods that are applied in the preparation of financial statements. Attention is given to the proper uses that can be made of financial data. The student will be required to complete a series of problems utilizing the microcomputer.

ACC 214 Intermediate Accounting II (4-3-5)
Prerequisites: ACC 210, 211, 212, 213
This is a continuation of ACC 213 with discussions relative to non-current assets and liabilities. Factors governing accounting for the corporation receive particular emphasis. The student will be required to complete a series of problems utilizing the microcomputer.

ACC 215 Cost Accounting (4-3-5)
Prerequisites: ACC 210, 211
This is a study of the theory and practice of accounting for the costs of manufacturing and selling. The treatment of labor, material, and overhead are given detailed consideration. It is designed to develop an appreciation of the uses of cost information in the administration and control of business organizations. The student will be required to complete a series of problems utilizing the microcomputer.

ACC 216 Federal Income Tax (4-3-5)
Prerequisite: None
This is a study of the Internal Revenue Code, regulations and cases which apply to the determination of taxation for individuals. Consideration is given to income, deductions, and filing. The student will be required to complete a series of problems utilizing the microcomputer.

ACC 219 Auditing (4-3-5)
Prerequisite: ACC 210 and 211
This is a survey of auditing principles, procedures, and standards. Attention is given to the concepts underlying the examination of accounting records and financial statements to ascertain their accuracy and the acceptability of the accounting principles used in their preparation. Students will be required to complete a series of problems using the microcomputer.

ACC 218 Managerial Accounting (5-0-5)
Prerequisite: ACC 210
Managerial Accounting emphasizes how accounting data can be interpreted and used by management in planning and controlling business activities of the firm. The use of accounting data by investors is discussed whenever appropriate.

ACC 250 Technical Accounting (3-4-5)
Prerequisite: MAT 110
This course is designed to present an emphasis on the use of accounting for decision making and to integrate financial accounting with managerial concepts. The first half of the course presents the essentials of financial accounting and analysis. The second half constitutes a study of cost-volume-profit and accounting procedures used by manufacturing firms.

Air Conditioning, Heating and Refrigeration (Also see Electrical Installation and Maintenance ELC)

AHR 1201 Refrigerant Recovery (2-0-2)
This is a basic course to help the student prepare for the C.F.C. certification exam. This course covers the refrigerant recovery and recycling.

AHR 1202 All Year Comfort Systems (3-6-5)
Auxiliary equipment used in conjunction with refrigeration systems to provide both heating and cooling for "all-year" comfort will be studied and systems will be designed using this auxiliary equipment. Included will be oil-fired systems, resistance-systems and the special controls used in the "all-year" comfort systems.

AHR 1203 Principles of Air Conditioning (4-6-6)
The history, theory, and factors covering air conditioning are studied. Instruction will include air conditioning terminology, temperature measurement air movement, humidity, psychometric properties, comfort zone, effective temperature, duct systems, air diffusion, air cleaning zone, testing instruments and heat loads.

AHR 1204 Domestic and Commercial Refrigeration (4-6-6)
Refrigeration service practice on domestic and commercial refrigeration systems using conventional, hermetic, and absorption systems. Cabinet care, controls, system maintenance, and system replacement will be stressed. Typical service problems will be solved by each student.

AHR 1205 All Year Comfort Systems-A (1-3-2)
(A course for students enrolled in the evening air conditioning program)
Auxiliary equipment used in conjunction with refrigeration systems to provide both heating and cooling for "all-year" comfort will be studied and systems will be designed using this auxiliary equipment. Included will be oil-fired systems, resistance-systems and the special controls used in the "all-year" comfort systems.

AHR 1206 All Year Comfort Systems-B (2-3-3)
(A course for students enrolled in the evening air conditioning program)
A continuation of AHR 1205. Upon completion of AHR 1205 and AHR 1206 the student will have met all the requirements for AHR 1202.

AHR 1211 Principles of Refrigeration (4-6-6)
Essential terminology, laws of refrigeration, heat and the methods of heat transfer, the compression system, use and care of tools, and equipment, tubing and fittings. Practice will be given in basic refrigeration jobs such as tube, bending, flaring, swaging, identification of fittings, soldering, and use of basic equipment.

AHR 1212 Automatic Controls I (4-3-5)
A practical course dealing with relays, solenoids, thermostatic and pressure motor controls, defrost controls, and wiring diagrams. Emphasis will be placed on proper diagnosis of electrical troubles in sealed refrigeration systems.

AHR 1213 Calculation of Heat Loss and Gain (2-6-4)
Practice in computing system loads, equipment sizing and balancing, and the use of charts and tables pertaining to refrigeration and air-conditioning equipment.

AHR 1214 Reverse Refrigeration (4-6-6)
Complete study of heat pump installation, its control, theory and operation. Practical work experience in trouble shooting on systems.

AHR 1221 Principles of Refrigeration-A (2-3-3)
(A course for students enrolled in the evening air conditioning program)
Essential terminology, laws of refrigeration, heat and the methods of heat transfer, the compression system, use and care of tools, and equipment, tubing and fittings. Practice will be given in basic refrigeration jobs such as tube bending, flaring, swaging, identification of fittings, soldering, and use of basic equipment.

AHR 1223 Automatic Controls II (0-6-2)
This is a basic course in the solid state and conventional speed control devices and the temperature control devices which are used in the air conditioning and refrigeration industry. Emphasis is placed on understanding the operations of each component in the control devices.

AHR 1224 Estimating (2-3-3)
Practical exercises in estimating for the student to gain experience. The student will prepare estimates and submit bids on projects involving the major types of refrigeration and air conditioning systems used in domestic and commercial buildings. Involves using computers.

AHR 1232 Principles of Refrigeration-B (2-3-3)
(A course for evening students enrolled in the air conditioning program)
A continuation of AHR 1221. Upon completion of AHR 1221 and AHR 1232 students will have met the requirements for AHR 1211.

AHR 1233 Principles of Air Conditioning-A (2-3-3)
(A course for students enrolled in the evening air conditioning program)
The history, theory, and factors covering air conditioning are studied. Instruction will include air conditioning terminology, temperature measurement, air movement, humidity, psychometric properties, comfort zone, effective temperature, duct system, air diffusion air cleaning zone, testing instruments and heat loads.

AHR 1234 Advanced AC Electrical Diagrams (1-3-2)
This course deals with the drawing and reading of advance of A/C electrical diagram. Practical exercises of wiring live units and troubleshooting A/C and heat pumps.

AHR 1243 Auto Controls I-A (2-3-3)
(A course for students enrolled in the evening air conditioning program)
A practical course dealing with relays, solenoids, hemostatic and pressure motor controls, defrost controls, and wiring diagrams. Emphasis will be placed on proper diagnosis of electrical troubles in sealed refrigeration systems.

AHR 1244 Auto Controls I-B (2-0-2)
(A course for evening students enrolled in the air conditioning program)
A continuation of AHR 1243. Upon completion of AHR 1243 and AHR 1244 students will have met all the requirements for AHR 1212.

AHR 1254 Principles of Air Conditioning-B (2-3-3)
(A course for students enrolled in the evening air conditioning program)
Upon completion of AHR 1233 and AHR 1254 students will have met all the requirements for AHR 1203.

Banking and Finance

AIB 202 Principles of Banking Operations (3-0-3)
Prerequisite: None
This course provides an updated and broad perspective of the banking industry. As the foundation for most subsequent AIB courses. Principles of Banking touches on nearly every aspect of bank functions. Included is a comprehensive introduction to banking in today's economy. Discussions on specific topics are presented in an accessible form. The language and documents of banking, check processing, teller, functions, deposit function, trust services, bank bookkeeping and bank loans and investments are some primary topics. The course ends with a discussion of the bank's role in the community.

AIB 203 Bank Cards (3-0-3)
Prerequisite: None
This course presents an overview of the bank card industry with the dual objectives of helping the student understand the role of the bank card in the economy as well as the basic operational problems involved in the successful management of a bank card plan. The interrelated nature of the various bank card functions is emphasized. Topics covered are the types of credit cards in use and their functions and histories; the cardholder's profile, attitudes, and behavior; and credit card operations —marketing authorization, customer service, cost analysis and control, collection policies and procedures, and security and fraud. The course also discusses the evolution of credit cards into Electronic Funds Transfer, legal developments affecting credit cards, and the regulatory environment in which banks operate their own business.

AIB 204 Economics in Banking (3-0-3)
Prerequisite: None
This course covers both micro and macroeconomics and devotes considerable time to current developments in national and international areas.

AIB 205 Inside Commercial Banking (3-0-3)
Prerequisite: None
The purpose of this course is to identify topics and issues which bankers must be prepared to address and discuss the quest for solution and responses. Coverage includes: a historical overview of the American Banking, the constituencies of commercial banks, effective management of bank funds, uses of funds, retail banking, wholesale banking, electronic funds transfer system, multinational banking, specialized service areas, regulatory constraints, and the new world of banking.

AIB 206 Law and Banking (3-0-3)
Prerequisite: None
This course is designed not only to present an introduction to basic commercial law, but to relate it more specifically to banking and banking transactions. Topics include: contracts, agency and partnerships, corporations, real property, personal property and sales, the Uniform Commercial Code, negotiable instruments and bank collections, and secured financing.

AIB 207 Bank Investments (3-0-3)
Prerequisite: None
The objectives of this course are to explain the nature of the more important bank investments, to demonstrate the relationship of investment management to other functional areas of the bank, and to discuss the factors that affect investment strategies and decisions. Emphasis throughout is on the basic principles with which investment personnel should be familiar—fundamentals such as the nature of risk, liquidity, and yield; how each is measured; and how they are related.

AIB 208 Consumer Compliance (1-0-1)
Prerequisite: None
This course provides an overview of the major federal consumer compliance laws and regulations. Each module addresses common violations found in each area with suggestions for establishing policies and procedures to help avoid common violations. Key compliance areas are addressed, such as: Equal Credit Opportunity, Truth in Lending, Real Estate transactions, Electronics Funds transfer, Advertising, Interest on Deposits, Fair Debt Collection, and Fair Credit Reporting.

AIB 209 Installment Credit (3-0-3)
Prerequisite: None
This course emphasizes the pragmatic "two-to" details of installment credit. Topics covered are principles of credit evaluation, open-end credit, marketing bank services, collection policies and procedures, legal aspects, financial statement analysis, direct and indirect installment lending, leasing and other special situations, installment credit department management, insurance, and rate structure and yields.

AIB 210 Money and Banking (3-0-3)
Prerequisite: None
This course presents the basic economic principles most closely related to the subject of money and banking in a context of topics of interest to present and prospective bank management. The course stresses the practical application of the economics of money and banking to the individual bank. Some of the subjects covered include structure of the commercial banking system; the nature and functions of money, banks and the money supply; cash assets and liquidity management; bank investments; loans, earnings and capital; the Federal Reserve System and its policies and operations; Treasury Department operations; and the changing international monetary system.

AIB 215 Accounting for Banking I (4-0-4)
Prerequisite: None
Basic course in accounting, emphasizes the modern practice of accounting procedures, and includes coverage of the latest accounting principles set by the Financial Standards Board. This course is part of an instructional system that includes an individualized performance guide to aid effective learning at a student's own pace. AID 215 will not substitute for ACT 150 in any Business and Computer Science curriculum.

AIB 216 Accounting for Banking II (4-0-4)
Prerequisite: AIB 215
This course builds upon the foundation acquired in AIB 215 with advanced concepts and techniques. AIB 216 delves into policy analysis and management, with emphasis on detailed accounting functions and procedures. An individualized performance guide is provided for student activities. AIB 216 will not substitute for ACT 151-152 in any Business and Computer curriculum.

AIB 220 Bank Management (3-0-3)
Prerequisite: None
This course presents trends which have emerged in the philosophy and practice of bank management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management. It should be noted that the course is not one of personnel management, but rather of banking management. It touches on objectives, planning, structure, control, and the interrelationships of various bank departments.

AIB 230 Selling Bank Services (1-0-1)
Prerequisite: None
This course teaches how to recognize and meet bank customer needs through checking accounts, savings services, loans to individuals, safe deposit, travelers checks, and cross-selling. Upon completion of this course attendees will be able to list the services their banks offer, describe the scope and advantages of these banking services, identify customer needs from a bank transaction or from a conversation with the customer and relate the appropriate service to the perceived customer need.

AIB 231 International Banking (3-0-3)
Prerequisite: None
This course presents an overview of one of the fastest growing area of U.S. commercial banking, for those new to the field, and for others involved in domestic activities of their banks. The objective of the course is to present 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, international lending, and how money is changed from one currency to another. Also included are discussions on the basic letter of credit, collections and the Eurodollar market.

AIB 232 Corporate Banking (3-0-3)
Prerequisite: None
This practical common sense approach to lending incorporates the exact sequential nature of the lending process, giving bankers a solid foundation on which to construct sound lending practices. Content highlights include: the lending process, the lending environment, the loan request, financial analysis, loan structuring, and loan administration.

AIB 233 Analysis of Financial Statements (3-0-3)
Prerequisite: None
This course offers the student tools and techniques necessary for the evaluation of financial condition and operating performance of a modern business enterprise. The course is divided into four parts: Financial Statement Analysis and Accounting; Financial Statements and Business Funds Flow; Tools of Financial Statements Analysis; and the Technique of Financial Statement Analysis. The last part is subdivided into modules covering short-term liquidity and solvency, funds flow analysis of operations, long-term financial strength and asset utilization.

AIB 234 Loan Officer Development (3-0-3)
Prerequisite: None
This course offers new leaders comprehensive training in the subjective skills they'll need every time they come face-to-face with a customer. Content highlights include: Initial Loan Review; Documentation for the Credit File; Managing Loan Portfolios; Problem Loans; Negotiation and Persuasion Techniques; Loan Pricing and Administrative decisions.

AIB 235 Trust Functions and Services (3-0-3)
Prerequisite: None
This course provides an overview of many of the generally accepted principles of the law of estates, trust, and agencies as it takes the student on a step-by-step study of trust functions and services encountered in the daily operation of a trust department.

Anthropology

ANT 190 The Ascent of Man-H (3-0-3)
Prerequisite: An ACT composite score of 24 or above or approval of instructor.
ANT 190 is an honors course designed around a series of thirteen films by Jacob Bronowski tracing the ascent of man from his African beginnings several million years ago to his present space-age and atomic technology. The films present a holistic view of man's ascent, involving a study of his biology, history, sociology, cultural variation, genetics, technology, etc. Students are required to view the films, attend class discussions, and do additional readings relevant to the film topics.

ANT 201 The Ascent of Man (3-0-3)
Prerequisite: None
A series of thirteen films by Jacob Bronowski tracing the ascent of man from his beginnings on the savannahs of Africa several million years ago to his present space-age and atomic technology. The films present a holistic view of man's ascent, involving a study of biology, history, sociology, cultural variations, genetics, technology, etc.

ANT 204 General Cultural Anthropology (5-0-5)
Prerequisite: None
This course involves the science of man and the development of his culture; a survey of archaeology; culture of ancient and contemporary prelit-

erate societies; dynamics of cultural change and acculturation.

ANT 206 General Physical Anthropology (3-0-3)
Prerequisite: None
The study of the physical evolution of mankind; modern racial types and genetics.

ANT 211 Connections: An Alternative View of Change (3-0-3)
Prerequisite: None
An interdisciplinary course based upon a ten-part video series written by James Burke, produced by BBC, demonstrating the catalytic effect of early technology upon increasingly sophisticated inventions used in the 20th Century. Each episode traces a critical path from several historical discoveries, through many cultures and fields of knowledge, to an invention that rules our lives today. What does technology do to you? When did it start? How did it develop? What would happen if it did not exist? These are the questions that form the common denominators that "connect" events from the ancient world to the present. Also offered as HIS 211.

ANT 280 Study Tour (2-12-6)
Prerequisite: None
A five week, condensed course involving three weeks of intensive study on the campus of Gaston College, followed by two weeks of off-campus study and travel. This course may involve travel within the United States or abroad as an open laboratory exercise for students. This course involves an interdisciplinary study including history, culture, art, architecture, music, politics, etc., with special emphasis given to one or more of these topics. Also offered as HIS 280, SOC 280, POL 280.

ANT 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subjects.
A seminar/workshop approach involving the student in lectures, discussions, projects, and/or travel concerning a topic in Anthropology.

ANT 291 Educational Travel (1-6-3)
Prerequisite: None
A social sciences course designed to allow students to obtain limited college credit for valid educational travel, both domestic and foreign. Permission for such Educational Travel must be obtained from the Director of Study Tours before such travel is conducted, and all classwork, written exams, and projects must be submitted to the appropriate department chairperson before academic credit is granted. Students are required to register for the course before travel is undertaken. (Course also offered as HIS 291, SOC 291, and POL 291.)

Architectural Technology

ARC 113 Architectural Drafting Fundamentals (3-9-6)
Prerequisite: None
An introduction to architectural drafting and drafting practices. Instruction is given in lettering, orthographic and pictorial drawings, and the selection, use and care of instruments. Orthographic projection, reading, and instrument drawing of principle views will be emphasized. Basic architectural drafting practices including dimensioning will be covered and a preliminary plan, foundation plan, and evaluations will be drawn.

ARC 120 Architectural Sections I (3-3-4)
Prerequisite: ARC 113
A study of all the sections required in residential drawings including chimney, stairs, wall, cabinet, and other special details.

ARC 124 Commercial Architecture I (3-9-6)
Prerequisite: ARC 212
Drawings of commercial/residential buildings including multifamily dwellings will be studied. A complete set of working drawings will be required.

ARC 126 Architectural Estimating I (3-3-4)
Prerequisite: ARC 144
A fundamental course in the estimating of light construction projects from the ground up with emphasis on carpentry estimating and costs. A systematic estimation procedure will be followed.

ARC 127 Architectural Estimating II (2-3-3)
Prerequisite: ARC 126
Architectural specification development will be emphasized. Students will be required to recognize various parts of specifications in proper sequence, understand relationship of specs to contracts, bidding and drawings; demonstrate use of CSI format in writing specifications.

ARC 142 Building Codes & Laws (3-0-3)
A study of codes and laws dealing with construction of residential, commercial, public, and institutional buildings. Both state and local codes will be examined in reference to safety, inspection, and enforcement procedures.

ARC 144 Commercial Architecture II (3-6-5)
Prerequisite: ARC 124
Students will design and draw a complete set of working drawings for a small commercial building. Drawings will include floor plan, foundation plan, evaluations, plumbing plan, electrical and all sectional details.

ARC 164 Steel Detailing (3-3-4)
Prerequisite:
This course will provide the basic knowledge a student needs to detail structural steel members. This includes steel fabrication and connection details, and use of materials and office practices. Plan, evaluation, and section details will also be studied.

ARC 212 Residential Architecture (3-9-6)
Prerequisite: ARC 113
A fundamental course in drawing and designing residential floor plans and evaluations. A complete set of working drawings will be required.

ARC 225 Architectural Sections II (3-3-4)
Prerequisite: ARC 120
A continuation of ARC 120 to include details typical of commercial construction.

ARC 237 Commercial Architecture III (3-6-5)
Prerequisite: ARC 144
A continuation of ARC 144 to include a complete set of advanced drawings of commercial buildings.

CIV 206 Fundamentals of Hydrology (2-3-3)
An introduction to the basic principles of hydrology including the hydrologic cycle, precipitation, rainfall runoff analysis, overland and open channel flow, erosion control, and basic design features.

Art

Art 101 Art Appreciation (3-0-3)
Prerequisite: None
A general lecture course examining the different functions, the visual and stylistic traits of art, and the traditional and contemporary design concepts used in the visual arts. Open to all students except art majors

ART 102 Art Seminar (3-0-3)
Prerequisite: None
Art Seminar is specifically designed for art majors, but it is open to all students. Special emphasis is given to assigned readings, reports, or projects. The seminar will mainly deal with the role of art in the Contemporary World.

ART 103 Art History (5-0-5)
Prerequisite: None
This course is a survey of the visual arts during the various cultural periods of Western Civilization. The major art works of the period, the various design concepts and theories, the cultural and stylistic characteristics of works and the impact visual arts have had on man and his environment are emphasized. This course is required for art majors, but it is open to all students.

ART 104 Investigation of Materials (3-6-6)
Prerequisite: None
Investigation of Materials is designed to give students a knowledge of specific materials—such as glass, fiber, wood, clay, metal, etc. Great emphasis will be placed on technique and craftsmanship as well as limitations and possibilities of the individual materials.

ART 114 Commercial Art Fundamentals (0-6-3)
Prerequisite: None
An introduction to the basic mechanics and terminology of commercial art and graphic design through lecture and studio practice. Emphasis on layout and design, typography, the preparation of art for printing, and use of tools and materials.

ART 115 Commercial Art Design (0-6-3)
Prerequisite: DES 114
A further study in commercial art production and advertisement. Emphasis is on innovative design from concept through to the printed product.

ART 116 Lettering for Commercial Art (0-6-3)
Prerequisite: None
Students will develop practical skills in lettering as it is used in advertising by learning the expressive and abstract qualities of letter forms. Both tradition and original styles will be included.

ART 117 Illustration (0-6-3)
Prerequisite: None
Development of illustration competence and personal style as related to the commercial art field. Various media and design assignments will be included.

ART 131 Drawing I (0-6-3)
Prerequisite: Departmental Approval
A beginning studio course in which the expressive and descriptive elements of drawing are examined. The course consists of various drawing experiences, dealing with a variety of subject matter, techniques, tool and material processes, and individuality of expression. It is assumed the students have a basic understanding of design concepts and principles upon beginning this course.

ART 132 Drawing II (0-6-3)
Prerequisite: ART 131
Drawing II is a continuation of Drawing I. A broad range of subject matter is considered and dealt with, and approached from realism to the non-objective. Emphasis is placed on the choice of subject matter, technique, composition, and uniqueness of individual expression.

ART 133 Figure Drawing (0-6-3)
Prerequisite: ART 131 & 132 or Departmental Approval
This studio course is designed to build competence in drawing the human figure. Exploration and examination of the human figure through the use of various drawing concepts, tool and material processes and techniques are stressed throughout the course.

ART 141 Painting I (0-6-3)
Prerequisite: Departmental Approval
A beginning painting studio course consisting of experiences in solving visual problems with traditional and contemporary design concepts, techniques and materials.

ART 142 Painting II (0-6-3)
Prerequisite: ART 141
This intermediate painting studio course is a continuation of those visual concepts, processes and techniques taught in Painting I. A special emphasis is placed on the student's interpretation, continuity, and maturity of idea, technique and design.

ART 143 Painting III (0-6-3)
Prerequisite: ART 141 & 142
Continuation of Painting II, but more of a directed individual study with the student determining, under the instructor's guidance, the problems to be solved. Several major works are expected by the end of the quarter.

ART 145 Special Studies in Painting (0-6-3)
Prerequisite: ART 141-143
An advanced studio course in painting in which the student, with the instructor's approval, selects an area of specialization. These areas may include research and application of a material and tool processes, advanced composition and color theory, and idea development. This course may be repeated twice for maximum nine hours credit.

ART 151 Sculpture I (0-6-3)
Prerequisite: None
Introduction to use of materials and tools with emphasis on technique and craftsmanship. Clay plaster, oxyacetylene welding, arc welding, and basic metal casting are investigated.

ART 152 Sculpture II (0-6-3)
Prerequisite: ART 151
Continuation of ART 151 with more involvement in sculptural concepts, development of sculpture through knowledge of technique, development of individual ideas.

ART 153 Sculpture III (0-6-3)
Prerequisite: ART 151, 152
Continuation of ART 152 with more freedom in choosing main area of involvement. Students may elect to work in a variety of materials such as wood, stone, plastic, terracotta, steel cast aluminum, bronze, etc. Emphasis will be placed on sculptural concept.

ART 155 Special Studies in Sculpture (0-6-3)
Prerequisite: ART 151-153 and Departmental Approval
Student's work should show some development of sculptural concept and demonstrate control of materials. Student must have the ability and direction to work independently. Criticism or conferences with instructor are weekly. The development of working habits and techniques should coincide with his intentions. This course may be repeated twice for maximum of nine hours credit.

ART 161 Printmaking I (0-6-3)
Prerequisite: None
Printmaking I is a beginning studio course in intaglio printing process. An emphasis is placed on introducing the student to basic printing concepts and methods used in the intaglio process; such as etching, engraving, calligraphy, et cetera. Students will also have an opportunity to study and learn the use of variety of printing tools, equipment, and materials. (This course was formerly entitled Graphics I.)

ART 162 Printmaking II (0-6-3)
Prerequisite: ART 161
An intermediate studio course in printmaking. Printmaking II students will concentrate on the techniques, materials, and methods used in serigraphy, or silk-screen, printing. In addition, students will continue to explore concepts and methods used in the intaglio and relief processes. Emphasis will be placed on technical skills, maturity of idea, and sensitivity to the media. (This course was formerly entitled Graphics II.)

ART 163 Printmaking III (0-6-3)
Prerequisite: ART 161 and ART 162
A continuation of Printmaking II, but as directed individual study of student's choice of method (intaglio, relief, and serigraphy) is assessed. Emphasis will be placed on individual imagery, technical skills, and sensitivity to the media.

ART 165 Special Studies in Printmaking (0-6-3)
Prerequisite: ART 161-163
An advanced course for the well-motivated print making student, taught entirely on an individual basis. The student is expected to select a narrow field of study, involving one printmaking process, i.e., intaglio, relief, or serigraphy. Working closely with the instructor, the student will endeavor to master the necessary technical skills in the chosen area, achieve a mature individual imagery, and experiment with new, innovative approaches for printmaking in that area. The course may be repeated twice for maximum nine hours credit. (This course was formerly entitled Special Studies in Graphics.)

ART 215 Commercial Art Techniques (0-6-3)
Prerequisite: ART 114
A more specialized study in commercial art with emphasis on techniques unique to printed reproduction.

ART 290 Seminar/Workshop (1-0-1)
Prerequisite: None
A workshop in which a specialized area of the visual arts is studied in a concise time period. Must meet 11 hours.

CER 121 Pottery I (0-6-3)
Prerequisite: None
A beginning studio course introducing the basic characteristics and concepts of clay for the production of aesthetic forms and utilitarian objects. Emphasis will be on limitations and possibilities of clay as a medium, development of hand-building skills and processes and the investigation into traditional and contemporary three-dimensional design concepts employed in the production of pottery objects. (This course was formerly entitled Ceramics I).

CER 122 Pottery II (0-6-3)
Prerequisite: CER 121 or Departmental Approval
This intermediate studio course is a continuation of Pottery I, but with special emphasis and concentration on the following development of the continuity of idea and design and craftsmanship in the pottery process; student ability to select design problems related to functional and nonfunctional pottery objects; and involvement and refinement of new and different pottery processes. It is assumed that the student is familiar with the basic pottery processes. Hand built and thrown works will be required. (This course was formerly entitled Ceramics II).

CER 123 Pottery III (0-6-3)
Prerequisite: CER 121, 122, and Departmental Approval
This is an advanced studio course for the individual who is seriously considering pottery as a major area of concentration. Development and refinement of those concepts, principles, and techniques and methods introduced in Pottery I and II of either utilitarian or non-functional ceramic ware of high quality and excellence in craftsmanship is emphasized. (This course was formerly entitled Ceramics III).

CER 125 Special Studies in Pottery (0-6-3)
Prerequisite: CER 121-123
An advanced course for students who have a keen interest in specific problems in ceramics. The student is expected to select and research the area of specialization and to put to practical application the knowledge and information gathered. Areas of specialization may include clays, glaze formulation, kiln construction, fuels, firings, advanced pottery design. This course may be repeated twice for maximum nine hours credit. (This course was formerly entitled Special Studies in Ceramics.)

DES 110 Design-Three Dimensional (0-10-5)
Prerequisite: None
This course involves experimentation with wood, paper, metal, wire, plaster and clay for the solution of problems in volume, space organization, texture, mass, and tension.

DES 111 Two Dimensional Design (0-10-5)
Prerequisite: None
This is a basic course in two dimensional design for art majors. Concentration is on the psychological and physiological aspects of design elements and principles. Development of basic skills in the use of various tools and materials is stressed in solving visual problems.

DES 112 Color and Design (0-10-5)
Prerequisite: None
An investigation of the elements and principles of two and three dimensional design, this basic course is designed to meet state requirements for elementary teachers' certification. Emphasis is on the development of design concepts, teaching methods, tool and material processes, and other visual communication skills. Open to the general college student.

DES 114 Commercial Art Fundamentals (0-6-3)
Prerequisite: None
An introduction to the basic mechanics and terminology of commercial art and graphic design through lecture and studio practice. Emphasis on layout and design, typography, the preparation of art for printing, and use of tools and materials.

JCR 109 Jewelry Design Casting (0-6-3)
Prerequisite: None
Instruction in the use of different types of waxes, production casting techniques, and finishing processes is taught.

JCR 113 Jewelry Design (0-6-3)
Prerequisite: Departmental Approval
Jewelry design is a studio course involving the relationship of idea and design to the tool and material process of creating handmade jewelry.

Automation Training

ATR 241 Robotics I (3-3-4)
Prerequisite: CSC 221
An introduction and overview of state-of-the-art robotics. Social and economic aspects of robotics are presented. The accompanying lab exercises highlight design of workcells and elementary robotic movement through keyboard programming.

ATR 242 Robotics II (3-3-4)
Prerequisite: ATR 241
Robotics II assumes the student has a general knowledge of robots and robotic applications. This course examines the task requirements and robot specifications. Emphasis is both class and lab work is on making a robot perform.

Automotive Technology

ELC 233 Basic Electricity/ Electronics (3-3-4)
Prerequisite: None
Basic principles of electricity will be studied. Electrical measurement, magnetism, electromagnetism, and magnetic effects of electricity constitute major areas of study.

AUT 121 Preventive Maintenance & NC Inspection & Shop Safety (2-2-3)
General introduction to a preventive maintenance program on the total vehicle. Areas of cost, repair and downtime will be covered. NC Vehicle safety inspection, which includes both safety and emissions will be studied. General shop safety will be stressed.

AUT 122 Gasoline Combustion Engine II (3-3-4)
Prerequisite: AUT 401
Study of engine performance, service of pistons, rings, valves, crankshafts, camshafts, oil pumps, lubrication system, cooling system, with emphasis on disassemble, measure parts, reassemble and run engine.

AUT 143 Automotive Servicing I (3-9-6)
This course provides shop experience in automotive manual power trains, including clutches, manual transmissions, transaxles and drive axles.

AUT 144 Auto Braking Systems I (3-3-4)
A study of Paschael's Law on hydraulics and various braking systems used on the automobile and light duty trucks. Emphasis on their function and operation. Proper diagnosing, adjusting, and parts replacement. Student to be informed about proper safety liability.

AUT 145 Automotive Servicing II (3-9-6)
Prerequisite: AUT 143
This course provides shop experience in the automotive fuel system, ignition systems, and

emission systems. that relate to engine performance and driveability.

AUT 301 Auto Fuels I (3-3-4)
Prerequisite: None
Study of the automotive fuels, refinement, additives, blends and proper safety in handling. Study of the fuel supply system, carburetors, internal and external adjustments. Proper use and care of testing equipment. Proper diagnosing and repair in instrumentation.

AUT 302 Auto Electrical/ Electronics I (3-3-4)
Prerequisite: First and Second Quarter
Basic principles of electricity, types of electricity, study of magnetism voltage, amperage, resistance electromagnetic field and transformers. Study of circuits, symbols, diagrams, and schematic. Basic study of electronics semiconductors, transistors, proper use of meters in testing troubleshooting.

AUT 307 Auto Climate Control Systems (3-3-4)
Prerequisite: First Six Quarters
Introduction to the principles of refrigeration, refrigerant oil, and refrigeration circuit. Proper methods of handling refrigerant and proper procedures of charging, discharging, and evacuating systems. Introduction to proper tools to perform the above.

AUT 315 Auto Manual Power Trains (3-3-4)
Prerequisite: First year
Principles and functions of auto power train systems, flywheel clutches, manual transmissions, manual transaxles, drive shafts, drive axles, rear axles and differentials. Troubleshooting, servicing, and repair.

AUT 317 Automatic Transmission/ Transaxles (3-6-5)
Prerequisite: AUT 315
This course provides a familiarization of the automatic transmissions/transaxles. Study of the proper nomenclature and related parts. Students will be able to diagnose, remove, replace, disassemble and repair as necessary according to manufacturer's specifications.

AUT 325 Auto Suspension Systems I (3-3-4)
Prerequisite: None
Introduction to chassis and suspension systems components and safety procedures. Introduction of tire and wheel service and proper service of wheel bearings. Function of suspension related parts, ball joint, shocks, struts, steering linkage, and introduction to wheel alignment angles.

AUT 329 Auto Suspension Systems II (3-3-4)
Prerequisite: AUT 325
Study and practice of front-end alignment and tire balancing. Emphasis on wheel alignment theory so that the techniques can be applied to any alignment situation. Student to receive practical experience on four wheel alignment and steering overhaul.

AUT 347 Auto Electrical/ Electronics II (3-3-4)
Prerequisite: AUT 302
Study of the electrical system of the automobile chassis wiring, starting system, charging system, and the ignition system (electronic). Proper use of analog and digital multimeters. Electrical test equipment will be used to trouble shoot problems.

AUT 349 Auto Electrical/ Electronics III (3-3-4)
Prerequisite: AUT 302 and 347
A study of the automotive computer controlled ignition systems, their functions and principles of operations. Emphasis on developing skills in testing and troubleshooting these components in a safe manner.

AUT 401 Gasoline Combustion Engines I (3-3-4)
Prerequisite: None
Study of the construction and operation of the gasoline engine. Study of valve trains, testing, diagnosing, and repair. Testing of engine performance, cooling system, and lubrication systems.

AUT 409 Auto Climate Control Systems II (3-3-4)
Prerequisite: AUT 307
Study of the operation of automotive heating and air conditioning systems to include electrical and mechanical control. Student to develop competence in testing, servicing, and repair of the systems and system components in a safe and proper manner. Introduction to the Automatic Climate Control (touch pad).

AUT 412 Electronic Fuel Injection (3-3-4)
Prerequisite: AUT 301
Study of computer controlled fuel systems including sensors and control devices. Emphasis on diagnosing and repair. Proper use of scan tools and shop manuals in diagnosing trouble-codes.

AUT 457 Auto Braking Systems II (1-3-2)
Prerequisite: AUT 144
A continued study of AUT 144 dealing with drum brakes, disc brakes, parking brakes, power brakes, and anti-lock braking systems (ABS) theory and nomenclature of parts and testing (Includes pulling trouble codes).

Biology

BIO 101 General Biology (5-3-6)
Prerequisite: None
A presentation of the basic principles of biology, including the nature of the scientific endeavor, basic chemistry, cell structure and metabolism, genetics, evolution, and ecology.

BIO 108 General Microbiology (5-2-6)
Prerequisite(s): BIO 101 or BIO 121
An introductory course covering the fundamental principles and techniques of microbiology with emphasis on morphology, physiological processes, and parasitic implications of microorganisms (bacteria, molds, yeast, viruses, rick-

ettsiae, protozoa, and algae). Discussions of disease processes are included.

BIO 115 Practical Microbiology (3-2-4)
Prerequisite: None
A course in microbiology emphasizing pathogenic aspects. Emphasis is on basic microbial principles, immunology, epidemiology, major taxonomic groups, and patterns of diseases, transmission, and control. Basic laboratory techniques are used to explore these concepts and their health care applications. (This course is not for college transfer).

BIO 121 Anatomy and Physiology I (3-2-4)
Prerequisite: None
An integrated study of the chemical, cellular and tissue levels of organization, followed by the anatomy and physiology of the integumenary, skeletal, muscular, and nervous systems.

BIO 122 Anatomy and Physiology II (3-2-4)
Prerequisite: BIO 121
An integrated study of nutrition, metabolism and development, and the anatomy and physiology of the endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive systems.

BIO 134 Basic Nutrition (3-0-3)
Prerequisite: None
A basic course in biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs.

BIO 290 Seminar/Workshop (1-0-1)
Prerequisite: None
A workshop in which a specialized and topical area of biological science is studied in a brief time period.

BOT 106 General Botany (5-2-6)
Prerequisite(s): BIO 101
A study of the morphology, physiology, taxonomy, genetics, evolution, and ecology with emphasis on flowering plants and conifers.

CON 205 Conservation of Natural Resources (3-0-3)
Prerequisite: None
Problems and techniques of conservation, water, soil, minerals, plants, animals, and human resources. This course is also offered as GEO 205.

ECL 105 Ecology of Man (5-2-6)
Prerequisite: BIO 101, BIO 121, or GEO 101
A course which examines the past and present relationships of man with his biological environment. Consideration will be given to ecological concepts, population growth, pollution, human variation, and conservation of natural resources.

ZOO 107 General Zoology (5-2-6)
Prerequisite(s): BIO 101
A study of the anatomy, physiology, evolution, taxonomy and ecology of animals with special emphasis on the vertebrates.

ZOO 133 Veterinary Zoology (5-2-6)
Prerequisite: None
Veterinary Zoology is a study of basic concepts and principles of biology including cell structure & metabolism, genetics, and ecology. The course also includes the study of anatomy, physiology, embryology, evolution, taxonomy, and ecology of animals with special emphasis on vertebrates. This non-college transfer course is designed primarily for Veterinary Medical Technology students.

Blueprint Reading

BPR 111 Architectural Blueprint Reading (3-0-3)
Interpretation and reading of architectural blueprints, information on the basic principles of lines, orthographic views, notes, dimensioning, construction materials, framing methods, plumbing, air conditioning, and electrical systems will be covered in addition to use of the scale and basic construction math. Some sketching and drawing will be required.

BPR 1111 Basic Blueprint Reading (0-3-1)
Interpretation and reading of blueprints. Development of ability to read and interpret blueprints, charts, instruction and service manuals, wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

BPR 1124 Blueprint Reading for Welders (2-3-3)
Advanced blueprint reading as related to actual complete drawings found in welding shops.

Botany (BOT)—See Biology

Business and Computer Science

New Courses for T-018

BUS 130 Organizational Behavior (5-0-5)
Prerequisite: None
Students will be exposed to various management challenges and opportunities of the 1990's. Topics covered will include a solid introduction to the basic theories and concepts of organizational behavior, contemporary environmental issues, managerial ethics and social responsibility, self-managing work teams, team-building strategies, and leadership.

BUS 223 Principles of Finance (4-3-5)
Prerequisite: ACC 210
Study of the financial function of the business enterprise with special emphasis on capital budgeting and the rate of return. Cash flow study, ratio analysis, sources of short-term financing, time value of money, and financial leverage are some of the topics relating to finance that are covered.

BUS 275 Business Strategy (4-2-5)
Prerequisite: ACC 212, BUS 223, CAS 231, MKT 120, or departmental approval
A capstone course that allows students the opportunity to make business decisions through teamwork. The course will use a computer simulation with emphasis placed on strategical decision-making in the areas of finance, marketing, operations and personnel. Students will manage the operational aspects of a simulated company. Course will provide a dynamic, multiple-industry environment where students enter and exit industries by buying, selling, creating, and liquidating strategic business units within a corporate portfolio.

CAS 185 Business Software Applications (3-4-5)
Prerequisite: CAS 180
The use of selected applications and their integration for Business Administration. Students will link data in one application to data in other applications to make a unified presentation. The business presentation in all of its forms, will be used as the basis of exercises.

CAS 231 Information Analysis II (3-4-5)
Prerequisite: CAS 230
The continued use of the microcomputer in the solution of business problems. Students will learn the computational and ordinal abilities in the database format for finance, accounting, economics, etc. Integration with other tools will also be considered. The business case problem will be used as exercises.

Business

BUS 104 Introduction to Business (5-0-5)
Prerequisite: None
A general course covering modern business activities including forms and structures of organizations, marketing, finance, management, business risks, and the relation of government to business.

BUS 111 Business Mathematics (5-0-5)
Prerequisite: None
Basic math involving arithmetic processes, fractions, and aliquot parts will be taught traditionally. Electronic calculators will then be used to solve problems involving checking accounts, payroll, percentage, interest, notes, consumer loans, analyzing accounting statements, markup and depreciation.

BUS 120 Personal Finance (5-0-5)
Prerequisite: None
This course is designed to enable the student to analyze and direct his own financial affairs. The course includes the study of money management, insurance, principles of budgeting, investment principles, retirement, borrowing, housing and stocks.

BUS 121 Principles of Management (5-0-5)
Prerequisite: None
An introductory course in management that includes basic theories of management. The major functions—planning, organizing, staffing, directing, and controlling—are carefully integrated with case studies and analyses.

BUS 167 Small Business Management (5-0-5)
Prerequisite: None
This course provides small business owners and managers with training in the knowledge, skills, and tools of management suitable to their specific needs in the area of organization, finance, marketing, sales and promotion, risk and insurance, record keeping, personnel management, government regulations, taxes and related areas.

BUS 209 Business Law (5-0-5)
Prerequisite: None
A study of the history of law, the social objectives of law, civil law, criminal law and court procedure. A detailed study of contracts concludes the course. Several digests and decided cases are studied with each topics to make the discussion of principles specific and meaningful.

BUS 210 Business Law (5-0-5)
Prerequisite: None
A continuation of BUS 209. This course primarily includes a study of commercial paper and sales law. Digests and case studies are used extensively.

BUS 242 Human Relations in Business (3-0-3)
Prerequisite: None
Emphasis on creating positive human relations in business by acquiring knowledge of concepts, skills, and techniques for managing individual group and organizational relationships; relationships across cultures; and yourself.

Ceramics (CER)—See Art

Computer Applications

CAS 1102 Introduction to Micro-Computer Application (1-2-2)
A general introduction to the microcomputer, DOS, and various software application packages including word processing, spreadsheeting and database management. Strictly an application course. Will not include programming.

CAS 129 Automotive Computer Software (1-2-2)
Practice in keyboarding, accessing programs, and finding specific information among several programs will constitute most of this course. The student will work with automotive information such as specifications, time for repairs, and parts list.

CAS 161 Introduction to Microcomputers (2-0-2)
Prerequisite: None
This is designed for the average person who wants to learn how to use a microcomputer. Instruction and hands-on experience will be provided in tutorials, word processing, graphics, data base, spreadsheets, and tele-communication.

CAS 180 Microcomputer Applications (3-4-5)
An introductory course on microcomputer that simultaneously teaches concepts and hands-on access to computer applications such as word processing, spreadsheets, data management and integrated software and communications.

CAS 230 Information Analysis (3-4-5)
Prerequisite: CAS 180
The use of the microcomputer electronic spreadsheet in the solution of management problems. Students will learn the computational abilities available in the spreadsheet format for finance, accounting, economics, etc. Business cases will be used as examples in problem solving.

Chemistry

CHM 101 Principles of Chemistry (4-6-6)
Prerequisite: MAT 101 or Departmental approval
A course designed for the student who intends to major in chemistry or who wishes credit in physical science to meet graduation requirements. The course meets the needs of those in pre-medical pre-dental, pre-engineering, and other pre-science curricula.

CHM 102 Principles of Chemistry (4-6-6)
Prerequisite: CHM 101
A continuation of CHM 101. The laboratory includes Qualitative Analysis

CHM 107 Qualitative Analysis (3-9-6)
Prerequisite: CHM 102, 102
A course in the theory and practice of classical volumetric and gravimetric analysis with an introduction to modern instrumental analysis.

CHM 101 An Introduction to Chemical Concepts (3-2-4)
Corequisite: MAT 98 or 103
This course is an introduction to college chemistry for individuals who have not obtained an adequate background and for students requiring a basic knowledge of the fundamentals of chemistry. The course is designed to survey basic principles of inorganic, organic, and biochemistry. The laboratory reinforces the lecture concepts through practical, hands-on experience.

CHM 211 Organic Chemistry (4-6-6)
Prerequisite: CHM 102
The presentation of the classification, nomenclature, reactions, bonding, and reaction mechanisms of the compounds of carbon.

CHM 212 Organic Chemistry (4-6-6)
Prerequisite: CHM 211
A continuation of CHM 211.

CHM 270 Nuclear Science (3-6-6)
Prerequisite: CHM 110, MAT 101, BIO 101 or permission of instructor
An introduction to the principles and practice of nuclear transformations and measurements. Lecture and laboratory work include basic nuclear science, modern nuclear technology, and environmental and health applications. Credit is allowed for completion of all activities of the intensive minimester at Oak Ridge National Laboratory, Oak Ridge Tennessee (one-hundred twenty hours). Also listed as PHS 270.

CHM 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular topics.
A workshop in which a specialized topic in chemistry is studied in a brief time period. Classes may include both lectures and demonstrations.

Civil Engineering Technology

CIV 211 Properties of Engineering Materials (2-3-3)
Prerequisite: MEC 120
A study of the more important mechanical and physical properties, the essential information concerning the sources and manufacture of the principal construction materials.

CIV 212 Construction Methods and Equipment (3-3-4)
Prerequisite: SRV 102
Planning and management of construction projects; hauling and excavating equipment; proper selection of equipment for job conditions; belt conveyors, quarrying, tunneling, piles; other heavy construction practices; time and cost studies.

CIV 214 Construction Management (3-0-3)
Prerequisite: MAT 121
An introduction to health, safety, quality control and graphical planning techniques that are common to construction.

CIV 223 Construction Estimates and Costs (3-3-4)
Prerequisite: CIV 212
Methods of constructing wood, steel, and concrete buildings; analysis of plans and specifications for construction requirements; preparation of cost estimates.

CIV 231 Contracts and Specifications (3-0-3)
Prerequisite: CIV 212 or hold an A.S./A.A.S. degree
Basic engineering law; owner, engineer, contractor relations and responsibilities; contract performance requirements; competitive bidding procedures; preparation and interpretation of specifications, boundary control and legal principles of surveying.

CIV 232 Soils & Foundations (3-3-4)
Prerequisite: MAT 122 or Department Approval
A study of the origin, composition, and the basic engineering properties of soil, the significance of laboratory and field testing of soil materials; three soil classification systems in common use, the procedure for soil compaction and soil stabilization; basic theory of soil strength tests, plate bearing tests and earth embankment slope studies.

CIV 233 Design of Roads and Pavements (3-3-4)
Prerequisite: SRV 103
Organization and financing of highway departments; planning considerations; design consider-

ations and standards; drainage; subgrades; flexible and rigid pavements. Lab develops field notes from SRV 103 into complete set of highway plans including earthwork calculations and mass diagram.

CIV 242 Properties of Concrete (3-3-4)
Prerequisite: MAT 122
An intensive study of the composition and properties of concrete; proportioning of concrete mixes; control and testing of varied concretes; field inspection of concrete manufacturing, placing, and curing.

CIV 253 Basic Hydrology (2-3-3)
Prerequisite: SRV 103 or Department Approval
An introduction to the basic principles of hydrology including specific areas of hydraulics, water and waste-water treatment, hydrologic cycle climate, rainfall, rainfall runoff analysis, and statistical evaluation of pertinent data.

CIV 263 Basic Structural Design (3-3-4)
Prerequisite: DFT 112, MEC 120
A study of the basic principles of design of steel, timber, and reinforced concrete structures by application of principles of mechanics and various building codes.

Criminal Justice

CJC 101 The Criminal Justice System & Process—Police & Corrections (5-0-5)
Prerequisite: None
This course introduces the student to the Criminal Justice System—police, courts, and corrections—and the criminal process. Topics include discussions of the major components of the criminal justice system, their historical developments, and present status. Upon completion of this course, students will be able to explain the responsibilities and functions of the various components of the criminal justice system.

CJC 109 Juvenile Delinquency (5-0-5)
Prerequisite: None
This course is an overview of the juvenile delinquency phenomenon and the process involved in its causation, prevention, and control. Topics include emphasis on the multi-disciplinary approach to the problem, variables related to delinquency, and the duties, responsibilities, and functions of the agencies in the juvenile justice system. Upon completion of this course, students will be able to understand the causes, treatments, and future of juvenile delinquency in this country.

CJC 110 Introduction to Criminology (5-0-5)
Prerequisite: None
This course is an overview of research into the causes of crime. Topics include the learning theories, bio-social dynamics, and psychological factors thought to be important in the causation of crime. Upon completion, students will be able to relate theoretical concepts of criminology to practical attempts at crime control.

CJC 111 Function of the Judicial Process (5-0-5)
Prerequisite: None
This course is a study of the judicial process in America with special focus on the courts of original and appellate jurisdiction in North Carolina. Topic emphasis is placed on roles of judicial personnel, pretrial process, jury selection, trial procedures, sentencing, and current problems in the courts. Upon completion, students will be able to explain the organization and operation of the American judicial system.

CJC 115 Criminal Law (5-0-5)
Prerequisite: None
This course includes a history of the development and philosophy of criminal law, theory and practice of criminalization, liability laws, crimes, and defenses. Emphasis is placed on North Carolina general statutes. Upon completion, students will be able to explain elements of specific offenses against property, habitation and person, and apply criminal law concepts to enforcement.

CJC 117 Constitutional Law I (5-0-5)
Prerequisite: None
This course introduces the history, fundamental concepts, and principles of the U.S. Constitution and its Amendments. Topics include an analysis of the past and present decisions dealing with the fourth, fifth, sixth, eighth, and fourteenth amendments. Upon completion, students will be able to explain the responsibilities and function of law enforcement officers in regard to the above constitutional amendments.

CJC 118 Constitutional Law II (5-0-5)
Prerequisite: None
This course introduces the student to further constitutional guarantees. Topics include an analysis of the past and present decisions dealing with the exclusionary rule, stop and frisk, preliminary hearings, indictments, and information. Upon completion, students will be able to have an understanding of what police can and cannot do in certain arrest or pre-arrest situations and what rights we, as citizens, have regarding police intervention.

CJC 205 Criminal Evidence (5-0-5)
Prerequisite: None
This course establishes a foundation for the student in understanding the meaning and importance of evidence. Topics include, but are not limited to, direct, circumstantial, and real evidence. All other rules of evidence are also covered. Upon completion, the student will have a thorough understanding of evidence that can and cannot be used in a court of law and of how evidence is handled prior to court.

CJC 210 Criminal Investigation (5-0-5)
Prerequisite: None
This course introduces the student to the fundamentals of criminal investigation. Topics include crime scene search and recording, collection and preservation of evidence, and case preparation and presentation. Upon completion, students will be able to process crime scenes and prepare evidence collected for court.

CJC 211 Criminalistics (4-2-5)
Prerequisite: None
This course includes a survey of the various forensic sciences and their application to the field of law enforcement. Topics include common forensic applications such as weights, measurements and comparisons, blood grouping, blood alcohol, luminol, drug analysis, and fingerprints. Upon completion, students will be able to recognize, collect, and preserve evidence in the field, thereby contributing to the effectiveness of the crime lab.

CJC 220 Criminal Justice Organization and Management (5-0-5)
Prerequisite: None
This course provides an overview of organizational theory and behavior. Topics include organizational functions, structures, processes, and behavior and manifestation of these phenomena in the criminal justice system. Upon completion, students will be able to discuss organizational theory as it applies to the criminal justice system.

CJC 262 Issues in Criminal Justice (5-0-5)
Prerequisite: None
This course provides an analysis of contemporary problems that affect the criminal justice system in America today. Topics include causes of violent crime, gun control, stress, police deadly force, plea bargaining, prison conditions, and others. Upon completion, students will be able to discuss and analyze critical issues facing police, courts, corrections, probation, and parole.

***CJC 310 Introduction to Criminal Justice (2-9-5)**
This course introduces the student to the Criminal Justice System—Police, Courts, and Corrections—and the Criminal Process. It deals with two of the components of the system—police and corrections—in depth. The course includes the historical developments and present status of these components.

***CJC 311 Function of Judicial Process (2-9-5)**
Prerequisite: None
This course familiarizes the student with the structure of the Federal and State Court systems and criminal process. The course includes the role of the court personnel—Judge, bailiff, court clerk, prosecutor and defense counsel. Emphasis is placed on the judicial process from initial appearance to post conviction remedies; Jurisdiction, venue, bail, release on recognizance, preliminary hearings, grand jury, plea negotiations, arraignment, pre-trial motions, discovery, jury trial, sentencing, appeal, and juvenile court and process are discussed.

***CJC 312 Criminal Law (3-3-4)**
Prerequisite: None
This course deals with crimes against the person, property, habitation, public decency, the administration of justice, and public disorder. The course includes the concept of criminal responsibility, corpus delicti, and the specific crimes of homicide, assault, robbery, kidnapping, arson, burglary, attempts to commit a crime, solicitation, theft, and sexual offenses. Leading cases are reviewed and discussed.

***CJC 313 Criminal Investigation (4-3-5)**
Prerequisite: None
This course introduces the student to fundamentals of investigation; crime scene search, collection, preservation of evidence; sources of information; interview and interrogation; case preparation and court presentation; and the investigation of specific offenses such as arson, narcotics, sex, larceny, burglary, robbery and homicide.

***CJC 314 Issues in Criminal Justice (3-3-4)**
Prerequisite: None
This course focuses on discussions of a variety of current topics of law enforcement and the criminal justice system. Topics could include: police unions, white-collar crime, police education, ethics, professional standards, deviant behavior, etc.

*These courses are offered in the certificate program in Basic Law Enforcement Training.

Conservation (CON)—See Biology

Cooperative Education

COE 101 Cooperative Work Experience I (0-10-1)
Prerequisite: Departmental Approval
A course designed to give credit for practical work experience in a business/industry setting closely related to the students field of study and/or career interest.

COE 102 Cooperative Work Experience II (0-10-1)
Prerequisite: Departmental Approval & COE 101
A course designed to give credit for practical work experience in a business/industry setting closely related to the students field of study and/or career interest.

COE 103 Cooperative Work Experience III (0-10-1)
Prerequisite: Departmental Approval & COE 102
A course designed to give credit for practical work experience in a business/industry setting closely related to the students field of study and/or career interest.

COE 104 Cooperative Work Experience IV (0-10-1)
Prerequisite: Departmental Approval & COE 103
A course designed to give credit for practical work experience in a business/industry setting closely related to the students field of study and/or career interest.

COE 201 Co-Op I (0-20-2)
Prerequisite: Departmental Approval
A course designed to give credit for practical work experience in a business/industry setting closely related to the student's field of study and/or career interest.

COE 202 Co-Op II (0-20-2)
Prerequisite: A course designed to give credit for practical work experience in business/industry setting closely related to the students field of study and/or career interest.

COE 203 Co-Op III (0-20-2)
Prerequisite: Departmental Approval
A course designed to give credit for practical work experience in business/industry setting closely related to the students field of study and/or career interest.

COE 301 Cooperative Work Experience I (0-30-3)
Prerequisite: Departmental Approval
A course designed to give credit for practical work experience in a business/industry setting closely related to the student's field of study and/or career interest.

COE 302 Cooperative Work Experience II (0-30-3)
Prerequisite: Departmental Approval & COE 301
A course designed to give credit for practical work experience in a business/industry setting closely related to the student's field of study and/or career interest.

COE 303 Cooperative Work Experience III (0-30-3)
Prerequisite: Departmental Approval & COE 302
A course designed to give credit for practical work experience in a business/industry setting closely related to the student's field of study and/or career interest.

Computer Science

CSC 121 Fortran Programming (3-4-5)
Prerequisite: Departmental Approval
The FORTRAN programming language will be used to develop the program logic necessary to solve a representative sample of logic problems. The student will write, compile, correct errors, and test their solutions to the above problems.

CSC 141 Cobol Programming I (3-4-5)
Prerequisite: None
The COBOL language will be used to develop the program logic needed to solve a representative sample of business problems. The student will also write, compile, correct their errors, and test their solutions to the problems.

CSC 142 Cobol Programming II (3-4-5)
Prerequisite: CSC 141
This course is a continuation of CSC 141. Emphasis will be placed on multi-level tables, multi-level control breaks, sorting, merging, as well as other advanced features in COBOL.

CSC 143 PASCAL Programming (3-4-5)
Prerequisite(s): Departmental Approval
The PASCAL language will be used to develop the logic needed to solve a representative sample of logic problems. The student will write, compile, correct errors and run their programs to solve the problems.

CSC 144 Programming Concepts I (3-4-5)
Prerequisite: None
This course will provide a foundation of good structured programming concepts. Using a popular programming language such as PASCAL or BASIC and extensive lab assignments, the student will acquire the concepts necessary to master programming languages.

CSC 145 Programming Concepts II (3-4-5)
Prerequisite: CSC 144 or Departmental Approval
This course is a continuation of CSC 144. Emphasis will be placed on data structures and more advanced programming techniques. Once this course is completed, the student will be prepared to apply these concepts to future programming languages.

CSC 148 IBM PC/DOS-OS/2 (3-4-5)
Prerequisite: None
This course will explore the IBM microcomputer operating systems through lecture and extensive lab assignments. The student will gain a working knowledge of DOS commands.

CSC 150 Computer Fundamentals (3-2-4)
Prerequisite: None
A fundamental overview of electronic data processing and the computer's ever-increasing role in modern society. Concepts of computer programming, data communications, computer systems, data collection, and information organization will be investigated. Lab assignments will be used to introduce the student to word processing, spreadsheet, and database concepts.

CSC 173 Spreadsheet and Data Base Processing (3-4-5)
Prerequisite: None
This course will provide an introduction to the use of spreadsheets on the microcomputer and the development and application of data base systems on microcomputers. Extensive lab assignments will be used to give students a hands-on working knowledge of current packages.

CSC 175 Spreadsheet Programming (3-4-5)
Prerequisite: None
This course is an introduction to the use of spreadsheet software on the microcomputer. Topics include: creating, editing, using formulas, using functions, producing graphs, data extraction, data import/export, and macros.

CSC 177 Database Programming (3-4-5)
Prerequisite: None
This course is an introduction to the use of database software on the microcomputer. Topics include: creating, maintaining, modifying, and

generating reports from a database. Data import/export, database design, and programming principles will also be covered.

CSC 181 RPG Programming I (3-4-5)
Prerequisite: None
The Report Program Generator Language will be used to develop the program logic needed to solve a representative sample of business problems. The student will also write, compile, correct their errors, and test their solutions to the problems.

CSC 221 Technical Computer Programming (3-3-4)
Prerequisite: MAT 110
or Corequisite: MAT 121
The use of the computer as a problem-solving tool in the area of engineering technology is taught. Program outline, flow, and data/solution format using the elementary "basic" syntax is covered. Conditional and unconditional branches, loops, and essential mathematical operators are used.

CSC 244 COBOL Programming III (3-4-5)
Prerequisite: CSC 141, 142
This course, the last of three in a series, develops a high level of student capability in application development in COBOL. Emphasis is placed on creating indexed files, then updating, maintaining, and producing reports from these files.

CSC 264 UNIX/C Programming I (3-4-5)
Prerequisites: CSC 144, 145 or Departmental Approval
The UNIX/C operating system/language is becoming increasingly popular and useful among potential employers. The student will gain an initial familiarization with this subject. The C programming language will be used to develop the program logic necessary to solve a representative sample of logic problems. The student will write, compile, correct errors, and test their solutions to the above problems.

CSC 266 UNIX/C Programming II (3-4-5)
Prerequisite: CSC 264
This is a continuation of CSC 264 and will continue C programming into data structure, algorithms, and complex report writing procedures.

CSC 274 CICS Programming (3-4-5)
Prerequisites: CSC 141, 142, 244 or Departmental Approval
The student will be exposed to the uses of CICS in an IBM environment. Upon completion of this course, the student will have a basic working knowledge of CICS and its uses.

CSC 280 Data Communications (3-0-3)
Prerequisite: Departmental Approval
Topics include: analog and digital data transmission, parallel and serial transmission, modems, multiplexors, port selectors, and communications protocol.

CSC 282 RPG Programming II (3-4-5)
Prerequisite: CSC 181
This course is a continuation of CSC 181. Emphasis will be placed on creating indexed files, then updating, maintaining, and producing reports from these files.

CSC 285 Advanced Topics in Programming (3-4-5)
Prerequisite: Departmental Approval
This course is designed to supplement the regular course offerings. Topics/languages may be proposed by students or faculty and must be approved by the Department of Computer Science.

Design (DES)—See ART

Design Drafting

DDF 201 Jig and Fixture Design (2-3-3)
Prerequisites: DFT 102, PHY 151
A study of basic locating and clamping principles and devices. Laboratory: design of a drill jig and a mill fixture.

DDF 203 Tool and Die Design (2-3-3)
Prerequisite: DDF 201
A practical course in which parts, tools, and dies are designed in actual layout on the drawing board. Emphasis is placed on the fundamental purpose of tool and die design to reduce the cost of the finished commodity, to simplify design, to save materials, and to eliminate unnecessary manufacturing steps.

DDF 225 Machine Design I (2-6-4)
Prerequisite: DFT 102, MEC 120
A study of the basic theories and techniques in the analysis of relative motion, acceleration, and velocities of machine parts such as linkages, cams, gears, and other mechanisms.

DDF 226 Mechanical Design I (2-6-4)
Upon completion of this course, students should be able to design machine parts on the basis of function and strength of material calculations, such as; fasteners, permanent joints, shafts and couplings, plain bearings, ball and roller bearings, belts, and chains, gears, clutches and brakes, and springs' select machine parts for a particular machine function by use of manufacturers' catalogs, manuals, and periodicals; and complete a design project.

DDF 227 Mechanical Design II (5-0-5)
Prerequisite: DDF 226
A continuation of DDF 226 with emphasis on application and failure of gears, shafts, drives, etc.

DDF 228 Machine Design II (5-0-5)
Prerequisite: DDF 225
A study of machine elements covering application and failure of such components as gears, shafts, belt drives, chain drives, clutches, couplings, and bearings. Textbook problem solving is emphasized.

DDF 297 Design Project (0-6-3)
Prerequisite: DFT 357 MEC 224
Students will design a project as a team. All phases of design, manufacture, materials, and time required are studied. A model of the chosen design is constructed and evaluated. In some

cases, a true prototype will be manufactured and evaluated by an outside team.

DDF 229 MET Design Project (0-9-3)
Prerequisite: DDF 225
Corequisite: DDF 228
A capstone design project course that will present the student with simulations of industrial design problems. A common project will be undertaken from idea to finished drawings. Market studies, calculations, practicality, and economy of design will be the cornerstones for this project.

Drafting

DFT 101 Engineering Drawing I (0-6-2)
Prerequisite: None
The beginner is taught the use and care of instruments, freehand sketching, geometric construction, lettering techniques, orthographic and auxiliary projection, basic theory of dimensions and section, and is introduced to computer aided drafting (CAD).

DFT 102 Engineering Drawing II (0-6-2)
Prerequisite: DFT 101
Continuation of DFT 101. Devoted to completion of sets of working drawings.

DFT 112 Civil Drafting (0-6-2)
Prerequisites: SRV 101, DFT 101
The principles of drawing applicable to Civil Engineering Technology. Topics covered include: boundary maps, roadway maps (plan, profile, cross sections, and mass haul), contour work, structural detailing, graphing, and use of surveying software. Drawings are done by using AutoCAD with the exception of one required ink drawing. Clarity and reproducibility are stressed at all times.

DFT 123 Electrical Drawing (0-6-2)
Prerequisite: DFT 101
Introduces and explains electronic drafting techniques utilizing AutoCAD.

DFT 150 CAD I (3-3-4)
Prerequisite: DFT 331
An introduction to the computer aided drafting systems. Instruction will include an explanation of the AutoCad commands accompanied by appropriate practical problems.

DFT 154 CAD II (3-3-4)
Prerequisite: DFT 150
A continuation of DFT 150 with emphasis on the use of more advanced functions and plotting a controlled layout. Drafting of problems related to practical applications will be introduced.

DFT 157 CAD III-Architectural (3-3-4)
Prerequisite: DFT 154
A continuation of DFT 154 to include a review of all the functions and plotting. Emphasis is placed on the drafting of practical problems in the architectural field.

DFT 331 Technical Drafting I (3-6-5)
Prerequisite: An introduction to drafting and drafting practices. Instruction is given in the selection, use, and care of instruments; single stroke lettering; applied geometry; and freehand sketching of orthographic drawings. Orthographic projection and reading instrument drawing of principle views will be emphasized.

DFT 332 Technical Drafting II (3-6-5)
Prerequisite: DFT 331
An introduction to fasteners. Dimensions and notes will be used according to The American National Standard Institute (ANSI). Sections and auxiliary views will be studied.

DFT 333 Technical Drafting III (3-6-5)
Prerequisite: DFT 331 DFT 332
Gears and cams will be studied and drawn. Precision dimensioning and fits with the use of tolerances will be studied and used extensively according to ANSI. Detail drawings with sections will be most widely used.

DFT 334 Technical Drafting IV (3-6-5)
Prerequisite: DFT 331, DFT 332, DFT 323
A study of jibs and fixtures. Continued emphasis placed on making of a complete set of working drawings with assembly and detail drawings emphasized.

DFT 355 Technical Drafting V (3-6-5)
Prerequisite: DFT 331
A study of the methods used in the preparation of pictorial drawings. Methods of rendering, use of paste-up techniques for parts catalogs and/or technical manuals are covered. Drawings will be inked on polyester film or illustration board.

DFT 365 CAD III/Mechanical (1-6-3)
Prerequisite: DFT 150 DFT 154
A review of all functions and plotting, with emphasis on the drafting of practical problems such as assemblies and detail.

DFT 366 CAD IV (1-6-3)
Prerequisite: DFT 150, DFT 154, DFT 365
An introduction to 3D drafting. Problems range from individual isometric exercise to expanded pictorials.

DFT 376 Technical Drafting VI (2-3-3)
Prerequisite: DFT 331
A study of electricity and electronics as it relates to the drafting field. Electrical and electronic components, diagrams, and methods are studied in relation to printed circuit boards. A printed circuit design project is included.

DFT 377 Technical Drafting VII (3-6-5)
Prerequisite: DFT 331, DFT 334
This study will consist of a die design project, special problems will be introduced to show actual working conditions. Design problems will be emphasized.

DFT 1181 Machinist Drafting (1-3-2)
Prerequisite: None
A study of drawing principles and practices for print reading and describing objects in graphic language. Basic techniques of drafting included are: use of drafting equipment, lettering, free hand orthographic and pictorial sketching, geometric construction, orthographic instrument

drawing of principal views, and standards and practices of dimensioning.

DFT 1182 Machinist Drafting II (2-3-3)
Prerequisite: DFT 1181
A continuation of DFT 1181 with emphasis on the necessary techniques and methods required for more advanced drafting.

Drama

DRA 101 Introduction to Theatre (3-0-3)
Prerequisite: None
This course is an exploration of the theatre as an art form: how the actor, director, and designer function. Outstanding plays of major periods are used to demonstrate the technical and aesthetic aspects of theatrical production.

DRA 102 Oral Interpretation (3-0-3)
Prerequisite: None
A course designed to promote the student's skill in interpreting and presenting various selections from literature, poetry, and plays. Students are given an opportunity for delivery of selections of their own choice.

DRA 103 Acting I (1-4-3)
Prerequisite: ENG 103 or Departmental Approval
This course is designed to train the actor to convey thought and emotion through the use of the body and the voice. Mime, oral exercises and improvisations are studied.

DRA 104 Play Production I (0-9-3)
Prerequisite: DRA 101 or Departmental Approval
This course provides students with guided practice in producing a play for audience approval. Students are required to play roles and serve on at least one of the following committees: scenery, sound, property, lighting, costume, publicity, or make-up.

DRA 105 Play Production II (0-9-3)
Prerequisite: DRA 104 or Departmental Approval
This course is a continuation of DRA 104. It provides students with guided practice in carrying out additional responsibilities in play production under the pressure of preparing plays for audience approval. Students enrolled will be expected to play roles and/or serve as members of the scenery, sound, property, lighting, costume, publicity, or make-up staffs.

DRA 106 Stage Crafts (1-4-3)
Prerequisite: DRA 101 or Departmental Approval
This course is designed to familiarize the student with all the theatre crafts including scenery construction and painting, property construction and acquisition, stage lighting and sound.

DRA 107 Stage Make-up (1-2-2)
Prerequisite: None
The student will study and practice creating straight, middle-age, old-age, and character make-ups.

DRA 290 Seminar/Workshop (1-0-1)
Prerequisite: A seminar/workshop approach involving the student in lectures, discussions, project and special activities in drama.

Earth Science (ESC)—See Physical Science

Ecology (Also see Biology)

ECL 105 Ecology of Man (5-2-6)
Prerequisites: BIO 101, BIO 121, or GEO 101
A course which examines the past and present relationship of man with his bio-physical environment. Consideration will be given to ecological concepts, population growth, pollution, human variation, and conservation of natural resources.

ECL 231 Industrial Ecology Analysis (2-3-3)
Prerequisite: CIV 253 or hold an AS/AAS Degree
An introduction to the basic concepts of ecology. The subject matter deals with man, the organization, the environment, conversation, energy, the impact of man and his technology as it relates to the engineering technician.

Economics

ECO 101 Economic Concepts (5-0-5)
Prerequisite: None
This course will teach the basic economic concepts concerning the entire U.S. economy. This course is not intended to transfer to a senior college or university.

ECO 102 Economic Concepts II (5-0-5)
Prerequisite: None
This course will teach the basic economic concepts of the individual sectors of the U.S. economy. This course is not intended to transfer to a senior college or university.

ECO 201 Principles of Economics (5-0-5)
Prerequisite: A study of macroeconomic principles, problems, and issues with emphasis on the applications in the United States.

ECO 202 Principles of Economics (5-0-5)
Prerequisite: ECO 201
A continuation of Eco 201. A study of the microeconomic principles, problems, and issues with applications to United States consumers and business firms.

ECO 213 Engineering Economic Analysis (3-0-3)
Prerequisite: MAT 110
Corequisite: MAT 121
A general survey of economics, economy studies, factors determining present economy, interest and annuity relationships, depreciation and valuation, and basic economy study patterns. Includes use of computer software.

Education

EDU 109 Seminar/Practicum I (1-10-2)
Prerequisite: EDU 118
This course provides hands on work experience in child care centers under the direction of an instructor. EDU 109 focuses on observation, analysis of strengths, discipline, and group presentations.

EDU 114 Health, Safety, and Nutrition for Young Children (2-2-3)
Prerequisite: None
This course will deal with all aspects of health (physical, mental, emotional) and safety for young children as well as sanitation requirements and methods of dealing with child abuse. Emphasis will be placed on the construction of teaching units for use with young children.

EDU 116 Communication Activities I (4-2-5)
Prerequisite: None
Study of language development in relation to adult models and the child's early experiences. Remedial approaches to improving the student's oral communication, in order to serve as an effective model. Case studies provide opportunities to analyze problems of adult-child communication and to derive guidelines for establishing effective communications patterns with young children.

EDU 118 Child Care Credential I (3-0-3)
Prerequisite: None
This course is an introduction to the principles and practices of working with groups of children in the early learning years. This course provides the first half of instruction necessary to qualify for the North Carolina Child Care Credential. Areas of study include: The role, behavior, traits, and characteristics of an effective child care provider; the major areas, characteristics, and principles of child growth and development for children birth through age 12; and, acceptance and respect for a child's individuality, culture, home life, and community.

EDU 119 Child Care Credential II (3-0-3)
Prerequisite: None
This course is an overview for individuals working in the child care profession. The course provides the final half of instruction necessary to qualify for the North Carolina Child Care Credential. Areas of study include: The elements in the child's learning environment that will provide for physical, social, emotional, and cognitive/language learning and development; positive guidance for children; and health and sanitation standards that promote a healthful environment for children.

EDU 121 Child Development and Classroom Management (3-0-3)
Prerequisite: None
This course will deal with the "whole child" in terms of his interaction with the social, emotional, and physical aspects of his world. Child Development will cover prenatal development through the middle years of childhood. Stress will be placed on real life situations as well as academic proficiency.

EDU 140 Seminar/Practicum II (1-10-2)
Prerequisites: EDU 109, EDU 118, EDU 119
This course provides hands on work experience in childcare centers under the direction of an instructor. EDU 140 focuses on lesson planning, setting up centers, and conducting teacher-directed activities.

EDU 203 The Exceptional Child (3-0-3)
Prerequisite: None
The study of children with developmental variations. Consideration is given to recognition of problems, community resources, and selection of appropriate activities for the child with exceptional mental or physical development.

EDU 205 Child Care Administration (3-0-3)
Prerequisite(s): EDU 118, 119
Day Care Administration covers the areas of responsibility for a day care director. These include: operations planning, physical facilities, financial management, legal issues, curriculum planning, staff, parent and community relations and enrollment.

EDU 207 Physical/Creative Activities (4-2-5)
Prerequisite: None
This course is the study of music which is appropriate for young children and the ways of integrating music into the total program of activities. Students learn to utilize a wide variety of materials for rhythm, instrumental performance, and dramatic play. Of equal importance is a study of the motor development of the young child with emphasis given to development through the medium of physical activity and play. Laboratory sessions provide opportunities for learning activities and developing extensive files.

EDU 208 Creative Activities (4-2-5)
Prerequisite: None
Study of art media in relation to the creative process in young children of the educational component that each medium reinforces, and of the ways a variety of low-cost art activities can be incorporated into a program for young children. Laboratory sessions provide first-hand experience with all of the media, opportunities to explore the uses of each, and practice in the care and storage of materials. Each student will plan a meaningful sequence or art activities which could be incorporated into a program for young children.

EDU 211 Exploratory Activities I (4-2-5)
Prerequisite: None
Study of those scientific facts, concepts, and phenomena that are of interest to young children. Laboratory experiences provide opportunities to carry out simple experiments in which young children could participate. Each student will plan a science program which could be used as an integral component of the overall program for young children in group care.

EDU 212 Exploratory Activities II (4-2-5)
Prerequisite: None
This course will help prospective teachers prepare materials to develop basic mathematical concepts with conservation, seriation, and geometry. Emphasis will be placed upon the development of materials and language skills necessary for presentation of lessons.

EDU 213 Communication Activities II (4-2-5)
Prerequisite: None
An overview of the major approaches to the teaching of reading. A major emphasis will be the study and utilization of materials actually found in the classroom setting. Additional emphasis will be placed on the diagnosis of children's needs and the prescription of activities appropriate to meet those needs.

EDU 215 Internship (1-20-3)
Prerequisites: EDU 116, EDU 118, EDU 119, EDU 121, EDU 211, EDU 212
This course provides hands on work experience in child care centers under the direction of an instructor. EDU 215 focuses on specialized interests such as infant/toddler, exceptional child, pre-school, or school-age activities.

EDU 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subject.
A seminar/workshop approach involving the student in discussions and/or projects on a topic in education.

Pre-Engineering

EGR 102 Introduction to Engineering (1-0-1)
Prerequisite: None
An introduction and overview of the engineering profession and its wide diversity of applications, including research, development, design, test, manufacturing, quality control, field service, management, and education. Engineering problem solving processes will be emphasized including problem theory, specific knowledge base, algorithmic procedures, and generalized problem solving heuristics.

EGR 205 Statics (5-0-5)
Prerequisite: MAT 206, PHY 211
The study of engineering statics using vector calculus, basic concepts, forces and equilibrium analysis, distributed forces, centroids, moments of inertia, virtual work as applied to machines, structures, and systems. Engineering problem solving processes will be emphasized including problem theory, specific knowledge base, algorithmic procedures, and generalized problem solving heuristics.

EGR 206 Dynamics (5-0-5)
Prerequisite: EGR 205
Corequisite: MAT 208
The study of engineering dynamics using vector calculus. Equations of motion, kinematics, kinetics of mass points and systems of mass points, kinetics and kinematics of rigid bodies.

Electrical Installation & Maintenance

ELC 1101 D.C. Circuits (7-6-9)
A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchhoff's Law. A study of the sources of direct current voltage potentials.

ELC 1102 A.C. Circuits (3-12-7)
A study of the fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits.

ELC 1104 See Industrial Maintenance (MNT)

ELC 1116, 1117, 1133—See Industrial Maintenance (MNT)

ELC 1134 Industrial Wiring (6-9-9)
Prerequisites: ELC 1101, ELC 1102
Layout, planning and installation of wiring systems in industrial complexes, with emphasis upon blueprint reading and symbols, the related National Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems.

ELC 1201 Air Conditioning Electricity (3-3-4)
Prerequisite: None
Air conditioning electricity, basic principles of electricity including electrical measurement, magnetism, and series and parallel circuits, also types of motors and switches as they apply to their use in the air conditioning field will be covered.

ELC 1221 Air Conditioning Electricity-A (3-0-3)
(A course for students enrolled in the evening air conditioning program)
Air conditioning electricity, basic principles of electricity including electrical measurement, magnetism, and series and parallel circuits, also types of motors and switches as they apply to their use in the air conditioning field will be covered.

ELC 1222 Air Conditioning Electricity-B (0-3-1)
(A course for students enrolled in the evening air conditioning program)
Upon completion of ELC 1221 and ELC 1222 the student will have met all the requirements for ELC 1201.

ELC 1143 Electrical Controls (3-6-5)
Prerequisite: ELC 1101, ELC 1102
Basic industrial electronic systems, such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control system and other basic solid-state

types of systems commonly found in most industries. Energy management control systems.

ELC 1144 Commercial Wiring (3-6-5)
Prerequisites: ELC 1101, ELC 1102, & ELC 1151
Provide instructions and application in the installation of electrical service-equipment and branch circuits in commercial type buildings. Requirements for electrical service as set forth by the National Electrical Code. Load calculations. Actual wiring of commercial type installation in building mock-ups.

ELC 1151 Residential Wiring Methods (3-12-7)
Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as service, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, national electrical code regulations in actual building mock-ups.

ELC 1155 A.C. and D.C. Machines (4-9-7)
Prerequisites: ELC 1101, ELC 1102
Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motor. Instruction in the use of the electrical test instruments in circuit analysis. The basic concepts of A.C. and D.C. machines and simple system controls. An introduction to the type control used in small appliances, such as: thermostats, timers, and sequencing switches.

ELC 1172 Electrical Code and Blueprints (6-3-7)
Prerequisite(s): ELC 1151, ELC 1101
Specification for industrial commercial and residential wiring installations including a consideration of the applicable code regulations for the preparation of electrical estimates covering industrial, commercial, and residential wiring installations.

ELC 1174 Power Distribution (3-3-4)
A study of electrical distribution systems for power, light and heat, including switchboards, panels, switchgear, and wiring for standard utilization and distribution voltages up to 100 kilowatts.

Electronics Engineering Technology

ELC 101 Electrical Fundamentals (3-3-4)
Corequisite: MAT 110 or 121
An introductory survey of the fundamentals basic to the study of Electrical and Electronics Engineering Technology. Principles of basic direct-current circuits are stressed.

ELC 102 Direct-Current Circuits (3-3-4)
Corequisite: MAT 121
Prerequisites: MAT 121 or MAT 110 with at least a grade of B, ELC 101
An introduction to the theory of circuit analysis. Equations for direct-current circuits with resistance and methods for their solution. Special emphasis on network theorems.

ELC 103 Alternating-Current Circuits (3-3-4)
Prerequisites: ELC 102, MAT 122
Elementary A-C circuits; effective and average values of current and EMF, instantaneous and average power. Complex algebra, analysis of R-L, R-C, R-L-C series and parallel circuits; complex power; A-C instruments.

ELC 122 Techniques of Fabrication (0-3-1)
Prerequisite: None
A study of techniques of soldering, study of manufacturers' and suppliers' catalogs and specification sheets, project.

ELC 221 Electrical Machines (3-3-4)
Prerequisite: ELC 103
A study of the construction, principles, regulation, characteristics, efficiency and application of direct-current motors and generators, and an introduction to transformers, alternators, and induction motors.

ELC 223 Electrical Control Systems I (3-3-4)
Prerequisite: ELC 221
A study of types of controls, control components, pilot devices, control circuit diagrams development and analysis of control circuits, maintaining control equipment, troubleshooting control circuits.

ELC 224 Electrical Control Systems II (3-3-4)
Prerequisites: ELC 223, ELN 211
Introduction to automatic control technology. Terminology, types of control, and analysis techniques provide the basis for study of transducers, control media and actuators. Transfer functions and stability criteria are applied to closed loop controllers.

ELC 233 See Automotive Technology

ELC 283 Electric Circuits and Machines (2-3-3)
Prerequisite: PHY 153
This course is a survey of electrical circuits and machines for Mechanical and Industrial Engineering Technology students. It is the study of direct-current circuits, magnetism, electromagnetic induction, direct-current generators, and direct-current motors.

ELN 104 Electronics I (3-3-4)
Prerequisite: ELC 102
Corequisite: MAT 122
A brief discussion of semiconductor physics, intrinsic and extrinsic semiconductors, junction diodes, diode applications. Introduction to bipolar transistors, characteristic curves, biasing, and the common base amplifier.

ELN 204 Electrical Circuits I (3-3-4)
Prerequisites: ELC 103, MAT 122
Corequisite: MAT 123
Introduction to alternating current circuit analy-

sis techniques. Thevenin's and Norton's theorems, mesh analysis, nodal analysis, series-parallel conversion techniques, maximum power transfer, delta-wye transformations.

ELN 205 Electrical Circuits II (3-0-3)
Prerequisite: ELN 204
Series and parallel resonance. Q and bandwidth, mutual induction and transformers. Coupled circuits.

ELN 211 Electronics II (3-3-4)
Prerequisite: ELN 104
The common emitter circuit, graphical analysis, D-C and A-C load lines, stability biasing, other biasing circuits, the hybrid equivalent circuit.

ELN 212 Electronics II (3-3-4)
Prerequisite: ELN 211
Multistage systems, cascade amplifiers, the decibel, frequency response considerations, large signal amplifiers.

ELN 213 Electronics IV (3-3-4)
Prerequisite: ELN 212
Feedback in amplifiers, positive feedback, sinusoidal oscillators, power supply regulators, pnpn and other control devices.

ELN 241 Digital Principles (2-3-3)
Prerequisite: ELN 104 or Departmental Approval
An overview of basic principles of digital electronics. Number systems, binary arithmetic, Boolean algebra, gate circuits, TTL circuits, Karnaugh maps, and arithmetic logic.

ELN 242 Microprocessors I (2-3-3)
Prerequisite: ELN 241
A continuation of ELN 241, binary addition, adders, 1's and 2's complement, RS latches, D latches, JK flip-flops, counter design, ROM, PROM, and RAM.

ELN 243 Microprocessors II (3-3-4)
Prerequisite: ELN 242
An introduction to microprocessors, the simple as possible processor, architecture and instruction sets. The 8085 block diagram, pinout, the minimum system, and operation.

ELN 244 Microprocessors III (3-3-4)
Prerequisites: ELN 243, ELN 252
Input/output operations of 8085 microprocessor. Support chips and the analog interface.

ELN 252 Field Effect Transistors (2-3-3)
Prerequisite: ELN 104
Operating principles, construction, and characteristics of JFET and MOSFET biasing the FET, the universal JFET bias curve.

ELN 253 Communications Circuits (3-3-4)
Prerequisites: ELN 212, ELN 205
Review of resonance, coupled circuits, tuned transformer coupling, radio frequency voltage and power amplifiers, linear power amplifiers, A-M transmitters and receivers, single sideband, F-M receivers.

ELN 271 Pulse Circuits (3-3-4)
Prerequisites: ELN 104, MAT 123
A study of basic pulse definitions, Fourier analysis of nonsinosoidal wave forms, transient response of R-L and R-C circuits, diode switching, clipping and clamping circuits, transistors switching circuits.

ELN 283 Integrated Circuits (2-3-3)
Prerequisite: ELN 243, ELN 252
A study of the internal circuitry of selected digital and linear integrated circuits; differential and operational amplifiers; fabrication of monolithic IC's.

Electronics Servicing

ELC 1121 D.C. Circuits (7-6-9)
A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in parallel and series parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchhoff's Law. A study of the sources of direct current voltage potentials.

ELC 1183 Printed Circuits and Soldering (3-3-4)
Prerequisites: ELC 1121 and ELN 1100
Techniques of photographic and direct etching of PC boards, automated assemble systems, conformal coatings, and layout artwork. Manual and automated soldering methods for PC assembly. Desoldering and repair techniques.

ELN 1100 Introduction to Electronics (3-12-7)
Prerequisite: None
Reading and interpreting schematic diagrams, reading meters and instruments, wiring circuits and collecting data, learning electronics vocabulary, careers in electronics, basic soldering, color codes, specifying parts, and shop safety.

ELN 1112 Trouble-Shooting Techniques (0-3-1)
Principles of radio reception and practices of servicing; included are block diagrams of radio receivers, servicing techniques of AM and FM receivers by resistance measurements, signal injection, voltage analysis, oscilloscope methods of locating faulty stages and components and the alignment of AM and FM receivers.

ELN 1133 Power Supplies and Amplifiers (4-3-5)
Basic amplifier biasing, typical amplifier configurations, operational amplifiers, half-wave and full-wave rectifiers, filters, electronic regulators and protection circuits, and switching power supplies are discussed.

ELN 1143 Introduction to Semiconductors (3-12-7)
Basic semiconductor physics, and P-N junction, diode, Zener effect, special diodes, bipolar transistor, field effect transistors, thyristors, integrated circuits, and optelectronic devices are discussed.

ELN 1144 Special Semiconductors and Microelectronics (3-12-7)
Operational amplifiers, Linear integrated circuits, TTL integrated circuits, MSI, LSI, VLSI, Microprocessor families and fabrication techniques will be discussed.

ELN 1154 Oscillators, Pulse Circuits and Modulation (6-3-7)
Basic Oscillators; Feedback, O; Transformer oscillator; LC oscillator; Hartley, Colpitts, Clapp circuits; Crystal controlled oscillators; Phase locked loop; R-C Oscillators; phase-shift oscillator; Wienbridge oscillator; nonsinusoidal oscillators; waveshaping; diode clipping; transistor clipper; clampers, multivibrators IC timers; Amplitude Modulation, sidebands, bandwidth, single sideband, frequency modulation, deviation, FM detectors are discussed.

ELN 1163 Introduction to Digital Logic (3-0-3)
Binary number system; binary codes, BCD, ASCII; Data representation, parallel and serial transmission; diode and transistor gates, NAND, NOR, and inverters in discrete and integrated form are discussed.

ELN 1164 Trouble-Shooting Techniques II (0-3-1)
Maintenance and repair of color T.V., cable systems, microcomputers, terminals, modems, and satellite earth stations will be covered. A study of principles of television receivers, alignment of radio and intermediate frequency amplifiers, adjustment of horizontal and vertical sweep circuits will be taught. Techniques of trouble shooting and repair of RV receivers with the proper use of associated test equipment will be stressed.

ELN 1174 Digital Techniques (3-0-3)
Flip-flops, shift registers, combinational logic circuits, digital design, and digital applications will be discussed. RS, D, and JK flip-flop; Binary, BCD, and ring counters; Dynamic MOS Shift Registers and applications; Encoders, Decoders, Multiplexers, and Demultiplexers; Truth tables and Karnaugh Map; the 6800, 8080, 8085, and Z-80 microprocessors.

ELN 1184 Industrial Electronics (3-3-4)
Prerequisite(s): ELC 1101 and ELC 1102
Basic theory, operating characteristics, and application of solid-state electronic theory use in circuit protective devices, control circuits such as relays, limit switches, and sensing devices. Teaches an understanding of basic electro-mechanical logic. Disassemble, replace parts, and reassemble all types of electro-mechanical devices.

Emergency Medical Science

EMS 101 Fundamentals of Emergency Medical Science (4-2-0-5)
Prerequisite: Acceptance as an EMS Student
Corequisite: EMS 102
This course is designed to introduce the student to the health care system and the function of emergency medical service providers within the system. A team approach is emphasized and the student is oriented to the responsibilities of individual team members. In addition, initial assessment and management of illness and injury will be introduced. Basic skills will be practiced in the laboratory portion of this course.

EMS 102 Emergency Assessment and Intervention (2-0-3-3)
Corequisite: EMS 101
This course emphasizes the fundamental, cognitive, and manipulative skills common to the basic emergency care and assessment of both ill and injured patients. Common equipment found on ambulances and in hospitals is utilized. Theoretical principles underlying the use of equipment, treatment, and evaluation of various emergent problems are emphasized.

EMS 103 Principles of Extrication and Rescue (4-2-0-5)
Prerequisite: Acceptance as an EMS Student
This course is designed to acquaint the student with techniques of extrication and rescue by presenting a comprehensive approach to the problems of gaining access, disentanglement, packaging and removal of persons entrapped in wrecked vehicles. Skills will also include water rescue, rescue from heights, rescue from depths, and rescue from burning buildings. A wide range of problems which could occur during any rescue operations and for which the professional rescuer must be prepared is included.

EMS 104 Injury Management (4-2-0-5)
Prerequisite: EMS 102, Acceptance as an EMS Student.
This course emphasizes physical assessment of patients with special medical trauma related problems. In addition, principles of fluid and electrolyte balance are discussed as they apply to the treatment of shock and other disorders.

EMS 105 Clinical Seminar and Practicum I (1-0-9-4)
Prerequisite: MS 102
Corequisites: EMS 103, EMS 104
This course provides beginning experience in hospital observation and field experience. Students present case studies from their field or hospital experience for informal discussion by the group. Emphasis is placed on the integration of theoretical knowledge obtained in EMS courses with the realities of practical field oriented patient care.

EMS 108 Clinical Seminar and Practicum II (2-0-9-5)
Prerequisites: EMS 104, EMS 105
Planned learning in hospital and field settings is included. Care of patients with disorders of hydration, volume loss, and metabolism is stressed.

EMS 110 Pharmacology for EMS (4-0-0-4)
Prerequisite: Acceptance as an EMS student
This course explores the fundamental classification and action of common chemotherapeutic agents. Emphasis is placed on the action and use

of compounds most commonly encountered in the treatment of acutely ill patients.

EMS 112 Emergency Vehicle Operations and Maintenance (2-2-0-3)

Prerequisite: Acceptance as an EMS Student

The first section of this course includes the principles underlying decision-making in relation to: characteristics of drivers needed for effective and safe operation of emergency vehicles, choosing the quickest and safest way to the scene, positioning the vehicle at the scene, and consideration of the patient's condition in choosing route and method of transfer (indications and contraindications for use of siren and lights). Advanced driving maneuver skills include lane changes, and one and two wheel off the shoulder recovery of the skidding vehicle. The second section of the course includes skills needed for vehicle emergency maintenance.

EMS 201 Advanced Life Support I (4-2-0-5)

Prerequisites: EMS 101, EMS 102, EMS 105, Acceptance as an EMS Student

In this course, anatomy and physiology of the cardiopulmonary systems are reviewed. Basic electrocardiography and the study of common cardiac arrhythmias are introduced. Coronary artery disease, acute myocardial infarction, including early warning signs, electrical arrhythmias, and mechanical complications of heart disease are discussed. The laboratory provides programmed instruction in the basic arrhythmia recognition and familiarizes the student with cardiac monitoring techniques and devices.

EMS 202 Clinical Seminar and Practicum III (2-0-9-5)

Prerequisites: EMS 110, EMS 104, EMS 108

Corequisite: EMS 201

Guided learning experience in the care of patients with complex problems is included. Emergency room, intensive care unit, and field experience provide emphasis on the assessment and treatment of victims with unstable mental and physical problems of a critical nature.

EMS 203 Emergency Psychiatric Care (3-0-0-3)

Prerequisite: PSY 201

Corequisite: EMS 202

This course begins with an overview of the characteristics of various neurotic and psychotic disorders. Emergency intervention in patients who exhibit suicidal, assaultive, destructive, resistant, bizarre, toxic, amnesic, or paranoid behavior is covered. In addition, the student becomes acquainted with the paramedic role during the prehospital care of psychiatric patients and the legal commitment process for mandatory psychiatric treatment.

EMS 205 Advanced Life Support II (4-2-0-5)

Prerequisite: EMS 201

This course is a continuation of EMS 201, Advanced Life Support I in which complex cardiac arrhythmias are discussed. Pharmacologic and electrical interventions in cardiac arrest are covered in detail. Interventions appropriate for mechanical complications of cardiopulmonary disease are covered as time permits. The laboratory continues with the programmed instruction of advanced arrhythmias and focuses on the utilization of advanced life support techniques in simulated patient situations. This includes the utilization of computers for assessing problems.

EMS 206 Clinical Seminar and Practicum IV (2-0-9-5)

Prerequisites: EMS 201, EMS 202

Corequisite: EMS 205

Experience in the practice of advanced life support skills used is provided. Emphasis is placed on the care of patients with cardiovascular disorders. Experience is also provided in the care of patients during the antepartum, intrapartum, and postpartum phases of pregnancy. Concurrent with EMS 207-OB Newborn, Pediatric and Geriatric Emergencies.

EMS 207 OB, Newborn, Pediatric, and Geriatric Emergencies (3-0-0-3)

Prerequisite: PSY 201

Corequisite: EMS 206

Assessment and decision-making concerning obstetrical and gynecological emergencies are covered in this course. The student is prepared to recognize imminent birth and assist the mother in the delivery process. Recognition of both normal and complicated deliveries is expected. Emergency resuscitation techniques for the newborn, transportation of the high-risk infant, care related to traumatic abortion and to the rape victim are included. Emergency care specified to children and senior citizens concludes this course.

EMS 211 Clinical Seminar and Practicum V (2-0-9-5)

Prerequisite: EMS 206

This course allows the augmentation of all emergency care skills including basic and advanced life support, psychiatric, and maternity care as well as patient handling techniques. Students are expected to function, under supervision, as team leaders in field experience.

EMS 213 Communication and Documentation for EMS (4-2-0-5)

Prerequisite: Acceptance as an EMS Student

This course prepares the student to understand and be able to effectively utilize communications equipment such as two-way radios, transmitting units within emergency vehicles, receiving units within emergency treatment facilities, dispatching equipment, and electro-cardiographic telemetry processing in the field of emergency care. Students are acquainted with the theory and use of vital data processing, their role as major input sources and the necessity for accurate observation and record maintenance. Students develop skills in preparing reports in terms of problem definition, development, data preparation for both formal and informal reporting, and

research techniques. Legal implications of medical records will be discussed and reviewed.

EMS 273 EMS Management (5-0-0-5)
Prerequisite: Acceptance as an EMS Student
This course stresses the principles of managing a modern emergency medical service operation. Special emphasis will be given to time management techniques, medico-legal problems, EMS grantsmanship, system management, budget development, managing medical supplies and equipment maintenance, and the structure and function of municipal governments.

English

ENG 092 Fundamentals of Communication (5-0-5)
Prerequisite: None
This course focuses on basic communication through writing and speaking. The writing unit centers on sentence construction, verb tense, spelling, basic punctuation, and paragraph development. The speaking unit centers on standard grammar, vocabulary development, and elimination of slang/regional expressions.

ENG 095 Essentials in English (5-0-5)
Prerequisite: ENG 092 or appropriate ASSET score
This course is designed to assist the student in the building of fundamental grammar skills necessary for success in ENG 101, Freshman Grammar and Composition, or ENG 121, Composition I. The course includes parts of speech, sentence structure, vocabulary, spelling, and paragraph development. Focus is on developing entry level skills through the writing process.

ENG 101 Freshman Grammar & Composition (5-0-5)
Prerequisite: Departmental Approval
English 101 includes a review of correct usage in grammar, mechanics, punctuation, and spelling, and the writing of numerous themes. Students are trained in the preparation of the library research paper.

ENG 102 Freshman Literature (5-0-5)
Prerequisite: Successful completion of ENG 101
English 102 includes an introduction to the types of literature, including prose, poetry, and drama. Students are given training and experience in the analysis and criticism of literature.

ENG 103 Public Speaking (5-0-5)
Prerequisite: None
English 103 is a course in speech preparation, composition, and delivery. Students are given frequent opportunities to prepare and deliver short speeches of various types.

ENG 121 Composition I (3-0-3)
Prerequisite: Departmental approval
A study of the essentials of standard usage and basic principles of English grammar with emphasis on proficiency in writing clearly, effectively, and appropriately. Special importance is given to writing appropriate to the engineering technician. Seven themes are written in class and students do general expository writing as outside assignments.

ENG 124 Composition II (3-3-4)
Prerequisite: ENG 121 or ENG 101
A course presenting a fuller continuation of correct English usage. Comprehensive study of major principles of effective correspondence and communication, and the application of these principles to specific types of practical writing through term paper, theme, and writing projects. Special emphasis is given to writing assignments appropriate to the engineering technician. Students are given additional instruction in most word processing tasks using a popular word processing software package.

ENG 125 Report Writing (3-3-4)
Prerequisite: ENG 124
A seminar type course designed to acquaint the student with all phases of technical writing. The course offers information on types, styles, and mechanics of reports in general and practice in preparing data for both formal and informal reporting. Includes continued instruction in and required use of word processing.

ENG 190 Freshman Literature-H (5-0-5)
Prerequisite: ENG 101 and approval of instructor.
ENG 190, an honors course, emphasizes the thematic approach to the different literary genre with specific emphasis on critical research, critical analysis, and creative writing in response to works studied.

ENG 201 English Literature (5-0-5)
Prerequisites: ENG 101 and 102
English 201 is a study of selected works of the major British writers, including discussion of the milieu in which they wrote. Students prepare research papers in which they analyze and criticize authors and their works. ENG 201 covers major British writers from Chaucer through Samuel Johnson.

ENG 202 English Literature (5-0-5)
Prerequisites: ENG 101 and 102
English 202 is a continuation of English 201 starting with the Romantic period and continuing through the Twentieth Century.

ENG 203 American Literature (5-0-5)
Prerequisite: ENG 101 and 102
English 203 is a study of important American authors, their literary works and environment from the Colonial period to the Civil War period.

ENG 204 American Literature (5-0-5)
Prerequisites: ENG 101 and 102
English 204 begins with Civil War writers and continues through the Twentieth Century.

ENG 218 Children's Literature (5-0-5)
Prerequisite: None
English 218 is a study of various types of literature appropriate for children. Evaluation of modern writers, illustrations, and materials will be emphasized.

ENG 290 Seminar/Workshop (1-0-1)
Prerequisite: none
A workshop in which a specialized area of language or literature is studied in a concise period. It may include off-campus travel.

ENG 1102 Communication Skills (2-0-2)
This course includes development of ability to communicate effectively through language usage in speaking and writing. Course includes organizing thoughts and presenting thoughts effectively in connection with problems.

Environment

ENV 251 Basic Environmental Technology (3-3-4)
Prerequisite: CIV 232 or AS/AAS Degree
An introduction to the basic principles of water quality standards, water purification and distribution, waste-water collection, and the operation of water treatment and waste-water treatment plants; solid landfill operations and design.

Fire Protection Technology

FIP 101 Introduction to Fire Protection Hazards (3-0-3)
Prerequisite: None
History and development of fire service safety and security movements. The role of the fire service, protection and safety personnel. Ancillary organizations, identification of general fire hazards and their causes and the application of the fire protection principles to them.

FIP 102 Municipal Fire Protection (3-0-3)
Prerequisite: FIP 101
Fire department organization, personnel management, and the department's relationship with other city departments. Evaluation of public fire protection needs, financial factors, records and reports, equipment, procurement policies, apparatus, tools, training needs and programs, maintenance needs and facilities, and other equipment necessary for modern fire protection.

FIP 104 Construction Codes and Material Rating (3-0-3)
Prerequisite: None
A thorough study of building codes applicable to fire prevention, and principles and practices used on various types of building construction. Fire resistance tests and ratings of building materials.

FIP 106 Applied Electricity for Fire Protection (3-0-3)
Prerequisite: None
A thorough study of methods and means of utilizing electricity to provide power. The installation and maintenance of electric circuit and machinery is included.

FIP 115 Fire Prevention Programs (3-0-3)
Prerequisite: None
Principles and application of fire prevention related to the community and industrial plants. The development and maintenance of fire prevention programs, educational programs, and inspection programs. Specific applications of related disciplines to fire prevention problems.

FIP 121 Municipal Finance (3-0-3)
Prerequisite: None
Municipal finance based on sound government principles and practice. A study of budget items, preparation of budget, justifying budgets, financial statements, cost accounting and record systems, taxation and audit.

FIP 135 Training Programs & Methods of Instruction (3-0-3)
Prerequisite: FIP 115
Purposes of fire service drills and training programs. The development and operation of the departments' training programs. Facilities and equipment necessary for modern training. Selecting and training the instructional staff. Suitable methods of instruction.

FIP 201 Fire Detection and Investigation (3-0-3)
Prerequisite: None
Determination of cause of accidental and incendiary fire, fire losses and loss of records, points of origin, location and preservation of physical evidence, and scientific aid to investigation. Courtroom procedure in presenting evidence. Motives and methods for fire setting and investigative methods are covered

FIP 206 Industrial Hazards (3-0-3)
Prerequisite: None
A study of the hazardous processes in industries such as petroleum, furniture, chemical, tobacco, metal, and textile. The protection and precautions needed for personnel and property safety. Hazards that are related to heating plants, electrical systems, and storage in all industries.

FIP 208 Municipal Public Relations (3-0-3)
Prerequisite: None
A general survey of municipal public relations and their effect on the governmental process. Principles of public relations such as planning, staffing, controlling and directing information to the general public are studied. Emphasis is placed upon personal responsibilities, means of communications, policies and organization of an effective public relations program.

FIP 211 Grading of Fire Defenses (3-0-3)
Prerequisite: Consent of Advisor
Insurance grading schedules and their principles of application. Methods of analyzing fire hazards and the effects of fire hazards on fire insurance rates. A study of the National Board Grading Schedule is made in detail with other schedules briefly.

FIP 219 Chemistry of Hazardous Materials (3-0-3)
Prerequisite: None
Theories of combustion and extinguishment, including the analysis of flammable materials, and the nature of extinguishing agents. The properties of matter affecting fire behavior. The appli-

cation of the laws and principles of chemistry and physics to the use, storage, and disposal of flammable liquids, solids, gases and ducts.

FIP 221 Fire Fighting Strategy (3-0-3)
Prerequisite: None
The aspects of tactics and strategy in extinguishing fires. Pre-fire plans, mutual and problems, techniques of using available equipment and manpower, conflagrations, techniques of predicting fires by fuel analysis. Emphasis will be on developing thinking skill in relation to crises.

FIP 225 Fire Protection Law (3-0-3)
Prerequisite: FIP 102
A study of law in relation to fire protection. Torts. Terms and Contracts studied by case methods. Liability of fire protection personnel when making inspections, recommendations, fighting fires, and other tasks. Pertinent laws, ordinances, and codes and the responsibilities and powers of the individual or organization concerning enforcement.

FIP 226 Industrial Safety (3-0-3)
Prerequisite: FIP 101
A fundamental study of industrial safety records, development of safeguards, accident costs and causes, job safety and safety maintenance. Methods of eliminating hazards including color coding, guards, and personal protective equipment. A study of the precautions and safeguards essential to protecting lives during fires in various types of occupancies. Exit code requirements, personnel protective devices, and practical safeguards will be studied. Review of case histories of fires and explosions which have resulted in loss of life to determine how these types of tragedies can be prevented.

FIP 228 Hydraulics and Water Distributive Systems (3-0-3)
Prerequisite: None
Mechanics of the flow of fluids through fire hose, nozzles, and appliances, pumps, standpipes, watermains, and other devices. Design, testing, and use of nozzles, appliances, pumps, and water distribution systems. Measurement of fluid flow and methods of determining quantities of water available from a distribution system. Practical applications of principles.

FIP 229 Sprinkler and Standpipe Systems (3-0-3)
Prerequisite: None
Types of sprinkler and standpipe systems, system devices and their operation, advantages of sprinkler systems, codes governing installation, water supply requirements, testing, inspection, and maintenance.

FIP 234 Inspection Principles and Practices (3-0-3)
Prerequisite: None
A study of the fundamentals of fire inspections including standards, techniques of evaluation of hazards as to degree of the hazard and practical recommendations. Reports including maps and sketches of each building inspected. On-the-site inspections of buildings to locate hazards and to recommend safe practices and improvements.

FIP 246 Automatic Alarm & Extinguishing Systems (3-0-3)
Prerequisite: None
A study of the types of fixed extinguishing systems, standard and special fire alarm and fire detection systems; their operation, installation requirements, testing, inspection, and maintenance.

FIP 247 Public Education Programs (3-0-3)
Prerequisite: None
This is a study in the design of public fire education programs. It includes a systematic approach to designing, implementing and evaluating those programs conducted to instruct the public about fire safety.

FIP 250 Fire Management I (3-0-3)
Prerequisite: None
This course presents an overview of past and present organizational structure within the fire services. Emphasis is on the diverse nature of modern fire service with its specialized functions of fire control, prevention, inspection, emergency medical services, and fire investigation. The course is one of a three-part series of courses constituting the fire management unit.

FIP 251 Fire Management II (3-0-3)
Prerequisite: None
This course focuses on the specific management approaches most useful in dealing with each of the major functional units of the fire service. These approaches include fire prevention, inspection services, fire suppression, medical and rescue services, fire and arson investigation, communications, and data processing and analysis. The course gives special attention to applying innovative management tools and modern technology to the unique needs in each of these special function areas.

FIP 252 Fire Management III (3-0-3)
Prerequisite: None
This course examines the traditional functions of budget development, training, and personnel administration and the less traditional areas of labor relations and productivity measurement and improvement. The course treats each of these subjects in depth and focuses on modern trends and innovative practices in these rapidly changing areas.

French

FRE 101 Elementary French (5-0-5)
Prerequisite: None
French 101 is a beginning course which stresses the basic language skills—listening, speaking, reading, and writing—along with cultural aspects.

FRE 102 Elementary French (5-0-5)
Prerequisite: FRE 101 or Equivalent
French 102 stresses the continuing development of the basic language skills and cultural studies.

FRE 201 Intermediate French (5-0-5)
Prerequisites: FRE 101 and 102 or 2 years of high school French
French 201 reinforces the basic language skills. It includes extensive readings, a grammar review, and cultural studies. Stress is given to spoken and written expression.

FRE 202 Intermediate French (5-0-5)
Prerequisite: FRE 201 or Equivalent
French 202 is a course which stresses spoken and written expression. It includes a grammar review, extensive readings, and cultural studies.

Geology

GEL 102 Introduction to Geology (5-2-6)
Prerequisite: None
A study of the basic principles and processes of the earth; its composition, formation, and features. Also listed as PHS 102.

Geography

GEO 101 Physical Geography (5-2-6)
Prerequisite: None
A study of the earth's astronomical relations, factors of weather and climate, and physiological features, and resources such as minerals, waters, soils, and seas. Also offered as PHS 101.

GEO 104 Introduction to Cultural Geography (3-0-3)
Prerequisite: None
A topical approach is used to contribute to a better understanding of the similarities and differences in the cultural characteristics and distribution of the world's people. Emphasis is placed on the study of languages, religions, population, growth, migration and distribution, and the concept of the nation-state.

GEO 110 World Geography (5-0-5)
Prerequisite: None
A regional approach is used to contribute to a better understanding of the distribution and patterns of people, their culture, and their economic and political activities. Emphasis is placed on the development of mental maps.

GEO 204 Economic Geography (3-0-3)
Prerequisite: None
A study of the economic, social, and political aspects of the distribution of natural resources and their utilization. The influence of industry, agriculture, and natural resources on the population density is developed.

GEO 205 Conservation of Natural Resources (3-0-3)
Prerequisite: None
Problems and techniques of conserving water, soil, minerals, plants, animals, and human resources. This course is also offered as CON 205.

GEO 290 Seminar/Workshop (1-0-1)
Prerequisite: None
A workshop in which a specialized and topical area of geography is studied in a concise time period.

History

HIS 101 World Civilization—Ancient (3-0-3)
Prerequisite: None
A history of civilization in the Ancient period. A survey of political, social and artistic developments in Mesopotamia, Egypt, Greece, and Rome.

HIS 102 World Civilization—Medieval (3-0-3)
Prerequisite: None
A survey of European social, political and cultural history from the fall of Rome to 1715, including the Middle Ages, the Renaissance and Reformation, and Early Modern France, England, Germany, and Italy. This course examines the influences of the Byzantine and Islamic cultures on European society.

HIS 103 World Civilization—Modern (3-0-3)
Prerequisite: None
The history of Europe from 1715 to 1945. A survey of life in Europe from the French Revolution and Enlightenment through the early Twentieth Century, including the effects on the United States and Soviet Union.

HIS 104 World Civilization—Contemporary (3-0-3)
Prerequisite: None
The history of the world since 1945 to the present. A survey of the political, social, and economic developments of Europe, Asia, Africa, and Latin America, and how they have affected world affairs.

HIS 201 United States History to 1877 (5-0-5)
Prerequisite: None
American history from the period of discovery and colonization through Reconstruction. Emphasis is upon promoting an understanding of and an appreciation for the fundamental themes and patterns in the social, economic, and cultural development of the nation. Special attention is focused upon the origin and development of constitutional government, geographic expansion, and the controversy growing out of sectional issues.

HIS 202 United States History from 1877 (5-0-5)
Prerequisite: None
American history from 1865 to the present, with emphasis upon the emergence of the U.S. as a modern industrial nation and world power, the "big change" in social, political, and economic development of the Twentieth Century, and the diplomatic complexities confronting the U.S. in the contemporary world.

HIS 203 North Carolina History (5-0-5)
Prerequisite: None
The history of North Carolina from its discovery by the French and Spanish to the present. Political, agricultural, industrial, religious, educa-

tional, literary, and social developments receive proper attention.

HIS 204 Afro-American Studies (5-0-5)
Prerequisite: None
A general study of the contributions of the black race to American Society. A study of slavery, Black Intellectuals, the attempt of the Black man to understand himself and his place in modern U.S. society, and the Black-White confrontation.

HIS 210 The Christians: An Historical Perspective (3-0-3)
Prerequisite: None
A series of thirteen films presenting the history of Western man through the eyes of the Christian church, with special emphasis placed upon the growth of Christianity and its impact on mankind. The films trace the growth of the new religion from its earliest days to the challenges faced by Western Civilization and the Christian religion in the 20th century. (Same as REL 210)

HIS 280 Study Tour (2-12-6)
Prerequisite: None
A five week, condensed course involving three weeks of intensive study on the campus of Gaston College, followed by two weeks of off-campus study and travel. This course may involve travel within the United States or abroad as an open laboratory experience for students. This course involves an interdisciplinary study including history, culture, art, architecture, music, politics, etc., with special emphasis given to one or more of these topics. Also offered as an ANT 280, SOC 280, and POL 280. (Course prefix designated at the time the area of study is determined.)

HIS 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subjects.
A seminar/workshop approach involving the student in lectures, discussions, projects, and/or travel concerning a topic in History.

HIS 291 Educational Travel (1-6-3)
Prerequisite: None
A social sciences course designed to allow students to obtain limited college credit for valid educational travel, both domestic and foreign. Permission for such Educational Travel must be obtained from the Director of Study Tours before such travel is conducted, and all classwork, written exams, and projects must be submitted to the appropriate department chairman before academic credit is granted. Students are required to register for the course before travel is undertaken. (Course prefix designated at the time the area of study is determined.)

Hydraulics and Pneumatics

HYD 242 Fluid Flow (3-0-3)
Prerequisites: MAT 122, PHY 151
Flow of fluids allows the student to study and observe, through lecture and demonstration work, the principles of open and closed system flow and to become aware of the applications of fluid flow in the mechanical field.

HYD 313 Hydraulics & Pneumatics (3-3-4)
A physical and mathematical study of the fundamental principles of fluid (liquids and gases) mechanics and their applications to practical problems. Terminology applications of pressure, fluid flow, volume displacement, force resolutions, Bernouli's principle and pneumatics will be included in the course.

Industrial Maintenance—See MNT

Industrial Engineering Technology
Industrial Management Technology

ISC 102 Principles of Industrial Management (5-0-5)
Prerequisite: None
The basic managerial decisions; organizational structure including plant location, building requirements, and internal factory organization problems of factory operation and control, planning, scheduling, routing factory production, stores control, labor control, purchasing, cost control.

ISC 103 Plant Layout and Materials Handling (0-6-2)
Prerequisite: DFT 101
Principles of plant layout to obtain the most effective utilization of materials and machines, as related to space and cost. Selection and use of modern equipment and methods for handling materials in industrial processes.

ISC 113 Industrial Safety (3-0-3)
Prerequisite: ISC 115
A comprehensive review of industrial hazards, prevention of accidents, and a study of the laws covering occupational health and safety.

ISC 115 Industrial Leadership (3-0-3)
Prerequisite: None
A study of psychological terms, language and concepts with emphasis toward industrial and management applications. Psychological approaches to industrial situations are studied to determine solutions that increase the effectiveness of people.

ISC 201 Production Planning (3-0-3)
Prerequisite: ISC 115
Production planning and control of intermittent manufacturing, continuous manufacturing, sales forecasting, and basic wage incentive plans.

ISC 202 Industrial Systems (3-3-4)
Prerequisite: ISC 201
An introduction to the principles, evaluation, requirements, design, analysis improvement, and installation of industrial systems.

ISC 212 Profit Improvement (3-3-4)
Prerequisite: ISC 201
Brief introduction to the advanced tools of scientific management for controlling profit, with emphasis on their application to industry.

ISC 213 Statistics and Quality Control (3-3-4)
Prerequisite: MAT 110 or MAT 121
Statistical techniques useful to technicians; includes elementary probability, frequency distribution, estimating of means, standard deviations, sampling variations, and control charts.

ISC 222 Methods Analysis (2-3-3)
Prerequisite: None
Introduction to the principles of motion economy through the various process charts. Also the techniques of micromotion study, job analysis, and job evaluation.

ISC 224 Work Measurement (2-3-3)
Prerequisite: ISC 222
Basic time study concepts and familiarization with the tools of time study. The application of performance ratings and allowances to basic time so as to formulate a standard time for a given task. Also, the use of standard data and synthetic basic motions and times.

ISC 233 Industrial Organization & Management (3-0-3)
Prerequisite: ISC 212
The interrelations of all systems of modern management. Organizational structure, plant location, safety, industrial and labor relations, and product and material standardization.

ISC 253 Management Problems (5-0-5)
Prerequisite: ISC 102
A study of the methods used to solve the problems that modern management faces on a day-to-day basis.

ISC 256 System Design (0-4-2)
Prerequisite: Departmental Approval
A comprehensive design of an industrial system which will incorporate the application of all phases of those topics with which an Industrial Engineering Technology student should be familiar. This will serve as a capstone course.

ISC 1101-See Industrial Maintenance (MNT)

Jewelry Design (JCR)—See Art

Legal Education

LEX 101 Introduction to Paralegalism (3-0-3)
Prerequisite: None
A broad overview of the ethical and professional duties of a paralegal, including the code of ethics. There will also be course work including case analysis and writing.

LEX 102 Tort Law (5-0-5)
Prerequisite: None
A study of the fundamental principles of the law on torts. Upon completion of this course, students should be able to recognize the more common intentional torts as negligence from various fact situations, explain the prima facie case for each, and evaluate the defenses available to each.

LEX 105 Legal Research (4-2-5)
Prerequisite: None
This course evolves around the fundamentals of legal research, analysis, and writing. Upon completion of this course, students should be able to read and interpret court decisions, statutes, and constitutions. Students will also learn to do basic legal research by using legal publications.

LEX 108 Nature & Function of Law in Society (3-0-3)
Prerequisite: None
This presentation of a philosophical and historical appreciation of what law is within the framework of social order. In addition to an analysis of how present laws came to be, particular emphasis will be placed on the way in which our present day society utilizes the law as a social control device. Also offered as POL 108.

LEX 120 Family Law (5-0-5)
Prerequisite: None
A study of the laws governing domestic relations under common law and as changed by statute. The laws dealing with sex relations, marriage, divorce, and children. Child custody, juvenile delinquency, and the juvenile court system.

LEX 201 Litigation Preparation and Writing (4-2-5)
Prerequisite: None
The study of the steps in aiding an attorney in preparing a civil case for trial, emphasizing preparation of a trial notebook, organization and indexing of discovery and other trial materials, and preparation of witnesses for trial. The course also includes practice in writing for the legal profession. Emphasis will be placed on research and analysis of legal problems.

LEX 202 Wills, Probate, & Trust (5-0-5)
Prerequisite: None
This course emphasizes procedures concerning distribution of property by trusts and wills. Upon completion of this course, students will be able to interview clients, use a wills manual, and assist the attorney in drafting wills and trusts, as well as complete the documents necessary to administer an estate.

LEX 203 Law Office Management (5-0-5)
Prerequisite: None
A study of effective organization skills in both small and large law offices. Included will be various filing systems, accounting systems, and professional liability insurance information.

LEX 210 Business Organizations (5-0-5)
Prerequisite: None
An overview of business organizations which includes the formation and structure of sole propri-

etorships, joint ventures, partnerships, and corporations. Document preparation, such as articles of incorporation and partnership agreements, will be stressed.

LEX 215 Consumer Law (5-0-5)
Prerequisite: None
A survey of the methods by which individuals and communities can protect themselves against misleading advertising and labeling, unsafe products, and pollution. Land use planning. Environmental protection.

LEX 216 Property Law (3-0-3)
Prerequisite: None
The law of real property and personal property; estates is land and future interests. Leasing, transferring, mortgages, recording, covenants, easements, licenses, landlord and tenant, wills, and successions, probate.

LEX 217 Bankruptcy (3-2-4)
Prerequisite: None
An overview of the substantive law of bankruptcy from the debtors' and creditors' points of view—including chapters 7, 11, and 13. The student will also be instructed in collections, including garnishment, attachment, claim and delivery, foreclosure, post judgment collection, and the drafting of collection letters. Emphasis will be placed on the practical aspects of skills learned to include communicating with the debtor and creditor, research into the law, preparation of bankruptcy and collection documents, and use of software packages and form files, and the maintenance of calendar controls.

LEX 218 Administrative Law (5-0-5)
Prerequisite: None
A study of the scope and authority of administrative agencies of the federal and state governments and the roles of the paralegal in working for such agencies. The student will be instructed in the proper completion and use of the necessary practice forms used by the agencies. In addition, the student will receive instruction on researching administrative law, proper procedure and case management.

LEX 220 Property Law (4-2-5)
Prerequisite: None
The law of real property and personal property; estates is land and future interests. Leasing, transferring, mortgages, recording, covenants, easements, licenses, landlord and tenant, wills, and successions, probate.

Math

MAT 094 Basic Mathematics (3-0-3)
Prerequisite: None
Basic Mathematics is intended for students who need assistance in basic arithmetic skills. Self-paced instruction includes operations with whole numbers, fractions, decimals, and percents, basic ratio and proportion, and an introduction to algebraic and geometric concepts. Word problem skills are emphasized.

MAT 095 Essentials of Math (5-0-5)
Prerequisites: MAT 094 or appropriate ASSET score
Note: This course will be phased out during the 1993-1994 academic year and will be replaced by MAT 096 and/or MAT 098.
This course develops the algebraic skills needed in subsequent courses in either mathematics or science. Emphasis is placed on number systems, solving linear equations and inequalities, exponents, signed numbers, operations on polynomials, factoring, introduction to radicals, and applications.

MAT 096 Algebra I (5-0-5)
Prerequisites: MAT 094 or appropriate ASSET score
Note: The MAT 096, MAT 098 sequence will replace MAT 095 during the 1993-1994 academic year.
This course introduces and develops algebraic skills and is designed for the student who has never taken or passed high school Algebra I, and/or for the student who needs a comprehensive review of Algebra I. Emphasis is placed on number systems, solving linear equations, exponents and polynomials, operations on polynomials, factoring binomials, and applications for each skill.

MAT 098 Algebra II (5-0-5)
Prerequisite: MAT 096 or appropriate ASSET score
Note: The MAT 096, MAT 098 sequence will replace MAT 095 during the 1993-1994 academic year.
This course is a continuation of MAT 096 and covers more advanced topics. Emphasis is placed on rational expressions, graphing linear equations and inequalities, linear systems, roots and radicals, solving quadratic equations, and applications for each skill.

MAT 101 College Algebra (5-0-5)
Prerequisite: Departmental Approval
A study of the real numbers from a postulational point of view and some of their derived properties. Included are such topics as: sets, relations, functions, theory of equations, systems of equations, matrices and determinants, complex numbers, inequalities, mathematical induction, partial fractions, and binomial theorem, and elementary analytic geometry.

MAT 103 Fundamentals of Mathematics (5-0-5)
Prerequisite: Departmental Approval
This course is intended to develop the basic mathematic skills necessary in a wide variety of areas. Included are computational skills relative to whole numbers, fractions, ratios, and percentages. Also included are selections for such topics as: sets and counting, matrices, probability, linear programming, game theory, scientific notation, dimensional analysis, simple linear equations, graph interpretation, and use of scientific calculators.

MAT 104 Trigonometry (5-0-5)
Prerequisite: MAT 101 or Departmental Approval
A study of the trigonometric functions, complex numbers, and logarithms.

MAT 105 Precalculus (5-0-5)
Prerequisite: MAT 101 or Departmental Approval
Prerequisite or Corequisite: MAT 104
Selected topics in advanced algebra and intensive study of analytic trigonometry.

MAT 106 Analytic Geometry & Calculus (4-2-5)
Prerequisites: MAT 101, 104, and 105 or Departmental Approval
The first quarter of four quarter sequence. Most of plane analytic geometry is covered as well as the basic elements of differential and integral calculus. Graphing calculators and mathematics software will be used to aid in concept formulation and to investigate selected problems.

MAT 107 Analytic Geometry & Calculus (4-2-5)
Prerequisite: MAT 106
A continuation of MAT 106. MAT 107 continues with the differentiation and integration of trigonometric, logarithmic, and exponential functions and techniques of integration. Graphing calculators and mathematics software will be used to aid in concept formulation and to investigate selected problems.

MAT 110 Technical Mathematics (5-3-6)
Prerequisite: Departmental Approval
Introduction to basic algebra, plane geometry, and right triangle trigonometry. The course will stress the techniques of solving problems that will be encountered in everyday situations. The use of calculators in solving these problems will be stressed.

MAT 121 Algebra & Trigonometry I (4-2-5)
Prerequisite: Departmental Approval
Review of fundamental algebraic operations; analysis of linear and quadratic functions including the conic sections; basic trigonometric functions; systems of linear equations; quadratic equations; graphs of trigonometric functions; ratio, proportion and variation. Scientific calculator and Mathcad instruction is integrated in the computation laboratories to coincide with the lecture materials and to solve problems appropriate to engineering technology.

MAT 122 Algebra and Trigonometry II (4-2-5)
Prerequisite: MAT 212
Complex numbers; exponential and logarithmic functions; systems of equations; determinants and matrices; inequalities; introduction to linear programming; arithmetic and geometric progressions; inverse trigonometric functions; trigonometric identities and equations. Applications with the continued use of the electronic calculator and Mathcad in laboratory problems.

MAT 123 Analytic Geometry and Calculus I (4-2-5)
Prerequisites: CSC 221, MAT 122
Introduction to analytic geometry; a study of the linear equations and the conic sections in rectangular and polar coordinates. Differentiation of algebraic functions. Applications of derivatives to physical problems, such as velocity, acceleration, related rates, maxima, and minima. Differentiation of transcendental functions and applications. The definite integral with applications. Emphasis is placed on the use of the computer and the use of the Mathcad for problem solving appropriate to engineering technology.

MAT 124 Analytic Geometry and Calculus II (4-2-5)
Prerequisite: MAT 123
Methods of integration. Introduction to solid analytic geometry and partial derivatives; the double integral. Empirical curve fitting. Functions in series. Differential equations of the first and second order with an introduction of the Laplace transform. The use of Mathcad is emphasized in numerical solutions to problems appropriate to engineering technology.

MAT 205 Calculus for Business and Social Sciences (5-0-5)
Prerequisite: MAT 101 or Departmental Approval
This course is intended for students majoring in business or the social sciences. Elements of differential and integral calculus are covered for polynomial, rational, exponential, and logarithmic functions with applications to business and social sciences. Credit may not be received for both MAT 205 and MAT 106.

MAT 206 Analytic Geometry and Calculus (4-2-5)
Prerequisite: MAT 107
A continuation of MAT 107. Included are indeterminate forms, improper integrals, polar coordinates, infinite series, and vectors in both two and three dimensions. Graphing calculators and mathematics software will be used to aid in concept formulation and to investigate selected problems.

MAT 207 Analytic Geometry and Calculus (4-2-5)
Prerequisite: MAT 206
A continuation of MAT 206. Included are physical applications including moments and centroids, multiple integrals, and an introduction to differential equations. Graphing calculators and mathematics software will be used to aid in concept formulation and to investigate selected problems.

MAT 208 Differential Equations (5-0-5)
Prerequisite: MAT 207
A continuation of MAT 207 including first order differential equations, applications, linear equations of higher order, applications in mechanics, LaPlace transforms, systems and application of linear equations, and complex variables.

MAT 210 Elementary Statistics (5-0-5)
Prerequisite: MAT 101 or MAT 103
A non-calculus treatment of techniques and procedure for handling data. Topics include: analysis of data, probability, binomial and normal distributions, hypothesis testing, T-Distribution, Chi-square distribution, F-distribution, nonparametric statistics, regression and correlation, and analysis of variance. This course is also offered as PHY 210.

MAT 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subjects.
A seminar/workshop or short course in which a specialized area of mathematics is studied.

MAT 1101 Trade Math I (4-0-4)
Practical number theory. Analysis of basic operations: Addition, subtraction, multiplications, and division. Fractions, decimals, powers and roots, percentages, ratios and percentages, and ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and columns. Introduction to algebra used in trades. Practice in depth.

MAT 1102 Trade Math II (4-0-4)
Fundamentals properties and definitions: plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Areas of plane figures, volume of solids. Geometric principles are applied to shop operations.

MAT 1103 Algebra and Trigonometry (4-0-4)
Basic concepts and operations of algebra: historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fraction, letter representative, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: adding, subtraction, substitution graphing, exponents, logarithms, tables and interpolation. Trigonometric ratios; solving problems with right triangles; using tables, and interpolation; solutions of oblique triangles using law of sines and law of cosines; graphs of the trigonometric functions; inverse functions, trigonometric equations.

MAT 1112 Electrical Math (4-0-4)
Prerequisite: ELC 1101 or ELN 1121
Algebra for complex electric/electronic circuits, Kirchoff's Laws, efficiency, trigonometry for A.C. circuits, calculation of inductive, capacitive and resistive A.C. components.

MAT 1153 Machinist Mathematics (4-0-4)
Introduces gear ratio, lead screw and indexing problems with emphasis on application to the machine shop. Practical applications and problems furnish the trainee with experience in geometric propositions and trigonometric relations to shop problems; concludes with an introduction to compound angle problems.

Mechanical Engineering Technology

MEC 101 Production Technology I (3-3-4)
Prerequisite: None
A survey of machining operations, measurement and inspection devices with regard to their capabilities, capacities, and limitations. Laboratories are primarily field trips to local manufacturing facilities. Lab reports to observations by the student are required.

MEC 102 Production Technology II (3-3-4)
Prerequisite: MEC 101 or Departmental Approval
A survey of manufacturing processes, tooling requirements, and process advantages and limitations. Casting, molding, alloying are typical of the processes evaluated. Laboratories are primarily field trips. Lab reports on observations by the student are required.

MEC 103 Physical Metallurgy (3-3-4)
Prerequisite: PHY 151
A study of metals in general with emphasis on stress/strain relationship, alloy phase diagrams and grain structure. The laboratory work is a series of processes from tensile test to microphotography of a polished sample. Students evaluate results in written reports.

MEC 110 Engineering Mechanics (3-3-4)
Prerequisite: PHY 151
Forces, resultants, and equilibrium by analytical and graphical methods; moments and couples; forces in simple structures and trusses; static and kinetic friction, kinetics, force, mass, acceleration and momentum.

MEC 120 Strength of Materials (3-3-4)
Prerequisite: MEC 110
Basic engineering strength of materials is studied to gain the knowledge required for the successful design of machine parts and of structural members, parts, and connections. The general presentation of the course follows this outline; stress and deformation, engineering materials and their properties riveted and welded joints, thin-walled pressure vessels, torsion, shear and moment of beams, stresses in beams, and design of beams.

MEC 210 Applied Mechanics (3-3-4)
Upon completion of this course, students should be able to understand the basics of forces and moments, draw free-body diagrams to maintain static equilibrium, calculate external forces, reactions, solve for internal forces in simples structures and apply fundamentals of static kinetic friction.

MEC 211 Mechanics of Materials (3-3-4)
Upon completion of this course students should be able to identify types of stresses that develop, compute deformation and strain in bodies due to stress systems acting on the body; and construct shear and bending moment diagrams.

MEC 232 Thermodynamics (3-0-3)
Prerequisites: PHY 152, MAT 123
A study of the fundamental laws of thermodynamics and the properties of materials and systems. Principles and techniques are developed for thermodynamic processes involving work, energy, and heat. A survey of basic heat engine cycles such as Carnot, Rankin, and Otto is included.

MEC 233 Industrial Instrumentation (3-3-4)
Prerequisites: PHY 153 OR
PHY 152 and ELC 103 and ELN 104
A study of basic principles and instruments for the measurement and control of industrial processes. Laboratory in use and application of electronic, pneumatic, and hydraulic measurement devices to measure temperature, pressure, flow, humidity, etc.

MEC 252 Fundamentals of Mechanical Design (3-0-3)
Prerequisite: PHY 151
To acquaint the student with the principles of the applied sciences in order that proper components of mechanical design, such as power trains, gearing, bearings, shafts may be used.

MEC 261 Plastics Technology I (3-3-4)
Prerequisite: PHY 151
An introduction to the chemistry and physical properties of plastics, and basic physics and operation of plastics industry machines. Labs will explore materials testing and basic processes.

MEC 262 Plastics Technology II (3-3-4)
Prerequisite: MEC 261
Industrial practice and machinery will be studied including both thermoplastic and thermoset processes. Labs will explore industry processes.

MEC 263 Plastics Technology III (3-3-4)
Prerequisite: MEC 262
Advanced processes and special materials will be studied. Mold maintenance, operation, and design will be covered. Labs will expose students to the latest technology available through field trips and laboratory experiments.

MEC 271 Computer-Aided Manufacturing Technology (3-3-4)
Prerequisites: ATR 241, MAT 123, ELC 283
Corequisite: MEC 233, ISC 213
Computer-aided manufacturing (CAM) equipment and processes will be studied. Labs will explore CAM through tours and use of laboratory equipment.

Machinist

MEC 1127 CAM Programming-Computer Aided Manufacturing-Part B (0-3-1)
(A course for students enrolled in the evening machinist program)
A continuation of MEC 1218. Upon completion of MEC 1218 and MEC 1228 students will have met all the requirements for MEC 1208.

MEC 1214 Machine Technology III-Part A (0-6-2)
(A course for students enrolled in the evening machinist program)
Upon completion of this course students should be able to select correct speeds and feeds, and appropriate depth of cuts; practice good safety; perform straight and angular milling cuts; and perform face milling, boring, shoulder, milling and horizontal plain milling.

MEC 1215 Machine Technology III (2-9-5)
Prerequisite: MEC 1202 or Departmental Approval
Students will learn to select the correct speeds and feeds; use appropriate depth of cuts; practice good safety, and perform straight and angular milling cuts, face milling, boring, shoulder milling and horizontal plain milling.

MEC 1216 Computer Numerical Control-Machining Center (2-3-2)
Prerequisite: MEC 1206 or Departmental Approval
Upon completion of this course students will be able to write 3-axis (X, Y, Z) programs, in 3-planes (G17, G18, G19) using G-codes and canned cycles to drill, bore, thread and mill in straight line or circular interpolated movements.

MEC 1217 CAM Programming-Computer Aided Manufacturing-Part A (2-3-3)
(A course for students enrolled in the evening machinist program)
Upon completion of this course, students will be able to describe CAM capabilities; use the commands and controls to create points, lines, circles, curves, and text; draw simple two-dimensional objects; draw simple objects in 3-view orthographic projection; and translate geometry into numerical code.

MEC 301 Basic Machining Processes (2-3-3)
This course acquaints the student with basic processes used in machining such as counterboring, countersinking, spotfacing, reaming, turning drilling and tapping. The course is to give the students information rather than developing skills in machining.

MEC 1200 Reading Precision Measuring Instruments (2-0-2)
Prerequisite: None
Upon completion of this course, students should be able to properly care for and use outside, inside, and depth micrometers, vernier calipers, venier height gauges, dial indicators, gauge blockers, and steel rules. Students will also use dial indicators to align vises, milling work heads, and workpieces on 4-jaw chucks.

MEC 1201 Turning and Milling Machine Technology I (5-9-8)
Corequisite: MEC 1200
Upon completion of this course, students should be able to perform basic operations using power band saws, a lathe, milling machines, and layout

tools. Students will learn to calculate and select proper speeds and feeds, sharpen tool bits, and practice good safety procedures.

MEC 1201 Turning and Milling Machine Technology II (3-12-7)
Prerequisite: MEC 1201 or Departmental Approval
The operations of drilling, boring, taper cutting, radius cutting, knurling, cutoff, threading, and vertical end milling tasks will be covered in this course.

MEC 1204 CNC and Conventional Machine Technology IV (3-6-5)
Prerequisite: MEC 1203
Students will complete projects requiring advanced skills. These projects will be machined on both conventional and CNC equipment.

MEC 1205 Basic CNC Programming (2-3-3)
Prerequisite: None
Upon completion of this course, students should be able to describe different NC and CNC systems, translate information from part prints into X and Z coordinate data, use absolute or incremental programming, select the correct tooling and insert grade, select the correct speeds and feed to obtain high production rates, and practice good safety procedures.

MEC 1206 Computer Numerical Control-Turning Centers (2-3-3)
Prerequisite: MEC 1205 or Departmental Approval
Upon completion of this course students will be able to write programs using "G" codes and canned cycles to turn, face, taper, chamfer, thread, and cut radii, O.D. and I.D.; debug, edit, and operate an Okuma Control.

MEC 1208 CAM Programming-Computer Aided Manufacturing (2-6-4)
Prerequisite: Departmental Approval
Upon completion of this course, students will be able to describe CAM capabilities; use the commands and controls to create points, lines, circles, curves, and text; draw simple two-dimensional objects; draw simple objects in 3-view orthographic projection; and translate geometry into numerical code.

MEC 1209 Grinding Operations (1-3-2)
Prerequisite: Departmental Approval
This course will teach students safety measures and the selection of correct wheels, speeds, grind angles, radii, shoulders, and square blocks while operating a horizontal surface grinder or tool and cutter grinder.

MEC 1210 Tool and Manufacturing Operations (0-6-2)
Prerequisite:
Students will complete projects requiring advanced skills. Projects will be machined on conventional and CNC equipment.

MEC 1212 Turning and Milling Machine Technology II-Part A (3-3-4)
(A course for students enrolled in evening machinist program)
The operations of drilling, boring, taper cutting, radius cutting, knurling, cutoff, threading and vertical end milling tasks will be covered in this course.

MEC 1213 Machine Technology III-Part A (1-6-3)
(A course for students enrolled in the evening machinist program)
Upon completion of this course, students should be able to select correct speeds and feeds and appropriate depth of cuts; practice good safety; perform straight and angular milling cuts; and perform face milling, boring, shoulder, milling and horizontal plain milling.

MEC 1220 Structure of Metals (3-0-3)
Prerequisite: None
Elementary and practical approach to metals, their structure, markings, classification and uses. Interpretation of properties and specification of steels by use of manuals, catalogs, charts, etc.

MEC 1221 Turning and Milling Machine Technology I-Part B (1-6-3)
(A course for students enrolled in the evening machinist program)
A continuation of MEC 1211. Upon completion of MEC 1211 and MEC 1221 students will have met all the requirements for MEC 1201.

MEC 1222 Turning and Milling Machine Technology II-Part B (0-9-3)
(A course for students enrolled in the evening machinist program)
A continuation of MEC 1212. Upon the completion of MEC 1212 and MEC 1222 students will have met all the requirements for MEC 1202.

MEC 1223 Machine Technology III-Part B (2-3-3)
(A course for students enrolled in the evening machinist program)
A continuation of MED 1213. Upon completion of MEC 1213 and MEC 1223 students will have met all the requirements for MEC 1203.

Medical Assisting

MED 101 Medical Terminology and Vocabulary II (3-0-3)
Prerequisite: MED 104
Medical Terminology and Vocabulary II is a continuation of MED 104 with greater emphasis on an understanding of terminology and its use in the medical office. Terms for anatomical body parts, diseases, and operations are emphasized by analysis of the terms and structure of the words.

MED 102 Medical Terminology and Vocabulary III (3-0-3)
Prerequisite: MED 101
Medical Terminology and Vocabulary III is a continuation of MED 101 with further study of the medical terms as they relate to anatomical body parts, diseases, operations, cancer, x-rays, nuclear medicine and drugs.

MED 103 Orientation to Medical Assisting (3-0-3)
Prerequisite: Admission to the program
Orientation to Medical Assisting is designed to help the student understand the role of the medical assistant. The student is guided through the development of medical science and its impact on the medical assisting career. Emphasis is placed on the medical assistant's role in the health care team and interpersonal relationships within the medical office. An orientation to the actual medical office environment is reinforced with a study of office design.

MED 104 Medical Terminology and Vocabulary I (3-0-3)
Prerequisite: None
Medical Terminology and Vocabulary I is a basic course for the paramedical personnel which deals with the study of the structure of medical words and terms. Emphasis is placed on spelling and defining commonly used prefixes, suffixes, word roots, and their combining forms.

MED 200 Medical Assisting I (3-6-6)
Prerequisite: Successful completion of first two quarters of the program
Medical Assisting I is designed to teach the basic techniques and skills needed by the medical assistant in assisting the physician in the clinical area of his practice. This course emphasizes housekeeping functions in a medical office, care of instruments and supplies, recording of vital signs, techniques, and basic administration of medications by injection.

MED 201 Medical Assisting II (3-6-6)
Prerequisite: MED 200
Medical Assisting II is a continuation of MED 200 with greater emphasis on office skills and more complicated procedures. Special emphasis is placed on assisting the physician with examinations, medical-surgical procedures, and basic study in pharmacology.

MED 202 Medical Assisting III (3-6-6)
Prerequisite: MED 201
Medical Assisting III is a continuation of MED 201 with further study of the clinical aspects of medical assisting. Special emphasis is placed on first aid, cardiopulmonary resuscitation (CPR), electrocardiograms (EKG's), physiotherapy, and an orientation to x-ray procedures.

MED 206 Laboratory Orientation I (3-6-6)
Prerequisite: Successful completion of first three quarters.
Laboratory Orientation I is designed to introduce the medical assisting student to the various laboratory procedures necessary to aid the physician in diagnosing the patient's illness. Emphasis is placed on the preparation of the patient for various procedures which may be ordered, their purposes, and the expected norms or results. Special emphasis is placed on clinical chemistry, microbiology and immunology.

MED 207 Laboratory Orientation II (3-6-6)
Prerequisite: MED 206
Laboratory Orientation II is a continuation of MED 206 with greater emphasis on skills and more complicated procedures performed in the physician's office. Special emphasis is placed on hematology and urinalysis.

MED 208 Medical Assisting Externship (0-20-2)
Prerequisite: Successful completion of the first five quarters of the medical assisting curriculum
Medical Assisting Externship is the practical application of skills learned in medical assisting. The student will be assigned to a physician's office and will work there (as a student, not an employee) for 20-23 hours a week under the supervision of the medical office staff. Assignments will encompass all phases of experiences in management, examination room, and laboratory procedures.

MED 210 Medical Assisting Seminar (6-0-6)
Prerequisite: Successful completion of the first five quarters of the Medical Assisting curriculum.
Medical Assisting Seminar concentrates on three areas of professional development for the medical assistant: problems involved in the medical assisting externship and logical approaches to their solutions; a successful move from campus to career, with study in resume writing, cover letter writing, interview techniques and dress; and beginning office management with guided study in the development of a medical office procedure and a patient information handbook. This course also includes a certification examination review.

MED 211 Medical Transcription (3-2-4)
Prerequisites: OSC 142 and MED 104
Medical Transcription is an introduction to typewriting of medical forms and machine transcription. This course is designed to help the medical assisting student develop accuracy and skill in spelling, punctuation, and typewriting of medical histories, reports and forms.

MED 213 Medical Law and Ethics (3-2-4)
Prerequisite: Successful completion of five quarters of the program, or department permission
Medical Law and Ethics is designed to acquaint the student with the legal aspects of medical practice acts; the physician/patient relationship; professional liabilities; and types of medical practices. The lab hours will be devoted to observing court sessions, role playing of various medical court cases with guest lawyers, and discussion by guest speakers of current medical law and ethics topics.

MED 220 Medical Assisting Administrative I (2-4-4)
Prerequisite: Successful completion of three quarters of the program.
Medical Assisting Administrative I is a study of the administrative duties of the medical assistant. The course includes the scheduling of appointments, techniques, handling of mail, filing systems, and office management.

MED 221 Medical Assisting Administrative II (2-4-4)
Prerequisite: MED 211 and MED 220
Medical Assisting Administrative II is a continuation of MED 220 with greater emphasis on skill and more complicated administrative procedures including such areas as travel arrangements, insurance forms and their preparation, financial records, and bookkeeping procedures.

Distribution and Marketing

MKT 120 Principles of Marketing (5-0-5)
Prerequisite: None
A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process.

MKT 132 Salesmanship (5-0-5)
Prerequisite: None
This is an introductory course designed to acquaint the student with the theoretical principles and practical application of modern selling.

MKT 212 Retailing (5-0-5)
Prerequisite: None
Critical analysis of retailing strategy and management with examination of selected current major problem areas unique to the retail sector of the economy.

MKT 243 Advertising (5-0-5)
Prerequisite: None
A study of the role of advertising in the American economy. Emphasis is on consideration of the elements of advertising campaign-research budgeting, media selection, creative strategy, effectiveness measurement. Consideration is given to developing strategies, writing copy, creating art, choosing printing based on management techniques designed to achieve advertising goals and developing the ability to control and evaluate the effectiveness of advertising efforts.

Phlebotomy

MLA 101 Basic Phlebotomy Concepts (12-4-14)
Prerequisite: Acceptance into Phlebotomy Program
This course is designed to introduce the student to the basic concepts of phlebotomy and to the health care environment. Concentrated studies in the following areas are included: health care delivery system, anatomy and physiology, blood collection procedures, infection control and safety, specimen collection and transport. In addition, emphasis will be placed on human relations and patient interaction skills.

MLA 102 Phlebotomy Internship (0-12-4)
Prerequisite: Completion of MLA 101
This course is the practical application of the skills learned in MLA 101. Students will be assigned to a clinical facility for the purpose of performing venipunctures, capillary/skin-puncture techniques, and microcollection techniques. Basic computer applications will also be presented in each facility. Upon successful completion of this course, the student will earn a Phlebotomy Technician Certificate.

Industrial Maintenance Mechanic

AHR 1118 Basic Refrigeration Systems (3-6-5)
A study of the basic principles of refrigeration systems, proper handling of refrigeration, and operation, control and repair of these systems.

CAS 1102 Introduction to MicroComputer Application (1-2-2)
A general introduction to the microcomputer, DOS, and various software application packages including word processing, spreadsheeting and database management. Strictly an application course. Will not include programming.

ELC 1104 Electric Wiring (3-6-5)
This course will consist of basic wiring systems with emphasis on following the National Electric Code for wire sizes, conduit sizes, placement and safety features.

ELC 1116 Basic Electrical I (3-3-4)
This course is a study of the fundamental concepts of direct current electricity, utilizing applications and calculations of current, voltage, resistance, and power rules in electric circuits. Emphasis is placed on construction of DC circuits and the use of test equipment to verify electrical values.

ELC 1117 Basic Electrical II (3-3-4)
This course presents the fundamental concepts of alternating current flow, reactance, impedance, phase and angle, power and resonance. Emphasis is placed on analysis of AC circuits. Laboratory experiments are used to reinforce concepts introduced in class.

ELC 1133 Electric Controls (3-3-4)
A study of the basic industrial electronic systems, including motor controls, alarm system controls, and thermostatic controls used in air conditioning systems.

ISC 1101 Industrial Safety (2-0-2)
A study of general safety rules and practices to be observed in industry. Attitudes and economics of safety will be discussed.

MEC 1122 Maintenance Machine Shop II (2-3-3)
This course consists of fitting and sizing procedures. Included will be operations on the lathe and milling machine including turning, facing and boring.

MNT 1112 Mechanical Systems (2-3-3)
The components of mechanical systems including drives, belts, couplings, clutches, gears, sprockets and chins, and shafts and component locking devices will be studied.

MNT 1113 Construction Fundamentals (2-0-2)
This will be a study of construction as it relates to mounting, placing or moving machinery, pipes, and electrical conduit. Emphasis will be placed on altering the construction in the form of drilling holes, or hanging from existing structure.

MNT 1117 HVAC Systems (3-3-4)
Heat pumps to boiler systems will be studied. Operation, maintenance, repair, and safety of these systems will be stressed as they relate to an industrial situation. Duct systems will be included.

MNT 1119 Piping and Tubing (3-3-4)
The various types of pipe and tubing and their particular advantages and applications will be discussed. Methods of fitting, bending, and supporting will also be discussed.

MNT 1145 Pumps and Valves (1-3-2)
Study of the various types of pumps and valves and their purposes. Installation and maintenance will be studied also.

MNT 1146 Rigging and Moving (0-3-1)
A study of the devices and machines used in moving machinery and heavy equipment in an industrial plant. Safety will be stressed in the course.

PME 1114 Small Engine Maintenance (0-3-1)
A study of electrical and fuel systems associated with small engines in industry. The major emphasis will be placed on tune-ups and maintenance.

Music

MUS 101 Music Appreciation (3-0-3)
Prerequisite: None
A course designed primarily for students with a limited background in music. An investigation into the component parts of music—rhythm, melody, harmony, texture, and design—and how these elements interact. A comprehensive survey of the history of music from its earliest beginnings to the present, with particular emphasis on the music literature, both vocal and instrumental of well-defined periods; Middle Ages, Renaissance, Baroque, Classical, Romantic, Impressionistic and Modern.

MUS 111 Music Theory I (3-0-3)
Prerequisite: MUS 090 or departmental approval
Sight-singing scales, major and minor keys, elementary harmony, melodic and harmonic dictation, key signature, rhythm, simple and compound meter. Designed for music majors.

MUS 112 Music Theory I (3-0-3)
Prerequisite: MUS 111
Learning activities include the student's creation of more advanced melodies and melodic and rhythmic patterns, their harmonizations using the figure bass and guitar chord notations; on the piano play simple melodies with their harmonizations by sight; more advanced sight singing. A continued study of piano playing will be encouraged.

MUS 113 Music Theory I (3-0-3)
Prerequisite: MUS 112
Learning activities include developing more advanced melodies of the student's own creation, their harmonization using modulation and secondary dominant chords; continuation of the activities of MUS 112 on a more advanced level; writing simple orchestral and band scores.

MUS 125 Class Voice (2-0-2)
Prerequisite: None
Group instruction in the fundamentals of singing, both solo and choral performance: correct posture and breathing, tone production, resonance, musical phrasing, diction, and artistic interpretation. Songs for study are chosen from the basic repertory, including folksongs, classics, art-songs, musical comedy and religious songs.

MUS 126 Class Voice (2-0-2)
Prerequisite: MUS 125 or Departmental Approval
A continuation of basic vocal tone production plus techniques of good diction. Will include study of various songs and arias. May be repeated for six hours credit.

MUS 127 Class Voice (2-0-2)
Prerequisite: MUS 126 or Departmental Approval
A continuation of MUS 126. Repertoire of all styles and periods will be selected by the instruction as determined by the ability of the students.

MUS 131 Mixed Chorus (0-2-1)
Prerequisite: None
A laboratory type performing group for students who like to sing. A study is made of choral literature from the Renaissance to the present, including current popular tunes and excerpts from musical comedies. May be repeated for six hours credit.

MUS 134 Class Piano (0-2-1)
Prerequisite: None
Group instruction in the basic principles of piano playing. Limited enrollment. Required for all music majors and minors unless exempt by virtue of an examination in piano proficiency.

MUS 135 Class Piano (0-2-1)
Prerequisite: MUS 134, or Departmental Approval
A continuation of MUS 134.

MUS 136 Class Piano (0-2-1)
Prerequisite: MUS 135, or Departmental Approval
A continuation of MUS 134, 135. May be repeated for six hours credit.

MUS 141 Instrumental Ensemble—Stage Band (0-2-1)
Prerequisite: Departmental Approval
A laboratory type performing groups. Emphasis on intonation, blend, phrasing, sightreading, interpretation. Music selected to meet the needs of the instrumentation available. May be repeated for six hours credit.

MUS 142 Instrumental Ensemble—Strings (0-2-1)
Prerequisite: Departmental Approval
A laboratory type performing group to gain experience in ensemble playing. Music selected to meet the needs of the instrumentation available.

MUS 143 Instrumental Ensemble—Brass (0-2-1)
Prerequisite: Departmental Approval
A laboratory type performing group to develop ability and experience to perform in small groups. Emphasis on quality of tone, intonation, style, breathing.

MUS 144 Instrumental Ensemble—Woodwinds (0-2-1)
Prerequisite: Departmental Approval
A laboratory course to gain experience and background in small group playing. Emphasis on quality of tones, intonation, style, and breathing.

MUS 154 Beginning Class Strings (2-0-2)
Prerequisite: None
Fundamentals of violin playing: how to select an instrument and take proper care of it; how to hold the instrument; how to use the bow.

MUS 155 Intermediate Class Strings (2-0-2)
Prerequisite: MUS 154 or Departmental Approval
Continuation of MUS 154, including the teaching of position work.

MUS 156 Advanced Class Strings (2-0-2)
Prerequisite: MUS 155 or Permission of Departmental Approval
Continuation of MUS 155, with additional emphasis on advanced position work; major and minor scales and arpeggios; introduction to simple orchestral works. May be repeated for six hours credit.

MUS 161 Orchestra (0-2-1)
Prerequisite: Departmental Approval
A laboratory-type performing group. Correct balance of different choirs, good intonation, blend, phrasing, sightreading, interpretation stressed. Music selected according to the needs and abilities of the orchestra. May be repeated for six hours credit.

MUS 201 Music History and Literature (3-0-3)
Prerequisite: MUS 101
An in-depth study of the development of music from the Middle Ages through the Contemporary Period. Emphasis on major composers in the orchestral and vocal fields with listening selections to be used for illustration of styles of composers.

MUS 211 Music Theory II (3-0-3)
Prerequisite: MUS 113 or departmental approval
Learning activities include the writing of the student's own compositions using the material covered; arranging given themes for SATB chorus, for orchestra, band, and chamber groups. More advanced harmonic, rhythmic, and melodic dictation; sight reading of simple scores; elementary counterpoint.

MUS 212 Music Theory II (3-0-3)
Prerequisite: MUS 211
Learning activities include a continued study of traditional music logic, covering the development of musical ideas into an extended work for orchestra and/or voices with instrumental accompaniment. Analysis of major compositions by the masters. Advanced sight reading and playing of scores. Advanced music dictation. Elementary counterpoint continued.

MUS 213 Music Theory III (3-0-3)
Prerequisite: MUS 212
Learning focuses on the development of the student's creative abilities using the entire range of the material covered in the previous five theory courses along with the additional material covered in this course. The student will be required to present a number of selections to a selected group of people.

MUS 290 Seminar/Workshop (1-0-1)
Prerequisite: To be specified for particular subjects
A seminar/workshop approach featuring specialized instruction and extensive practical application of musical techniques in the fields of vocal and instrumental music.

Nursing

NUR 090 Basic Concepts of Associate Degree Nursing (3-0-3)
Prerequisite: Licensed Practical Nurse in State of North Carolina and admission to LPN-RN track of ADN program.
Nursing 090 provides a foundation upon which the LPN student develops an understanding of the basic dimensions of nursing from an ADN perspective. Historical perspectives of the nursing profession, nursing education, and roles of the Associate Degree Nurse are presented.

NUR 101 Concepts of Basic Nursing (5-4-3-8)
Prerequisite: Admission to the ADN Program
Corequisites: BIO 121, ENG 101, BIO 134
This course acquaints the student with basic nursing theory and skills with an overall emphasis in meeting client needs throughout the life span. The student is introduced to human needs

theory, the nursing process, caring-collaborative behaviors, the roles of the Associate Degree Nurse which serve as major concepts in the program's conceptual framework. Communication skills, body system, and developmental theories throughout the lifespan are introduced as supporting concepts utilized in nursing care. Provisions are made for the application of theoretical knowledge and skills in a campus laboratory and in an acute care setting. The student is expected to develop a beginning confidence in the performance of skills utilizing appropriate techniques.

NUR 102 Integration of Basic Nursing Concepts (4-4-9-9)
Prerequisite: NUR 101
Corequisites: BIO 122, NUR 132, PSY 201
This course utilizes the basic concepts of nursing and integrates them to meet the health care needs of adults with selected health problems in an acute care setting. Additionally, in order to provide an interface between content and practice of the developmental needs and care of both the well elderly and the elderly client with health care problems, the students have the opportunity to practice in a long-term care facility. The hierarchy of needs, the nursing process, caring-collaborative behaviors, and roles of the Associate Degree Nurse serve to guide the student's course of study. The concentration of study is placed on the nursing care of the client experiencing surgery and alteration in sensory, integumentary, endocrine, musculoskeletal, and immunological functioning. Students are given opportunities to apply theoretical knowledge and skills in the campus laboratory as well as in an acute care setting.

NUR 104 Medical-Surgical Nursing I (5-2-9-9)
Prerequisites: NUR 101, 102, 132
Corequisites: BIO 108, PSY 229
This course focuses on the study of common adult health problems and utilizes knowledge gained in prerequisite nursing courses. Human needs theory, caring-collaborative behaviors, roles of the Associate Degree Nurse, and the nursing process serve as guides in the study of clients experiencing altered reproductive, urinary/renal, gastrointestinal, biliary/hepatic, respiratory, cardiovascular, and hematological functioning. Communication, life span needs, and body systems are integrated into the provision of nursing care. The student is expected to continue developing clinical skills and exhibit competence in his/her performance of these skills. Provisions are made for the application of theoretical knowledge and skills in the campus laboratory as well as in an acute care setting.

NUR 132 Pharmacology in Nursing (2-0-0-2)
Prerequisite: NUR 101
Corequisites: BIO 122, NUR 102, PSY 201
The focus of NUR 132 is the calculation of drug dosage including systems of measurement, conversions within/between the systems, and calculations of oral, injectable and intravenous drug preparations. This course also introduces the student to historical and legal perspectives of pharmacology, utilization of the nursing process and nursing roles in drug therapy, and drug actions/interactions. In addition, principles of medication administration, clinical applications of pharmacology and drug therapy in the elderly are addressed.

NUR 201 Maternity Nursing (5-4-9-10)
Prerequisite: NUR 101, 102, 104, 132
Corequisite: PSY 250
This course focuses on the health care needs of the mother, infant, and family during the normal and high-risk childbearing cycle, using the nursing process, human needs theory, and roles of the Associate Degree Nurse as guides. Communication skills and body systems are integrated as supporting concepts in the provision of nursing care in the childbearing phase of the life span. Provisions are made for the application of classroom knowledge and skills in the campus laboratory, antepartum clinics, prepared childbirth classes, and in the acute care setting.

NUR 202 Child Health Nursing (5-4-9-10)
Prerequisites: NUR 101, 102, 104, 132
Corequisite: PSY 250
This course focuses on the health care needs of the child and family unit at various stages of growth and development utilizing the nursing process, human needs theory, and roles of the Associate Degree Nurse as guides. Normal growth and development of children from birth through adolescence is emphasized and consideration is given to the child within his or her family unit. Simple to complex situations related to altered body systems functioning are included in the study of health deviations during childhood and adolescence. Communication skills as well as caring and collaborative behaviors are integrated as supporting concepts in the provision of nursing care in the study of child health. Provisions are made for the application of classroom knowledge and skills in the campus laboratory, child health clinics, pediatrician's office, child development center, long-term care facilities for the developmentally disabled, and the acute care setting.

NUR 203 Medical-Surgical Nursing II (5-2-15-11)
Prerequisites: NUR 101, 102, 104, 132, 201, 202, 204
Corequisites: NUR 206, 207
This course acquaints the student with the individual who is experiencing complex health care needs in the cardiovascular, pulmonary, neurologic, and renal systems of the body. Emphasis is placed on critical care, emergency care, and advanced nursing assessments and techniques. The learner is introduced to management skills and responsibilities necessary for the transition from nursing student to R.N. Additional concepts which are integrated throughout the course include roles of the ADNnurse; caring, collaborative behaviors; the nursing process; leadership; problem-solving; communication skills; pharmacology and nutrition. Provisions are made for the application of theoretical knowledge and skills in the clinical setting.

NUR 204 Psychiatric Nursing (5-0-12-9)
Prerequisites: NUR 101, 102, 104, 132, PSY 229
Corequisite: PSY 250
This course acquaints the student with the roles of the Associate Degree Nurse in the collaborative care of the client experiencing stress or altered patterns of behavior during the life span. The individual client is the focus of caring, collaborative nursing. Students are stimulated and expected to think critically while demonstrating a commitment to client-centered nursing that is genuinely caring and respectful and which demands accountability for excellence and clinical competence at the novice level. The student moves from simple to complex. Communication skills, the nursing process, human needs throughout the life span, family focus and psychotherapeutic treatment modalities serve as major concepts in the study of mental health situations. The role of the psychiatric nurse is studied in the context of history and current trends in mental health care. The legal aspects of psychiatric nursing are presented. Approached conceptually, Gaston College's adult student is provided with opportunities to apply theoretical knowledge and skills in an acute care setting and to observe mental health care in an outpatient setting.

NUR 206 Comprehensive Nursing (3-0-0-3)
Prerequisites: NUR 101, 102, 132, 104, 201, 202, 204
Corequisites: NUR 203, 207
This course allows the advanced student to analyze and synthesize selected complex health care problems across the life span. Content focuses on clients whose placement along the wellness-illness continuum is variable, such that prevention, drug and diet therapies and rehabilitation can be emphasized. The student will utilize the nursing process in solving a variety of nursing care problems through use of standardized and/or teacher-made comprehensive tests.

NUR 207 Perspectives of Nursing Practice (2-0-0-2)
Prerequisites: NUR 101, 102, 132, 104, 201, 202, 204
Corequisites: NUR 203, 206
This course allows the advanced ADN student to explore the profession of nursing itself as well as its relationship with the United States health care system. Historical and current perspectives on a variety of issues affecting the practice of nursing will be emphasized. The multi-dimensional characteristics of nursing in today's health care arena are presented encompassing ethical, political, legal, and professional dynamics.

Nursing, Practical

NUR 1015 Fundamentals of Nursing I (6-2-6-9)
Prerequisite: Admission to PN Program
Corequisites: NUR 1012, BIO 121, PSY 201
Nursing I is an introductory study of the nursing care which is common to all patients. The student will develop skill in procedures and techniques related to nursing interventions as they pertain to 1) elements of health and disease, and 2) maintenance, support, and reinforcement of natural body defenses. The student will practice procedures and techniques in the college laboratory under the guidance of nursing faculty. Learning experiences are provided which will give the student knowledge and skills at the beginning level to assist the patient in meeting individual needs which arise from health deviations and disabilities. Nutrition, history, introduction to medications, principles of human behavior, and the legal and ethical aspects of nursing care are integrated in the course content.

NUR 1012 Nutrition in Nursing (3-0-3)
Corequisites: NUR 1015, BIO 121, PSY 201
This is a beginning course in normal and therapeutic nutrition. The student will be involved in a study of the composition of the foods in the basic four food groups as related to the nutrients necessary for good health. Further, the student will be involved in a study of proper food selection and meal planning for normal and special diets.

NUR 1025 Fundamentals of Nursing II (6-2-15-12)
Prerequisites: BIO 121, NUR 1015, NUR 1012, PSY 201
Corequisites: BIO 122, NUR 1232
Nursing II is an introduction to medical-surgical nursing. It is a continuation of the study of the broad concepts of patient care in which the student will develop skills in procedures and techniques related to the nursing care of patients with altered body functions, long-term illness, and infectious diseases. Opportunity is provided for using previously acquired knowledge as well as that acquired concurrently in planning and implementing nursing care. Nutrition, applied pharmacology, and legal aspects of nursing care are integrated in the course content and clinical experience.

NUR 1035 Maternal and Child Health Nursing (6-2-15-12)
Prerequisites: NUR 1015, NUR 1025, NUR 1232, NUR 1012
Corequisite: ENG 101
The purpose of this course is to allow the practical nursing student to continue to utilize and expand his/her cognitive and manipulative skills. The course utilizes the life cycle approach in both lecture and laboratory instruction. Experiences included are: care of pre-natal, labor, parturition, post-partum, and pediatric patients (neonate through adolescent), with emphasis on needs basic to life.

NUR 1046 Medical-Surgical Nursing (6-2-15-12)
Prerequisites: NUR 1015, NUR 1025, NUR 1232, NUR 1035, NUR 1012
Corequisite: NUR 1047
The purpose of this course is to continue to use cognitive, judgmental, and manipulative skills necessary to give comprehensive nursing care to adults with specific medical and surgical disorders. Theoretical content is presented to enhance the understanding of patients with disorders of the central nervous system, the integumentary system, the endocrine system, the genitourinary

system, and the eye and ear. Opportunity is provided for the application and reinforcement of previous knowledge as well as that acquired concurrently in planning and implementing nursing care. Patients will be selected for students' clinical assignments on the basis of student need and to meet the clinical objectives of the day.

NUR 1047 Perspectives in Practical Nursing (2-0-0-2)
Prerequisites: NUR 1015, NUR 1025, NUR 1035, NUR 1012, NUR 1232
Corequisite: NUR 1046
This course is designed to assist the prospective graduate in making the transition from the student role to that of a responsible member of the health team. Emphasis will be given to trends in nursing as they affect practical nurses; responsibilities, provisions, and limitations of licensure; and career options available to Licensed Practical Nurses.

NUR 1232 Pharmacology in Nursing (3-0-0-3)
Prerequisites: NUR 1015, NUR 1012
Corequisite: NUR 1025
This course is designed to help the student gain knowledge of drug classification, administration, calculation, and the related nursing responsibilities. The course takes the student from general principles of pharmacology and skills in calculations to the study of actions, uses, and required nursing behaviors for safe clinical practice.

Nursing Assistant

NUR 3023 Nursing Assistant I (2-2-6-5)
The Nursing Assistant I course prepares graduates to provide personal care and perform basic nursing skills for the elderly and other adults. The course includes class, laboratory, and clinical learning experiences. The student must pass each section, class and lab, clinical, and the final exam independently of the other in order to be certified with the state as a nursing assistant. After successful completion of course and testing students are listed with the Department of Facility Services and may find employment as Certified Nursing Assistants in hospitals, nursing homes, and home health care agencies.

NUR 3024 Nursing Assistant II (3-4-9-8)
The Nursing Assistant II course prepares graduates to perform more complex skills for patients or residents regardless of age. Prerequisites include successful completion of a state approved Nursing Assistant I course, high school diploma or GED, and six months experience working as an NA I. After successful completion of course, students are listed with the North Carolina Board of Nursing as NA II's and may find employment in hospitals, nursing homes, or other health care agencies that utilize the Nursing Assistant II role.

NUR 3025 Home Care (2-2-3)
Prerequisites: College admission requirements and approval of NA Coordinator.
The home care course prepares graduates to provide basic health and personal care for infants, children, adolescents, and adults including the elderly in the home. The course emphasizes growth and development throughout the life span; nutrition and meal preparation; medication management; pediatric home care; safety, accident prevention, and emergencies in the home; community resources; family dynamics; and home management.

Orientation

ORI 096 Success Seminar (3-0-3)
Prerequisite: None
This course seeks to ease the transition for the student coming from high school to college and for the student who is returning after absence from the educational setting. Emphasis is on the development of skills necessary for success in college as well as in the workplace. Topics include learning to learn, teamwork, and critical thinking, as well as study and test taking strategies.

Office Science Education

OSC 125 Communications I (3-4-5)
Prerequisite: ENG 095 or permission of instructor This course is designed to provide the foundation for effective business communications. It will focus on the fundamentals of English and the established standards of usage while emphasizing their importance in the business world.

OSC 126 Communications II (3-4-5)
Prerequisite: OSC 125 or permission of instructor
This course is designed to provide communication skills necessary to speak and write clearly in a business environment. Students will compose business correspondence, develop and give an oral presentation, and develop effective verbal and nonverbal communication and listening skills.

OSC 127 Professional Development (3-4-5)
Prerequisites: ENG 101 and 103
This course is designed to promote the development of professional image, as well as self-identity, to familiarize students with all aspects of positive communication so vital in business situations, e.g., group dynamics, ethics, use of telephone presentation skills.

OSC 141 Keyboarding I (3-2-4)
Prerequisite: None
This course will develop basic keyboarding skills with emphasis on keyboarding mastery. The student masters the alpha, numeric, and symbol keys. The emphasis will be on speed and accuracy.

OSC 142 Keyboarding II (3-2-4)
Prerequisite: OSC 141
This course builds on the keyboarding competencies students have developed. Emphasis is placed on increasing speed, improving accuracy, learning word processing functions, developing formatting skills, applying communication skills, and learning document production skills.

OSC 143 Keyboarding III (3-2-4)
Prerequisite: OSC 141, 142
Advanced-level job simulations on the microcomputer are presented in this course. Topics included are legal, medical, government, insurance, employment, and production measurement.

OSC 153 Resumes/Interviews
This course will aid students in the development of their resumes, techniques of interviewing and related applications letters. Students will initiate a personal portfolio.

OSC 152 Critical Issues in Office Technology (5-0-5)
Prerequisite: Department Approval
This course will be devoted to the development of critical thinking skills concerning theories about women's roles in business and how these contribute to society. The goal of this course will be to provide an opportunity to examine social, racial, and gender-related issues and how they affect self identity.

OSC 219 Machine Transcription (3-4-5)
Prerequisite: OSC 141 and OSC 125
This course is intended to develop transcribing skills as well as the ability to store on an advanced electronic typewriter. In addition, students will be polishing their proofreading and editing ability. Language skills and punctuation will also be emphasized.

OSC 223 Administrative Office Procedures (3-4-5)
Prerequisite: Department Chairperson Approval
Emphasis is placed on the understanding of the automated office and developing efficient work habits. Skills are taught in such areas as mail processing, telephone techniques, receptionist's duties, assisting in meetings, and making travel arrangements. Students will use the IBM Wheelwriter 6 for storage and retrieval of documents.

OSC 220 Word Processing I/ Functions (3-4-5)
Prerequisites: OSC 141
The student will develop skill in the production of problems with emphasis on the student's ability to produce mailable copies. Production units will include tabulation, manuscripts, correspondence, and business forms, Emphasis is also placed on the mastery of word processing functions.

OSC 221 Word Processing II/ Production (3-4-5)
Prerequisite: OSC 220
This course is designed to enable the student to produce complex documents using advanced word processing functions.

OSC 222 Word Processing III/ Applications (3-4-5)
Prerequisite: OSC 221
This course is designed to enable the student to produce complex documents using advanced word processing functions. In addition, desktop publishing features and techniques will be integrated within the course.

OSC 230 Records Management (3-4-5)
Prerequisite: CSC 148
Principles and procedures for the establishment and use of various filing methods including alphabetic, numeric, geographic, and subject are covered. Principles and processors for storage control, retrieval, transfer, retention and disposal of records are also covered. Database software will be used in this course.

OSC 231 Desktop Publishing (3-4-5)
Prerequisite: OSC 222
This course will use the microcomputer to assemble words and illustrations on pages and print those pages on a high-quality laser printer. Some of the types of documents that will be produced are business cards, flyers, reports, forms, brochures, pamphlets, newsletters, invitations, and announcements.

OSC 263 Ten Key (1-2-2)
Prerequisite: BUS 111
This course is designed to develop the touch system using the ten-key keyboard or numeric keypad. Percentages, discounts, markup, and interest will also be reviewed using the electronic calculator. Software will be used to monitor each keystroke for speed and accuracy, allowing the operator to correct any weakness before they become bad habits.

Paralegal—See Legal Education (LEX)

Physical Education

PED 100 Volleyball (0-2-1)
Prerequisite: None
Includes the fundamental skills, strategy, and rules through participation in volleyball.

PED 101 Football, Soccer (0-2-1)
Prerequisite: None
Includes fundamental skills, strategy, and rules through participation in flag football and soccer.

PED 102 Softball (0-2-1)
Prerequisite: None
Includes rules and skills through participation in softball.

PED 103 Swimming (0-2-1)
Prerequisite: None
Beginning swimming and/or swimming skills for advanced swimmers.

PED 104 Bowling (0-2-1)
Prerequisite: None
Includes fundamental skills, scoring, rules, and etiquette through participation.

PED 105 Archery (0-2-1)
Prerequisite: None
Includes fundamental skills and knowledge through participation in the activity.

PED 106 Golf (0-2-1)
Prerequisite: None
Includes skills and knowledge stressing social value. Beginning.

PED 107 Basketball (0-2-1)
Prerequisite: None
This course includes rules and strategies, scoring, officiating, and participation in basketball.

PED 108 Skiing (0-3-1)
Prerequisite: None
Includes fundamental skills, techniques, and knowledge through participation. Beginning.

PED 111 Tennis (0-2-1)
Prerequisite: None
A thorough coverage of fundamental skills, strategy, rules, and scoring through participation in sport. Beginning.

PED 112 Modern Dance (0-2-1)
Prerequisite: None
A course designed to include the study of basic rhythmics and fundamental movements of modern dance. Beginning.,

PED 113 Gymnastics & Tumbling (0-2-1)
Prerequisite: None
The course will include participation in tumbling, gymnastics, apparatus, stunts, and pyramid building.

PED 114 Karate (0-2-1)
Prerequisite: None
Karate is an ultimate form of unarmed self-defense. It is regarded as an excellent way to exercise, control weight, and develop fitness. It is approached as a beautiful and highly skilled oriental art and as a highly skilled sport using skills and control techniques without bodily contact.

PED 118 Square Dancing (0-2-1)
Prerequisite: None
Includes a study of the basic figures found in American square dances and the performance of the dances themselves.

PED 119 Introduction to Weight Conditioning (0-3-1)
Prerequisite: None
This course will provide the beginning student with the basic knowledge and techniques for weight conditioning. Emphasis will be given to developing muscular strength, muscular endurance, and overall physical fitness.

PED 120 Intermediate Tennis (0-2-1)
Prerequisite: PED 111 or Departmental Approval
A continuation of skills from basic to more advanced fundamentals. Emphasis is given to improving skills, strategy, and techniques. Doubles and mixed doubles are thoroughly covered. Special emphasis is given to the competitive aspects.

PED 121 Intermediate Golf (0-2-1)
Prerequisite: PED 106 & Departmental Approval
A continuation of skills from basic to more advanced fundamentals. Emphasis is given to improving skills, strategy, and techniques.

PED 122 Intermediate Weight Conditioning (0-3-1)
Prerequisite: PED 119 or Departmental Approval
This course will provide the student with knowledge and technique for higher levels of weight conditioning. Emphasis will be given to meeting individual training goals and to addressing conditioning problems.

PED 201 Introduction to Physical Education (5-0-5)
Prerequisite: None
Designed for students who expect to teach or coach. Includes the history of health education and physical education; philosophical, psychological, physiological, and sociological background for the teaching of health and education; basis for program and organization of activities.

PED 210 Health Education (3-0-3)
Prerequisite: None
A course designed to present basic personal health knowledge, and to develop proper health habits and attitudes in the individual.

PED 220 Theory & Practice of Coaching Baseball (1-2-2)
Prerequisite: None
This course deals with the theory and methods of coaching baseball. Emphasis is given to rules, strategies, and techniques.

PED 221 Theory & Practice of Coaching Basketball (1-2-2)
Prerequisite: None
This course deals with the theory and methods of coaching basketball. Emphasis is placed on rules, game strategy, and selected techniques of coaching basketball.

PED 222 Theory & Practice of Coaching Football/Soccer (1-2-2)
Prerequisite: None
This course deals with the theory and methods of coaching football/soccer. Emphasis is placed on rules, game strategy and selected techniques of coaching football/soccer.

PED 225 Physical Fitness (0-2-1)
Prerequisite: Students registering for this class must have a physician's signed statement for clearance if they are 30 years or older, have had previous surgery, or have a medical condition.
This course is designed to provide an individualized approach to physical fitness. Major emphasis will be given to the scientific basis for setting up and engaging in personalized physical fitness programs.

PED 227 Aerobics-Jazz (0-2-1)
Prerequisite: Students registering for this class must have a physician's signed statement for clearance if they are 30 years or older, have had previous surgery, or have a medical condition.
A course designed to build cardiovascular endurance through choreographed dance that conditions the entire body. Specific muscle groups will be focused on through the dance routines.

PED 228 Prevention & Care of Athletic Injuries (3-0-3)
Prerequisite: None
A course in the prevention and care of injuries including safety devices, use of wraps and supports, massage, taping, therapeutic techniques, and conditioning exercises.

PED 230 First Aid and CPR (3-0-3)
Prerequisite: None
This course deals with emergency treatment of various types of injuries, control of bleeding, artificial respiration, transportation, splinting and bandaging, and legal responsibilities. It includes cardiopulmonary resuscitation.

PED 231 Advanced Life Saving (2-2-3)
Prerequisite: All candidates must pass a swimming competency exam.
This course is designed to provide the individual with the abilities to protect himself and others around water. The course deals more specifically with rescues related to water type emergencies. Successful completion results in certification as an Advanced Life Saver by the American Red Cross.

PED 240 Sports Officiating (1-2-2)
Prerequisite: None
Study of rules, officiating techniques, and the teaching of procedures concerning football and soccer. A definite number of hours also will be assigned for practical experience in officiating during the respective intramural activities.

PED 241 Sports Officiating (1-2-2)
Prerequisite: None
Study of rules, officiating techniques, and the teaching of procedures concerning basketball and volleyball. A definite number of hours also will be assigned for practical experience in officiating during the respective intramural activities.

PED 242 Sports Officiating (1-2-2)
Prerequisite: None
Study of rules, officiating techniques, and the teaching of procedures concerning baseball and softball. A definite number of hours also will be assigned for practical experience in officiating during the respective intramural activities.

PED 260 Outdoor Living (1-2-2)
Prerequisite: None
Outdoor living is designed to acquaint the beginning camper with various aspects of the camping experiences ranging from elementary camp procedures to more advanced outdoor survival. Emphasis is given to both classroom knowledge and the practical application of camping techniques and procedures. Field experience is interspersed throughout the quarter.

PED 270 Motor Development & Movement in Early Childhood (4-2-5)
Prerequisite: None
A study of the motor development of the young child with emphasis given to physical and psychological development through the medium of physical activity. This course is designed to assist individuals who plan to work with young children by providing knowledge, skills and concepts for planning, organizing, teaching, and evaluating a program of activities.

PED 290 Seminar/Workshop (1-0-1)
Prerequisite: None
A seminar/workshop approach involving the student in lectures, discussions, projects, and/or specified activities in physical education.

PED 301 BLET Physical Training (1-3-2)
This course is designed for developing a higher degree of physical fitness with major emphasis given to cardiovascular, muscular endurance and coordination as it applies to law enforcement. This course will be offered for BLET candidates only.

Philosophy

PHI 104 Critical Thinking and Reading (5-0-5)
Prerequisite: RED 95 or ASSET score above 38
This course is designed to provide students with analytical skills for critical reading, writing, and thinking. In this writing intensive course, complex controversial issues will be examined with emphasis on analyzing and evaluating arguments for validity and identifying fallacious reasoning. This course is cross referenced with RED 104.

PHI 200 Introduction to Philosophy (3-0-3)
Prerequisite: None
This course is an introduction to the philosophical perspectives that characterize the attempt to understand and answer the ultimate questions concerning man and his world. Considerations are given to the great ideas concerning the nature of reality, the natural world, life, knowledge, beauty, and value.

PHI 201 Ethics: Problems for a Just Society (3-0-3)
Prerequisite: None
This course is to acquaint students with primary sources of significant thinking on contemporary issues and how they relate to the leading developments in the history of moral philosophy.

PHI 203 Introduction to Logic (5-0-5)
Prerequisite: None
A course designed to acquaint the student with the principles, methods, structure of induction, deduction, verification, and logical implications of ordinary language.

PHI 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subjects
A seminar/workshop approach involving the student in lectures, discussions, projects, and/or travel concerning Philosophy.

Phlebotomy—See MLA

Photography

PHO 101 Introduction to Photography (0-6-3)
Prerequisite: None
Photography 101 is an introductory study of basic theory, principles, and techniques of black and white and color picture photography. Photography as an art, a profession, a tool, and a hobby will be discussed. The use of 35mm camera and basic development and enlargement practices will be covered.

PHO 102 Intermediate Photography (0-6-3)
Prerequisite: PHO 101
This course is designed to improve photography skills. Emphasis will be on controlling and understanding a wide range of photographic media and tools, lighting, and darkroom techniques.

Physical Science

PHS 101 Earth Science I (5-2-6)
Prerequisite: None
A study of the earth's astronomical relations, factors of weather and climate, and physiographic features, and resources such as minerals, water, soils, and seas. Also offered as GEO 101.

PHS 102 Earth Science II (5-2-6)
Prerequisite: None
A study of the basic principles and processes of the earth; its composition, formation, and features. Also listed as GEL 102.

PHS 270 Nuclear Science (3-6-6)
Prerequisite: CHM 110, MAT 101, BIO 101 or Permission of Instructor
An introduction to the principles and practice of nuclear transformations and measurements. Lecture and laboratory work include basic nuclear science, modern nuclear technology, and environmental and health applications. Credit is allowed for completion of all activities of the intensive minimester at Oak Ridge National Laboratory, Oak Ridge Tennessee (one-hundred twenty hours). Also listed as CHM 270.

Physics (Also see Hydraulics and Pneumatics HYD)

PHY 132 Principles of Technology I (3-3-4)
A study of force, work, rate, and resistance as they relate to mechanical, electrical fluid, and thermal systems. Emphasis is placed on problem solving and practical applications.

PHY 142 Principles of Technology II (3-3-4)
Prerequisite: PHY 132
A continuation of PHY 132 dealing with energy, power, and force transformers as they relate to mechanical, electrical, fluid and thermal systems. Emphasis is placed on problem solving and practical applications.

PHY 151 Mechanics (3-3-4)
Prerequisite: MAT 121
An introduction to the principles of mechanics. Subject matter includes measurement, vector and scalar quantities, force and motion, work and energy, elasticity and fluid mechanics. Lectures and laboratory work are coordinated to enable a better understanding of physical principles. Designed for students whose curriculum requires an algebra based course.

PHY 152 Heat, Sound and Light (3-3-4)
Prerequisite: PHY 151
An introduction to the physics of heat, sound and light. Subject matter includes the thermal behavior of matter, heat transfer, thermodynamics, wave motion and sound, the nature and properties of light. Laboratory work to parallel work in classroom. Designed for students whose curriculum requires an algebra based course.

PHY 153 Electricity, Magnetism and Modern Physics (3-3-4)
Prerequisite: PHY 152
OR
ELC 101 and PHY 151
A study of electricity, magnetism and modern physics. Subject matter includes electrostatics, magnetism, basic electric circuits, capacitance and dielectrics, electromagnetic induction, alternating current, and an introduction to modern physics. Laboratory work to parallel work in classroom. Designed for students whose curriculum requires an algebra based course.

PHY 211 Mechanics (4-3-5)
Prerequisite: MAT 106
An introduction to mechanics. Subject matter includes vector and scalar quantities, static and dynamic systems of forces, translation and rotational motion with variable acceleration, work, and energy, hydrostatics and hydrodynamics, elastic properties of matter and harmonic motion. Laboratory exercises are coordinated with classroom work. Designed for students whose curriculum requires a calculus oriented course.

PHY 212 Heat, Sound & Light (4-3-5)
Prerequisites: PHY 211 and MAT 107
An introduction to the principles of heat, sound, and light. Subject matter includes heat measurements, heat transfer, the laws of thermodynamics; wave motion; acoustical phenomena; the nature and propagation of light; reflection and refraction, lenses and optical instruments; interference and diffraction; and polarization. Emphasis is placed on problem solving and engineering applications. Laboratory exercises are coordinated with classroom work. Designed for students whose curriculum requires a calculus oriented course.

PHY 213 Electricity & Magnetism: Atomic Physics (4-3-5)
Prerequisites: MAT 206 and PHY 212
An introduction to electricity and magnetism and atomic physics. Subject matter includes electrostatics; capacitance and dielectrics; potential; chemical and thermal electromotive force; electromagnetism; electrical instruments; electro-

magnetic induction; motors and generators; alternating currents; transient circuits; thermionic emission; electromagnetic waves; relativity; radioactivity; and nuclear reactions. Emphasis is placed on problem solving and engineering applications. Laboratory exercises are coordinated with classroom work. Designed for students whose curriculum requires a calculus oriented course.

PME—See Industrial Maintenance (MNT)

Political Science

POL 108 Nature & Function of Law in Society (3-0-3)
Prerequisite: None
The presentation of a philosophical and historical appreciation of what law is within the framework of social order. In addition to an analysis of how our present laws come to be, particular emphasis will be placed on the way in which our present day society utilizes the laws as a social control device. Also offered as LEX 108.

POL 110 Introduction to American Federal Government (5-0-5)
Prerequisite: None
A basic course dealing with democratic theory, the evolution of the American constitution and political institutions in the U.S., the role of the people in American politics, and the relationship of the individual to the federal government in the area of civil rights and liberties.

POL 201 International Relations (3-0-3)
Prerequisite: None
A study discussion course on key foreign policy topics based on the "Great Decisions" program outlined each year by the non-partisan Foreign Policy Association.

POL 203 State & Local Government (5-0-5)
Prerequisite: None
A study of typical state and local political institutions and practices in America, with special emphasis upon the governmental organization and political problems of the state of North Carolina and its communities.

POL 280 Topical Travel Study (2-12-6)
Prerequisite: None
See ANT 280 for course description.

POL 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subjects.
A seminar/workshop approach involving the student in lectures, discussions, projects, and/or travel concerning a topic in Political Science.

Pre-Engineering—See EGR

Psychology

PSY 095 Psychology of Human Potential (3-0-3)
Prerequisite: None
This is a course utilizing educational psychology in an informal setting which emphasizes the study of personality particularly as it relates to one's goals, ideals, and self concept. In addition, emphasis will be placed on the background to and development of self-esteem.

PSY 103 Psychology of Human Relations (3-0-3)
Prerequisite: None
A basic knowledge of psychological principles is studied to provide insight into personal behavior and recognition of human relations skills needed in the business world.

PSY 201 General Psychology (5-0-5)
Prerequisite: None
A survey of the field including learning, emotions, motivation, abnormal behavior, psychotherapy, and developmental psychology.

PSY 203 Child Psychology (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
A study of the child from conception through pre-adolescence. Physical, biological, social, intellectual, emotional and personality development are emphasized in the course designed to promote an understanding of the behavior and needs of the child.

PSY 204 Adolescent Psychology (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
The physical, biological, social, intellectual, and emotional changes occurring during adolescence are considered in relation to their effect on the development and personality in the individual. School, social, and personality problems are considered in the understanding and guidance of youth.

PSY 205 General Psychology Lab (1-2-2)
Prerequisite: PSY 201 or Departmental Approval
An introduction to the scientific study of behavior, to laboratory procedures, and to laboratory equipment. The goals of the course include familiarizing students with the principles and vocabulary of experimentation, sources of psychological information, practice in conducting and service in laboratory projects, and writing in APA format.

PSY 206 Psychology of Adjustment (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
The study of the process of adjustment. Consideration is given to psychological reactions to critical problems encountered in modern life. Different approaches to psychotherapy will be introduced.

PSY 210 Elementary Statistics (5-0-5)
Prerequisite: MAT 101 or equivalent
A non-calculus treatment of techniques and procedures for handling data. Topics include: analysis of data, probability, binomial and normal

distributions, hypothesis testing, t-distribution, Chi-square distribution, F distribution, and analysis of variance. Also offered as MAT 210.

PSY 215 Psychology of Addiction (5-0-5)
Prerequisite: None
This is an introduction to a number of addictions present within our society including: alcohol and drugs, eating disorders, gambling, addiction to persons, working, smoking, and sex. This course is designed to assist the student in understanding the concept and process of addiction. Areas of emphasis include historical overview, personal, family, and cultural influences that affect these addiction processes.

PSY 229 Abnormal Psychology (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
An analysis of the symptoms, contributing factors, reactment and outcomes of maladjustive behavior. Classification and nomenclature of psychoneurosis, psychoses, personality disorders, and other psychopathological disorders are discussed.

PSY 230 The Psychology of Adult Development and Aging (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
This is a survey course concerning the changing process and the changed individual from early through later adulthood. Physical, psychosocial, and cognitive changes occurring in middle age and senior age will be emphasized.

PSY 250 Life-Span Psychology (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
A study of the individual from conception through old age. Physical, biological, social, intellectual, emotional and personality development are emphasized in the course designed to promote an understanding of the behavior and needs of the individual at the various stage of life.

PSY 253 Industrial Psychology (5-0-5)
Prerequisite: PSY 201 or departmental approval
This is a course of study that introduces the student to human behavior in the work place. Consideration will be given to such topics as job analysis, personnel and placement selection within the organization, job motivation and job satisfaction, consumer psychology, and corporate culture.

PSY 254 Theories of Personality (4-2-5)
Prerequisite: PSY 201 or departmental approval
This is a course emphasizing the study of personality, particularly as it relates to theories including psychoanalytic, behavioral, humanistic, physiological, trait, and cognitive.

PSY 290 Psychology Seminar/ Workshop (1-0-1)
Prerequisite: May be specified for particular subjects.
A seminar/workshop approach involving the student in discussions and/or projects on a topic in psychology.

PSY 1102 Human Relations (2-0-2)
Prerequisite: None
Development of understanding of relationships to other persons through some of the basic principles of human psychology. The problems of the individual and his work situation are studied in relation to the established organization of modern business and industry and in relation to government practices and labor organization, with special emphasis on the operating responsibilities of good management.

Reading

RED 094 Essentials in Reading I (5-0-5)
Prerequisite: None
This course is designed to enable the student to correct reading deficiencies by building vocabulary and word attack skills and by developing reading comprehension strategies.

RED 095 Essentials in Reading II (5-0-5)
Prerequisite: RED 094 or appropriate ASSET score
This course is designed to improve the student's basic reading skills. Content includes reading comprehension, critical reading, and vocabulary building techniques at an intermediate level. Opportunities are provided for students to practice analytical and interpretive skills and to select from curriculum-specific readings.

RED 104 Critical Thinking and Reading (5-0-5)
Prerequisite: RED 95 or ASSET score above 38
This course is designed to provide students with analytical skills for critical reading, writing, and thinking. In this writing intensive course, complex controversial issues will be examined with emphasis on analyzing and evaluating arguments for validity and identifying fallacious reasoning. This course is cross referenced with PHI 104.

RED 1101 Reading Improvement (2-0-2)
Reading 1101 is a concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately. Reading faults of the individual are analyzed for improvement, and principles of vocabulary building are stressed.

Religion

REL 101 World Religions (3-0-3)
Prerequisite: None
This course is a study of the major religions of man and how they influence the world we live in. The course includes a study of primal religious traditions. Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity, and Islam.

REL 102 Old Testament Survey (3-0-3)
Prerequisite: None
An introduction to the history, literature, religion, and personalities of the Old Testament.

REL 103 New Testament Survey (3-0-3)
Prerequisite: None
An introduction to the history, literature, personalities, and religion of the New Testament.

REL 210 "The Christians" (3-0-3)
Prerequisite(s): None
A series of 13 films presenting the history of Western man through the eyes of the Christian

Church, with special emphasis placed upon the growth of the new religion from its earliest days to the challenges faced by Western Civilization and the Christian religion in the 20th century. (Same as HIS 210)

REL 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subjects
A seminar/workshop approach involving the student in lectures, discussions, projects, and/or travel concerning a topic in Religion

Real Estate

RLS 101 Real Estate Fundamentals (6-0-6)
Prerequisite: None
This course consists of instruction in basic real estate principles and practices, including real estate law, financing, brokerage, closing, valuation, management, and taxation. Also included is instruction on construction, and land use, property insurance, and the North Carolina Real Estate License Law and Rules/Regulations of the North Carolina Real Estate Commission.

RLS 102 Real Estate Math (3-0-3)
Prerequisite: None
This course is a basic mathematical skills review required to pass N.C. Real Estate Commission License Examination. The course contains a review of basic arithmetic, steps in analyzing word problems of a real estate nature, selection and use of formulas, and concludes with a review of mathematical computations required to complete sales "closing statements."

RLS 103 Real Estate Law (3-0-3)
Prerequisite: RLS 101 or compatible licensure course approved by N.C. Real Estate Commission
This course consists of advanced-level instruction in real property ownership and interests, transfer of title to real property, land use controls, real estate brokerage and the law of agency, real estate contracts, landlord and tenant law, closing real estate transactions, federal income taxation of real estate, the N.C. Real Estate License Law, Rules/Regulation of the N.C. Real Estate Commission, the Commission's "Trust Account Guidelines," and basic securities law aspects of real estate transactions.

RLS 104 Real Estate Finance (3-0-3)
Prerequisite: RLS 101 or compatible licensure course approved by N.C. Real Estate Commission
This course consists of advanced level instruction on the subject of financing, sources of mortgage funds, secondary mortgage market, financing instruments, types of mortgage loans, legislation affecting financing, property valuation, and other relevant topics.

RLS 105 Real Estate Brokerage Operations (3-0-3)
Prerequisite: RLS 101 or compatible licensure course approved by N.C. Real Estate Commission
This course consists of basic instruction in the various aspects of real estate brokerage operations, including establishing a brokerage firm, management concepts and practices, personnel and training, marketing operations, records and bookkeeping systems including trust account bookkeeping), and financial operations.

Radio/Television Broadcasting

RTV 116 Introduction to Broadcast Sports (3-6-6)
Prerequisite: None
This course is an introduction to radio and television sports, with special emphasis placed on the gathering, writing, editing, processing, announcing, and sports play-by-play. Students will do actual play-by-play of football, basketball, and baseball.

RTV 120 Radio Control Room Procedures (5-0-5)
Prerequisite: None
This course familiarizes the student with basic radio equipment, test instruments, station interconnects, balanced and unbalanced lines, reel-to-reel records, cart machines, mics, mixing boards, EBS receivers, RC circuitry, monitoring equipment, transmitters, cassette recorders, antenna systems, phone lines, remote units, and teletype equipment.

RTV 201 Theories of Mass Communication (5-2-6)
Prerequisite: None
This is a studyof major theories of mass communication and exploration of how various theories account for the influences that mass communication has on the individual and on society.

RTV 202 Advertising, Sales, and Promotion (3-2-4)
Prerequisite: None
This is a study of the various aspects of advertising including the different forms of advertising. The psychology of advertising and sales will be studied. An examination of rate cards and other sales tools; preparing and delivering sales presentations; obtaining and retaining accounts; and a look at agencies, administration, and compensation will be made.

RTV 203 Expression in the Media (5-0-5)
Prerequisite: None
Students will learn to express themselves clearly, quickly, and to the point. This course is a must for anyone in the communications field.

RTV 204 Radio Production (3-8-7)
Prerequisite: None
This course includes creations, development, production, and presentation of broadcast announcements, newscasts, interviews, commercials, and dramatic program material with emphasis in the proper use of equipment to achieve effective idea communication.

RTV 205 Broadcasting Programming (3-0-3)
Prerequisite: None
This course includes trends and requirements of broadcast programming. Also, it includes an analysis of community program needs and tastes, station image, and the effect of self-regulatory codes on broadcasting.

RTV 206 Writing for Broadcasting (3-2-4)
Prerequisite: None
This is a course designed for radio and television students who must learn to initiate written copy. Exercises in developing typical reports using writing techniques and graphic devices are completed by the students.

RTV 207 R/TV Production I (3-8-7)
Prerequisite: None
This course is an introduction to television or radio production. According to the student's focus, operation of television; microphones; lighting; switcher; character generator for studio and field; or operation of radio control board, microphones, turntables, tape recorders, and reproducers will be stressed in actual student productions.

RTV 209 R/TV Production II (2-8-6)
Prerequisite: None
This course is advanced work in producing and directing television programs or in producing and announcing radio programming. Students will be responsible for initiating and carrying through real-time productions in the areas of their focus, broadcast or cable radio or television.

RTV 211 Broadcast Journalism (5-6-8)
Prerequisite: None
This is an introduction to the field of broadcasting journalism with special emphasis on the gathering, writing, delivering, editing, and processing news.

RTV 212 Broadcasting Management (3-0-3)
Prerequisite: None
This course includes problems of managing a radio/television station stressing social, economic, and legal responsibilities of a broadcast operation.

RTV 215 Dynamics of Public Relations (2-0-2)
Prerequisite: None
This course will expose students to media public relations. Exploring problems of the past, present, and future, they learn to question, examine, and solve media public relations conundrums. This is a serious, in-depth study for students to draw insights from all areas concerned with public relations—from social science and humanistic research, from ancient and contemporary rhetorical theory, and from communication theory.

RTV 218 Broadcast Law (3-0-3)
Prerequisite: None
This course includes laws and regulations governing broadcasting with a working knowledge of relationship of governing agencies such as Congress, committees, courts, and the FCC. Historical and current developments in rules and regulations; law, and self-regulation are examined.

RTV 220 Introduction to TV Systems (5-4-7)
Prerequisite: None
Students become familiar with television telecasting and receiving equipment including cameras, VTRs (consumer and commercial), ENG. transmitters, film chains, switchers, receivers, character generators, computers, TBCs, video processors, proc amps, test signals, VITs, dropout compensators, projectors, tally lights and more.

RTV 226 Supervised Work Experience I (2-20-4)
Prerequisite: None
Students are assigned to work in a radio or television station for a minimum of 20 hours per week. The objective is to provide actual work experience for broadcasting students and the practical application of skills/knowledge previously learned.

RTV 227 Supervised Work Experience II (2-20-4)
Prerequisite: None
Students are assigned continued work in a radio or television station for a minimum of 20 hours per week. The objective is to provide actual work experience for broadcasting students and the practical application of skills/knowledge previously learned.

Sociology

SOC 102 Introduction to Sociology (5-0-5)
This is a study of structure, the functioning, and changes in human groups. Consideration is given to the origins and development of culture, the nature of personality, and the basic components of social organizations. Attention is also given to the forms, causes, and effects of human interaction.

SOC 103 Marriage and Family Relations (3-0-3)
Prerequisite: None
This is a practical consideration and discussion of the factors, leading to successful marital adjustment; attention is given to the period from early dating to marriage, the coming of children, and the problems of child rearing. The course also deals with sexual adjustment, inlaw relationships, religion, and money management.

SOC 109 Community Resources (3-0-3)
Prerequisite: None
This is a study of the resource and service agencies in the community that may be used as a supportive service in industry, education, and other human service institutions. The experience is

closely correlated with classroom activities so that students may apply knowledge and skills to an on-the-job learning situation.

SOC 110 Human Sexuality (3-0-3)
Prerequisite: None
This is a study of male and female sexuality including such relevant subjects as: reproductive anatomy and physiology, male and female sexual responses, the development of sexual attitudes and values, and the development of a healthy personal and interpersonal sexuality.

SOC 202 Contemporary Social Problems (5-0-5)
Prerequisite: None
This is a study of the nature and causes of some of the major problems that characterize contemporary society. Among those included are physical and mental health; minorities; problems accentuated by age; crime and juvenile delinquency; family problems; poverty; energy and environmental problems.

SOC 210 Social Change (5-0-5)
Prerequisite: SOC 102 or Departmental Approval
This course will describe the processes in which society changes. It will look at historical changes in society and their impact on social institutions such as, the family, education, religion, economics and government. It will explain these changes in a cross-cultural and cross-national perspective. This review of society will prepare the student for an expectation of changes in the future. It will be a course that investigates the future from a sociological perspective.

SOC 225 Interpersonal and Group Behavior (5-0-5)
Prerequisite: None
This course examines the sociological aspects of interpersonal and group behavior in various settings. Elements affecting communication in everyday social interactions, from informal personal relations to more formal individual and group contact, will be considered. The impact of socio-economic and cultural differences on social interaction will be emphasized. The nature and dynamics of cooperative and conflict relationships will be explored.

SOC 280 Study Tour (2-12-6)
Prerequisite: None
A five week, condensed course involving three weeks of intensive study on the campus of Gaston College, followed by two weeks of off-campus study and travel. This course may involve travel within the United States or abroad as an open laboratory experience for students. This course involves interdisciplinary study including history, culture, art, architecture, music, politics, etc. with special emphasis given to one or more of these topics. Also offered as ANT 280, HIS 280, and POL 280.

SOC 290 Seminar/Workshop (1-0-1)
Prerequisite: May be specified for particular subjects.
A seminar/workshop approach involving the student in lectures, discussions, projects, and/or travel concerning Sociology.

Spanish

SPA 101 Elementary Spanish (5-0-5)
Prerequisite: None
Spanish 101 is a beginning course which stresses the basic language skills—listening, speaking, reading, and writing—along with cultural aspects.

SPA 102 Elementary Spanish (5-0-5)
Prerequisite: SPA 101 or Equivalent
Spanish 102 stresses the continuing development of the basic language skills and cultural studies.

SPS 201 Intermediate Spanish (5-0-5)
Prerequisite: SPA 101 and 102 or 2 years high school Spanish
Spanish 201 reinforces the basic language skills. It includes extensive readings, a grammar review, and cultural studies. Stress is given to spoken and written expression.

SPA 202 Intermediate Spanish (5-0-5)
Prerequisite: SPA 201 or Equivalent
Spanish 202 stresses spoken and written expression. It includes a grammar review, extensive readings, and cultural studies.

Speech

SPH 223 Public Speaking (3-0-3)
Prerequisite: None
A practical course designed to train technicians in the mechanics of oral composition. Students participate in formal, extemporaneous, and impromptu speaking as well as in conversation and interviewing. Special emphasis is placed on preparation, poise, and presentation on material. Interplay between class members and role playing are also stressed.

Surveying

SRV 101 Surveying I (3-6-5)
Corequisite: MAT 110 or MAT 121
Principles and practices of obtaining horizontal, vertical, and angular measurements; care and use of instruments; azimuths and bearings; introduction to construction surveys and earth work.

SRV 102 Surveying II (3-6-5)
Prerequisite: SRV 101
Topographic surveying, division of land, celestial observations, introduction to curves, field adjustments of transits and levels.

SRV 103 Surveying III (3-3-4)
Prerequisite: MAT 122, SRV 102
Reconnaissance, preliminary and location surveys; theory and application of simple, compound, and reverse circular curves; spirals, parabolic curves; earthwork calculations.

Veterinary Medical Technology

VET 101 Clinical Practices I (2-2-0-3)
Prerequisite: Admission to the program
Clinical Practices I is designed to introduce the student to the basics of animal health, husbandry, and environment. Concentrated studies in the following areas are included: housing, sanitation, basic safety, restraint, knot tying, sexing, grooming, physical exam and history, euthanasia, behavior, and breeds. The laboratory sessions consists of hands-on experience with each of the laboratory animals and techniques taught in lecture.

VET 102 Clinical Practices II (3-2-0-3)
Prerequisite: VET 101
Clinical Practices II is designed to teach students the various techniques for administering medications to animals, collecting blood and urine samples, and giving first aid including bandages and splinting. It will also include an introduction to operating room protocols, including anesthetic and sterile technique. The laboratory sessions consist of hands-on experience with each of the techniques taught in lecture.

VET 103 Clinical Practices III (3-4-0-5)
Prerequisite: VET 102
Clinical Practices III will provide the student with extensive knowledge of anesthesia and surgery—related subjects including anesthetic administration, monitoring, and recovery; operating room protocol, sterilization, IV catheterization and fluid therapy, and care of surgical instruments. Laboratory sessions consist of hands-on experience with each of the techniques taught in lecture.

VET 104 Clinical Practices IV (3-4-0-5)
Prerequisite: VET 103
Clinical Practices IV teaches the students the principals of radiology and radiographic technique, including understanding and operation of the x-ray machine, basic safety, animal positioning, film care and processing, and contrast radiography. The second half will cover the principles of advanced medical and surgical care for animals presented for various emergency and critical care situations. The laboratory sessions consist of hands-on experience with each of the techniques taught in lecture.

VET 105 Clinical Practices V (3-4-0-5)
Prerequisite: Vet 104
In the first half of Clinical Practices V the students will develop an expertise in dentistry, dermatology, physical therapy, ophthalmology, and orphan care. The second half will be devoted to an in-depth discussion of common internal medicine and surgical problems with time allotted for continuing development of expertise in venipuncture, radiology and anesthesia.

VET 106 Infectious Diseases (2-0-0-2)
Prerequisite: Admission to the program
Infectious Diseases is an introduction to common infectious diseases of animals, basic immunology, and the prevention of disease through immunization. Also will include an introduction to the principals of medical therapy and a discussion of zoonotic diseases (communicable to man).

VET 107 Comparative Anatomy/ Physiology I (3-2-0-4)
Prerequisite: ZOO 107
Comparative Anatomy & Physiology I is a study of the following systems: skeletal, muscular, nervous, integumentary, respiratory, urinary, digestive, endocrine, reproductive, and circulatory. Emphasis will be placed on the structure and function of each system in the dog and cat.

VET 108 Comparative Anatomy/ Physiology II (3-2-0-4)
Prerequisite: VET 107
Comparative Anatomy & Physiology II is a continuation of Comparative Anatomy & Physiology I. Study will include the structure and function of the same systems covered in VET 107 but emphasis will be placed on horses, cattle and other ruminants, pigs, laboratory animals, reptiles, fish, and birds.

VET 109 Veterinary Office Practices (2-2-0-3)
Prerequisite: Admission to the program
Veterinary Office Practices is designed to teach the basic techniques and skills needed by the student in an administrative aspect. The course will include: client communication, medical record upkeep, history taking, human relations, office procedure and administration. It includes the use of telephones, appointment book, records (financial and medical), practice acts, and professional liability.

VET 110 Veterinary Pharmacology (2-0-0-2)
Prerequisite: VET 106, MAT 103
Corequisite: CHM 110, VET 107
Veterinary Pharmacology is a study of drugs and other substances utilized in veterinary medical practices. Emphasis will be placed on drug classifications and methods of action, calculating drug dosages, as well as storing and handling biologic and therapeutic agents appropriately. The student will also gain a knowledge of normal versus abnormal responses to medication, with appropriate actions being emphasized.

VET 200 Parasitology (3-2-0-4)
Prerequisite: ZOO 107
Parasitology is designed to help the student understand different animal parasites and their life cycles, as well as specific diagnostics and treatments for each parasite. Specific topics include; habitat identification, life cycles, transmission control and effects on hosts. Emphasis is placed on lab diagnosis of the most commonly seen forms of the parasite through fecal, urine, skin, and blood exams.

VET 202 Animal Pathology (3-2-0-4)
Prerequisite: VET 107, VET 108
Animal Pathology is devoted to the fundamentals of pathology including terminology, disease processes, and the study of the aspects of common diseases of domestic animals. Necropsy procedures will also be conducted.

VET 203 Animal Nutrition (1-2-0-2)
Prerequisite: CHM 110
Animal Nutrition teaches the students the principles and theory of nutrition and their application to feeding practices of animals including small, large and lab animals. The course will cover such topics as nutrients, feeding labels, proximate analysis, feeds, and toxins.

VET 204 Laboratory Techniques I (2-4-0-4)
Prerequisite: Completion of first three quarters of the Veterinary Medical Technology Program
Laboratory Techniques I is devoted to teaching students basic laboratory techniques that are important for veterinary medicine. These include chemistry, hematology, urinalysis, laboratory equipment and safety. Laboratory sessions consist of hands-on experience of techniques taught in lecture.

VET 205 Laboratory Techniques II (2-4-0-4)
Prerequisite: VET 204
Laboratory Techniques II is a continuation of Laboratory Techniques I which focuses on serology, cytology, microbiology and specialty diagnostics of various body systems. Laboratory sessions will consist of hands-on experience of techniques taught in lecture.

VET 206 Laboratory Techniques III (2-4-0-4)
Prerequisite: VET 205
Laboratory Techniques III is a continuation of Laboratory Techniques I & II and focuses on coagulation studies, and advanced diagnostic techniques such as endoscopy and ultrasound. Time will also be allotted for continued outcome-based evaluation of subjects covered in Laboratory Techniques I & II.

VET 210 Large Animal Clinical Practices (3-4-0-5)
Prerequisite: VET 101, VET 102, VET 103, VET 104
Corequisite: VET 105
Large Animal Clinical Practices is devoted to subjects dealing specifically with large animals including care and handling, milking and related problems, blood collection and drug administration, and the techniques of medical and nursing care unique to large animals.

VET 211 Advanced Veterinary Office Practices (3-0-0-3)
Prerequisite: Completion of the first six quarters of the Veterinary Medical Technology Program
Advanced Veterinary Office Practices is a continuation of the techniques learned in Veterinary Office Practices I with concentration on the study of practice management, inventory control and financial record keeping. Further study will encompass jurisprudence, professional liabilities, and biomedical ethics.

VET 212 Veterinary Technician Externship
Prerequisite: Completion of the first six quarters of the Veterinary Medical Technology Curriculum
Veterinary Technician Externship is the practical application of skills learned in the Veterinary Technology Program. The students will be expected to work 33 hours a week at the assigned veterinary hospital/clinic under the supervision of the Veterinary staff. Students will be expected to perform competently in their practical applications of clinical skills. The two hour lecture per week will be devoted to problem solving relative to externship experiences, procedure reviews and exam reviews.

Welding

WLD 1101 Basic Oxy-Fuel & Arc Welding (3-12-7)
This course includes welding demonstrations given by the instructor and practice by the students. The safe and proper methods in the set-up and operation of welding equipment are demonstrated. Practice is given in oxy-fuel welding and cutting, brazing, silver soldering, soft soldering, and shielded metal arc welding.

WLD 1102 Shielded Metal Arc Weld (3-12-7)
The operation of A.C. transformers and D. C. motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course.

WLD 1111 Gas Welding Fundamentals (0-3-1)
Gas welding demonstration by the instructor and practice by student in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding, bronze welding, and flame-cutting methods applicable to mechanical repair work.

WLD 1112 Arc Welding Fundamentals (0-3-1)
Arc welding demonstrations by the instructor and practice by the students. The operation of AC & DC arc welding machines. Studies are made of welding heats, polarities and electrodes. Practice will be given for making groove and fillet type welds.

WLD 1117 Gas Shielded Arc Welding (3-12-7)
This course is designed to teach the operation and use of gas-shielded arc welding methods (TIG/MIG). Emphasis is placed on the study of the equipment, its safety and operational demands, and practice in all welding positions. Upon completion, students will be able to set-up and operate TIG and MIG welding machines and weld various size metals in all welding positions.

WLD 1118 Certification and Testing (3-12-7)

Prerequisite: WLD 1102

This course provides practice in welding metals to meet certification standards as established by specific codes. Emphasis is placed on the various tests established by industry and the American Welding Society using specific principles and welding procedures. Upon completion, students will be able to weld metals in all welding positions and test the welds to determine if quality welds have been produced.

WLD 1125 Welding Processes & Projects (3-12-7)

A course that simulates actual work conditions by requiring the student to design a project, draw blueprints and build the product in accordance to the specifications of the blueprint. Special welding and cutting techniques such as plasma arc cutting will be studied. The student will be required to do research on specialized welding techniques.

WLD 1134 Introduction to Pipe Welding (3-12-7)

Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position shielded metal arc welding processing accounting to section IX of the ASME code.

Zoology (ZOO)—See Biology

Personnel

ADMINISTRATION, FACULTY AND STAFF

Adams, Barbara H. 1986
Administrative Assistant, VP for Student Services, Admissions and Marketing
A.A.S., Gaston College

Adams, Kathie (RN) 1995
Instructor, Nursing Assistant
A.D.N., Forsyth Technical College

Al-Nasra, Moayyad M. (P.E.) 1992
Department Chairperson, Civil Engineering Technology
B.Sc., M.Sc., Yarmouk University
Ph.D., Old Dominion University

Armstrong, J. Leonard, Jr. 1965
Department Chairperson, Electronics Engineering Technology
B.S.E.E., N.C. State University

Armstrong, Melissa M. 1991
Instructor, Chemistry
B.S., Davidson College
Ph.D., (A.B.D.), University of Tennessee

Arthurs, Janet B. (R.N.) 1983
Instructor, Nursing
B.S.N., University of North Carolina at Chapel Hill

Ball, Roland R. 1965
Dean, Industrial Technologies Division
B.S., Berry College
M.A., Appalachian State University

Bambach, William J. 1976
Instructor, Prison Unit-Developmental Education
B.A., Belmont Abbey College
M.A., University of N.C. at Chapel Hill

Barnes, Jean C. 1989
Instructor, Developmental Reading
B.A., Sacred Heart College

Barnes, Thomas 1986
Director of Plant Operations
B.S., Atlantic Christian College

Barrett, Linda F. 1993
Shipping and Receiving Assistant

Baylock, Parrish K. 1991
Custodian

Bennett, Thomas S. 1975
Instructor, Business Administration
B.S., Appalachian State University
M.Ed., University of N.C. at Charlotte

Berrier, Paul R. 1974
Vice President for Institutional Development
A.B., M.Div, Duke University
Ed.S., Appalachian State University
Ed.D., University of N.C. at Greensboro

Blackstock, Sarah C. 1995
Instructor, Science
B.S., College of William and Mary
M.S., Carnegie Mellon University

Blanton, Robert A. 1969
Department Chairperson, Social/Behavioral Sciences, Study Tours Director
A.A., Mars Hill College
B.S., M.A., Appalachian State University

Bostian, Steven W. 1971
Department Chairperson, Business Administration and Accounting
B.S.B.A., M.A., Appalachian State University

Bradley, Lois B. (R.N.) 1981
Chairperson, Nursing
B.S.N., Lenoir-Rhyne
M.Ed., University of N.C. at Charlotte

Brooks, Cindy 1993
Bookstore/Secretary

Brown, Barbara R. 1991
Coordinator ABE, GED, Literacy Lincoln Campus
B.A., N.C. Wesleyan College
M.A., University of South Florida

Brown, Pearlie M. 1966
Senior Librarian
B.S., M.L.S., N.C. Central University
Ed.D., Nova University

Bruce, Joy F. 1992
Instructor, Accounting and Business
B.A., North Carolina State University
M.S., Appalachian State University

Burgin, Deborah F. 1994
Instructor/Coordinator, ABE Learning Centers
B.S., University of N.C. at Charlotte

Burgin, William L., Jr. 1991
Instructor, Mathematics
B.A., M.A., University of N.C. at Charlotte

Butts, Patricia M. 1993
Bookstore Assistant

Byers, Darlene M. 1989
Secretary, Institutional Effectiveness and Planning
B.A., Johnson C. Smith University

Cagle, Joe N. 1993
Instructor, Paralegal
B.A., Olivet College
J.D., Wake Forest University
M.A., Goddard College
LL.M., University of Mississippi

Cameron, Edgar M. 1976
Department Chairperson, Industrial Technologies
A.A.S., Gaston College
B.S., Western Carolina University

Cantrell, James L. 1989
Computer Programmer
A.A.S., Gaston College

Carpenter, Teresa J. 1984
Counseling Associate
A.A., Gaston College

Carroll, V. Gail (C.P.S.) 1990
Financial Aid Specialist
B.S., Bob Jones University

Chaffin, Troy F. 1974
Instructor, Developmental Mathematics
B.A., University of Florida

Chambers, Stephanie M. 1987
Personnel Specialist
A.A.S., Gaston College

Clay, Rex 1995
Institutional Researcher
B.S., Marshall University
M.A., UNC - Chapel Hill
Ed.D., North Carolina State University

Clemmer, Mary G. 1982
Instructor, Computer Science
A.B., Lenoir-Rhyne College

Cline, Horace L. 1965
Associate Vice President for Student Services
B.S., East Carolina University
M.A., Appalachian State University
Ed.D., Nova University

Cloninger, Michael 1995
Instructor, Automotive Technology
A.A.S., Gaston College

Cole, Judith P. 1970
Instructor, Biology
B.S., Morris Harvey College
M.S., Marshall University

Cole, Richard M. 1978
Audiovisual Specialist
B.S., M.A., Appalachian State University

Cooke, Linda H. 1979
Secretary, Cooperative Education
A,A., Gaston College

Cooke, Ronald P. 1985
Department Chairperson, Industrial Maintenance Mechanic
A.A., Gaston College
B.S., Western Carolina University

Cox, Virgil G. 1987
Dean of Engineering Technologies
B.S., Massachusetts Institute of Technology
M.S.E.E., Massachusetts Institute of Technology
Ocean Engineer, Massachusetts Institute of Technology

Craft, John 1995
Instructor, Electrical Installation and Maintenance
Diploma, Gaston College

Crain, Claude 1992
Security/Maintenance, Lincoln Campus

Crane, Duane 1994
Chairperson Science
B.S., North Carolina State University
M.A., Eastern Michigan University
M.A., University of North Carolina at Charlotte

Creed, Natalie M. 1995
Instructor, Mathematics
B.S., N.C. Central University
B.A., University of Michigan

Crow, Kay T. 1989
Administrative Assistant to Vice President for Academic Affairs
Georgia Southern University

Crowther, Joann Y. 1980
Registration/Records Specialist

Davis, Beverly A. 1988
Department Chairperson, Licensed Practical Nursing
B.S.N., Lenoir-Rhyne College

Davis, Christopher B. 1995
Grounds Technician
A.A., Catawba Valley Community College

Davis, Regina C. 1984
Accounting Specialist/Equipment Coordinator
A.A.S., Gaston College
B.S., Gardner-Webb University

Davis, William P. 1984
Instructor, Computer Science
B.A., College of William and Mary
M.S., Barry University
Ph.D., University of N.C. at Greensboro

Dedmon, Paula H. 1991
Instructor, Biology
B.S., M.A., Winthrop College

Dellinger, Dewey D. 1990
Department Chairperson, Mathematics
B.A., N.C. State University
M.A., University of N.C. at Charlotte
Ph.D., N.C. State University

Devine, Darrell F. 1983
Instructor, Electrical Installation and Maintenance
Gaston College

Domenico, Elizabeth W. 1971
Instructor, Business Administration
B.S., Rider College
M.S., Temple University

Dotson, Kathy H. 1989
Computer Programmer/PC Specialist
A.A.S., Gaston College
B.S., Gardner-Webb University

Dougan, Carol P. 1995
Dean, Businss and Computer Science
B.Mus, University of Cincinnati
M.Mus, University of Southern California
M.B.A., Pepperdine University
Ph.D., The University of Texas at Austin

Duncan, Jane (R.N.) 1992
Department Chairperson, Nursing Assistant Program
B.S.N., University of S.C. at Columbia

Dunlap, David C. 1991
Custodian

Dunsmore, Stuart G. 1971
Instructor, English
B.A., Butler University
M.A., New York University

Ellington, Kimberly M. 1991
Secretary, Fire Protection Technology and Fire Training

Elliott, Carol M. 1991
Administrative Assistant to Dean of Lincoln Campus
A.A.S., Gaston College

English, Donna 1995
Instructor, Drafting
A.A., A.A.S., Isothermal Community College

Falls, Brenda L. 1973
Instructor, Office Technology
B.S., M.A., Ed.S., Winthrop College

Feemster, Gwendolyn K. 1987
Continuing Education Auditor
A.A.S., Gaston College
B.S., Gardner-Webb University

Fieler, Gail 1993
Secretary, Medical Asst, Vet Tech, Phlebotomy
A.A., Palm Beach Junior College

Foster, Peggy S. 1988
Director of Cooperative Education
A.A.S., Piedmont Technical College
B.S., Limestone College

Freeman, Gary W. 1982
Instructor, Art
B.S., M.A., East Carolina University

Freeman, Karen Q. 1984
Early Childhood Teacher
A.A.S., Gaston College

Galant, Lawrence L. 1970
Instructor, Psychology
B.S., Fairleigh Dickinson University
M.Ed., Pennsylvania State University
Ph.D., University of N.C. at Greensboro

Galloway, June R. 1987
Early Childhood Teacher
A.A.S., Gaston College

Garrett, Vivian 1978
Early Childhood Teacher
A.A., Gaston College

Garvin, Betty B. 1988
Instructor, Medical Assisting
A.A.S., College
B.T., Appalachian State University

Gill, Pamela A. 1992
Instructor, Foreign Languages
A.B., Duke University
M.A., Ph.D., University of N.C. at Chapel Hill

Glover, Kevin 1991
Custodian

Goines, Barbara C. (R.N.) 1975
Instructor, Nursing
B.S.N., Winston-Salem State University

Goldman, Saul S. 1976
Instructor, Criminal Justice
B.L., M.L., Brooklyn Law School

Gossett, Monette T. (R.N.) 1991
Instructor, Nursing
B.S.N., Texas Christian University
M.S., Carver School of Missions/Social Work
M.S.N., California State University

Green, Geraldine B. 1979
Administrative Assistant to Dean of Business and Computer Science
Brevard College

Greene, Vicki K. 1991
Admissions Specialist
A.A.S., Gaston College

Greene, William H. 1989
Dean, Arts and Sciences
B.A., Johnson C. Smith University
M.A., Ph.D., Michigan State University

Greenlee, Linda M. 1967
Administrative Assistant to the Dean of Arts and Sciences
A.A., Gaston College

Greer, Linda L. 1992
Dean, Continuing Education
B.S., M.Ed., Indiana University of Pennsylvania

Gregory, Alfred L. 1986
Supervisor, Housekeeping

Gregory, Brenda E. 1989
Secretary, Life Skills Programs
Evans College

Grooms, Suzette B. 1991
Secretary, Lincoln Campus
Kings College

Gunter, L. Dale 1993
Director of Enrollment Management
B.S., Clemson University
A.B.T., University of N.C. at Chapel Hill
M.B.A., University of N.C. at Charlotte

Hall, Pam 1995
Vice President for Administrative Services and Strategic Planning
A.A. Louisberg College
A.B., University of N.C. at Chapel Hill
M.A.Ed., East Carolina University

Hall, Steve R. 1991
Supervisor, Systems Planning and Maintenance

Hambright, Myers T. 1974
Instructor, Electronics Engr. Technology
B.A., Elon College
M.B.A., Winthrop College

Hamby, Martha B. 1987
Buyer/Purchasing Agent

Hamilton, Sandy 1994
Secretary, Community Education

Hanie, Elizabeth 1995
Director, Veterinary Technology
B.S.A., D.V.M., University of Georgia
M.S., Virginia Polytechnic Institute

Harbers, Carol E. 1988
Director of Marketing, Public Relations and Development
A.B., University of N.C. at Chapel Hill
M.A., University of N.C. at Charlotte

Harrison, Barbara G. (R.N.) 1975
Instructor, Licensed Practical Nursing
B.S., Winston-Salem State University
M.Ed., University of N.C. at Charlotte

Hegenbart, Alex F. 1979
Director of Music Programs
B.A., S.M.H. at Amsterdam
M.M., Amsterdam Conservatory of Music

Henry, Daisy S. 1974
Director, Financial Aid/Veterans Affairs
A.A.S., Gaston College

Hicks, Ben B. 1983
Instructor, Radio/TV Broadcasting
A.A., Emanuel College

High, Lora A. 1988
Receptionist/Coordinator of Internal Communications
A.A., Gardner-Webb College

High, Randy 1994
Director of Safety/Chief of Campus Police
A.A. Gaston College
B.S., University of N.C. at Charlotte

Holcombe, Anna C. 1995
Early Childhood Teacher
B.A., Sacred Heart College

Hood, Marshall 1992
Maintenance Technician

Hopper, Alice D. 1978
Admissions Specialist

Hopper, Nancy P. 1986
Coordinator of Continuing Education Registration
A.A.S., Gaston College
B.S., Gardner-Webb College

Hoyle, Bonnie L. 1992
Coordinator of Tech Perp/Instructor
B.S.M.E., University of S.C.

Hoyle, Gail 1993
Secretary, Lincoln Campus ABE/GED/AHS

Hoyle, Sandra F. 1972
Administrative Assistant to Dean of Engineering Technologies

Huffstetler, Melva W. 1986
Director, Life Skills Program
B.S., Appalachian State University

Hunsucker, David L. 1968
Dean, Library and Media Center
A.B., Lenoir-Rhyne College
M.A., Appalachian State University
M.S.L.S., University of N.C. at Chapel Hill

Huntley, Troy C. 1973
Instructor, Physical Education
B.S., M.A., Western Carolina University
Ed.D., East Texas State University

Jackson, Glenda S. 1991
Instructor, Reading
B.S., Appalachian State University
M.H.D.L., University of N.C. at Charlotte

James, John T. 1974
Counselor/Director for Minority Affairs
B.S.I.E., S.C. State College\
M.Ed., University of N.C. at Charlotte

Jenkins, Todd M. 1987
Supervisor, Grounds Maintenance
A.A.S., Catawba Valley Technical College

Jennings, Judy K. 1992
Recruiter for Life Skills Programs
B.A., Sacred Heart College
B.S.W., Livingstone College

Jimison, Louise N. 1982
Director, Early Childhood Development Cfenter
B.A., Sacred Heart College

Johnson, Grace L. 1993
Custodian

Johnston, Janet L. 1974
Chair Person, Early Childhood Education
B.S., Athens College
M.A., Ed.D., University of Alabama

Jones, Betsy H. 1979
Director of Computer Services
A.A.S., Gaston College
B.S., Gardner-Webb College

Jones, Jo Ann S. 1989
Instructor, Business Administration and Office Technology
B.S., MacMurray College
M.A., East Carolina University

Jones, Mary Elizabeth (R.N.) 1978
Department Chairperson, Medical Assisting
B.S.N., University of South Carolina
M.A., Central Michigan University

Kee, Lorinnsa B. 1994
Plant Operations Facilitator
A.A., Gaston College
B.A., University of N.C. Charlotte

Keener, Laura B. 1988
Early Childhood Teacher
A.A.S., Gaston College

Killian, Don R. 1965
Instructor, Social Science
A.B., Davidson College
M.A., Appalachian State University

Kincaid, Brenda A. 1974
Director of Student Employment Services
B.A., University of N.C. at Charlotte

King, Bonita G. 1976
Library Specialist
A.A.S., Caldwell Community College
B.S., Gardner-Webb University

Kiser, Rebecca E. 1989
Instructor, Office Technology
A.A.S., Cleveland Community College
B.T., M.A., Appalachian State University

Lackey, Keith F. (R.L.S.)
Instructor, Civil Engineering Tech
A.A.S., Gaston College
B.S., North Carolina State University

Lambert, D. Keith 1974
Department Chairperson, Visual Arts
B.S., East Carolina University
M.F.A., University of N.C. at Greensboro

Largent, Patricia A. 1995
Custodian

Lawrence, Donald L. 1981
Department Chairperson, Criminal Justice
B.S., University of N.C. at Charlotte
M.S., University of S.C.

Leeper, Hattie M. 1986
Department Chairperson, Radio/TV Broadcasting
B.S., University of N.C. at Chapel Hill
M.Ed., University of N.C. at Charlotte

Leftwich, Beth 1995
Director, Institutional Effectiveness and Planning
B.S., Western Carolina University
M.Ed., University of North Carolina at Charlotte

Lenoir, James 1994
Coordinator, Adult High School
B.S., Livingston College

Lewandowski, Joseph T. 1974
Instructor, Psychology
A.B., M.A., Fresno State College
Ph.D., Washington State University

Lewis, Evelyn L. 1986
Coordinator, Human Resources Development
B.A., Flora McDonald College for Women

Lienhart, Dale A. 1984
Computer Operator/Communication Specialist
A.S., Gaston College

Linker, Benjamin N. 1993
Grounds Technician

Lippert (Kirkpatrick), Norma (R.N.) 1981
Dean of Nursing & Health Sciences Division
B.S.N., Duke University
M.A., Appalachian State University
M.S.N., University of N.C. at Charlotte

Looney, T. Gene 1988
Registration/Records Specialist
B.F.A., University of Texas

Lowery, Hilda C. 1974
Administrative Assistant to Vice President of Finance and Operations

Lynch, Lucinda F. 1978
Financial Aid Specialist/Secretary

Mabry, Douglas S. 1991
Instructor, AC/Heating/Refrigeration
Diploma in HVAC, Cleveland Com. College

Manikas, William T. 1974
Instructor, Political Science, History
B.A., Boston University
M.A., Colgate University
Ed.D., Florida Atlantic University

Martin, Franklin E. 1983
Department Chairperson, Air Conditioning, Heating & Refrigeration
B.S., Western Carolina University

McAteer, Porter L. 1965
Instructor, Industrial Engineering Technology
B.S.I.E., North Carolina State University

McCall, Elizabeth S. 1990
Instructor, English
B.A., Belmont Abbey College
M.A., University of N.C. at Charlotte

McCoy, Bonne D. 1993
Counselor, Health Sciences
B.A., Western Kentucky University
M.Ed., University of N.C. at Charlotte

McCrory, Nellie R. 1972
Department Chairperson, Languages and Literature
B.S., M.Ed., Livingston University
Ph.D., University of Alabama

McCullough, Alicia 1993
Instructor, English
B.A., Hampton University
M.A., University of N.C. at Charlotte

McElwaine, Marion 1992
Custodian

McGee, Thomas R. 1979
Campus Police Officer

McGinnis, Heidimarie 1987
Accounting Assistant
A.A.S., Gaston College

Merritt, John C. 1965
Associate Dean, Community Education
B.S., M.A., East Carolina University
Ed.D., N.C. State University

Miller, Frances E. 1972
Chief Examiner, GED

Miller, James P. 1988
Custodian

Miller, Marcia L. (R.N.) 1989
Instrtuctor, Nursing
B.S.N., University of Michigan
M.S.N., University of N.C. at Chapel Hill

Mintz, Annette W. 1978
Library Technician
North Carolina Central University

Mogg, Randy J. 1991
Instructor, Anatomy & Physiology
B.S., Texas A & M University
Ph.D., University of Texas

Morton, Mary D. 1993
Instructor, Philosophy
B.A., M.A., University of South Carolina
M.A., Vanderbilt University
Ph.D., Vanderbilt University

Navey, Linda H. 1972
Administrative Assistant to the President

Nencetti, Janice 1987
Accounting Assistant

Nencetti, Thomas J. 1993
Director of Video Production
B.A., State University of N.Y. at Geneseo

Nichols, Sharon M. 1979
Instructor, English
B.A., M.A., University of N.C. at Charlotte

Norman, Dana 1995
Custodian

Nortey, Thomas D. 1993
Department Chairperson, Mechanical Engineering Technology
B.S.M.E., University of Science & Technology
M.S.M.E., University of Massachusetts

O'Brien, Margarita J. 1991
Instructor/Counselor
B.A., M.A., University of N.C. at Greensboro
Ed.S., Appalachian State University

Oates, Peggy V. 1994
Financial Aid Specialist/Secretary
B.S., Gardner Webb College

Opritza, Marsha 1993
Director, Small Business Center
B.S., Ohio State University
M.B.A., Western Carolina University

Overly, Joyce A. 1995
Instructor, Chemistry
B.S.Ed., Indiana University of Pennsylvania
Ph.D., Bowling Green State University

Painter, S. Anita 1985
Accounting Specialist

Parker, D. Dolores 1967
Technical Processing Specialist
B.V.A., M.F.A., Winthrop College

Pasour, Wallie K. 1992
Coordinator, Adult High School/Faculty, Lincoln Campus
B.A., M.Ed., University of N.C. at Charlotte

Patterson, Mary 1995
Continuing Education Registration Specialist
A.S., Gaston College

Patterson, Nancy C. 1982
Administrative Assistant to the Vice President for Development
A.S., Kings College

Patterson, Robert W. 1982
Painter/Maintenance

Pendleton, Ronnie L. 1995
Plumber
Vocational Diploma, Gaston College

Penley, Kandy D. 1980
Secretary, Criminal Justice
A.A.S., Gaston College

Pettis, Charles 1986
Custodian

Platt, Marilyn G. 1991
Chairperson, Developmental Education
B.A., M.A., University of N.C. at Charlotte

Purser, Janice L. 1987
Administrative Assistant, Dean of Continuing Education
A.A., Gaston College
A.B., Lenoir-Rhyne College

Queen, Patsy S. 1989
Instructor, Nursing
B.S.Ed., B.S.N., Western Carolina University
M.S.N., University of Texas at Austin

Queen, Robin 1994
Asst. GED Examiner
A.S., Gaston College

Ramsey, Tina L. 1995
Early Childhood Teacher
A.A., Gaston College
B.A., Belmont Abbey

Randall, Marguerite T. (R.N.) 1993
Instructor, Licensed Practical Nursing
B.S.N., Duke University

Randleman, J. Michael 1994
Instructor, Paralegal and Criminal Justice
A.A., Mars Hill College
B.A., J.D., Wake Forest University

Raymond, Thomas T. (P.E.) 1993
Chairperson, Industrial Engineering Technology and Operations Mgmt. Technology
B.S.I.E., University of Florida
M.B.A., University of Kentucky

Redd, Deana K. 1995
Assistant Director of the Bookstore
B.B.A., LaGrange College

Reid, John Y. 1995
Vice President for Academic Affairs
A.B., Yale University
M.A., University of Arizona (History)
M.A., University of Arizona (English)
Ph.D., University of Arizona

Rhoney, Frances C. 1984
Instructor, Office Technology
A.B., Lenoir-Rhyne College
M.A., Appalachian State University
Ed.S., Barry University
Ph.D., (ABD), University of N.C. at Greensboro

Rhyne, Irma
Registration Specialist

Robbins, Judy 1988
Security Officer
A.A., Gaston College

Roberson, Kathryn W. 1972
Instructor, English
B.A., M.A., University of N.C. at Charlotte

Robertson, James G. 1974
Instructor, Marketing
B.S., M.S., Pennsylvania State University

Robinson, Billy L. 1977
Shipping and Receiving Supervisor

Robinson, Martha A. 1992
Secretary, Director of Computer Services
A.A.S., Brevard Junior College

Rogers, Leslie 1992
Admissions Specialist
A.A.S., Gaston College

Ross, Jayne B. 1986
Department Chairperson, Architectural Drafting
A.A.S., Central Piedmont Comm. College
B.S., Western Carolina University

Runyon, Harry T. 1971
Department Chairperson, Automotive & Diesel
Nashville Auto Diesel College
Mayo State Vocational School
B.S., Western Carolina University

Russell, Donald K. 1965
Department Chairperson, Electronics Servicing/Industrial Electronics
A.A.S., Gaston College
B.S., Western Carolina University
M.S., North Carolina Agricultural and Technical State University

Sahms, Patricia M. 1980
Director of Printing

Sanders, Patricia A. (R.N.) 1993
Instructor, Nursing
B.S.N., Weber State University

Sanders, Susan D. 1985
Mailroom Assistant

Scott, Kathy L. 1974
Veterans Affairs & Financial Aid Specialist

Sellers, H. Duane 1995
Preventive Maintenance Technician
Diploma, Gaston College

Sexton, Lawrence D. 1989
Instructor, Developmental English
B.A., Brooklyn College

Shellman, W. Mark 1984
Department Chairperson, Computer Science
B.S., North Carolina State University
M.S., Barry University

Sigal, Marvin 1992
Instructor, Biology
M.S., Wright State University
B.S., Ph.D., The Ohio State University

Simmons, Donna T. 1986
Computer Lab Technician

Simmons, Lee S. 1976
Instructor, Accounting
B.S.B.A., M.A., Appalachian State University

Sirois, Margi 1995
Instructor, Veterinary Technology
A.A.S., Camden County College
B.S., Rowan College of New Jersey
M.S., Rutgers University

Simpson, Gary 1976
Department Chairperson, Physical Education
B.S., Appalachian State University
M.A.T., University of N.C. at Chapel Hill
Ed.D., Nova University

Skinner, Patricia A. 1994
President
Ph.D., The Ohio State University
S.A., Western Michigan University
M.A., Western Michigan University
B.S., Western Michigan University
A.A., Lake Michigan College

Smith, Lester K. 1994
Maintenance Technician
Vocational Diploma, N.C. Textile Technology

Smith, Lynn R. 1995
Secretary, Learning Resources
A.S.S., Lenoir Community College

Smith, Martha Y. 1984
Administrative Assistant to Dean of Industrial Technologies
B.A., Central Wesleyan College

Smith, Rhonda B. 1980
Associate Dean for Student Registration and Records
A.A.S., Gaston College
B.T., Appalachian State University

Smith, Sherry J. 1987
Accounting Specialist
B.S.B.A., University of N.C. at Greensboro

Sorrow, Susan S. 1993
Instructor, Psychology
B.A., Sacred Heart College
M.S.,S.S.P., Winthrop University

Sox, Angela L. 1984
Reference Librarian
B.A., N.C. State University
M.S.L.S., University of N.C. at Greensboro

Sprinkle, Elizabeth Ann (R.N.) 1995
Instructor, Nursing
A.A.S., Philadelphia Community College
B.S., Spring Garden College
M.S.N., Guynedd-Mercy College

Stackston, Hattie L. 1980
Early Childhood Teacher
A.A.S., Gaston College

Stagg, Nancy J. 1994
Secretary, HRD

Standley, Evelyn M. 1985
Administrative Assistant
Board of Trustees/President
Gaston College

Starr, Sharon S. (R.N.) 1991
Instructor, Nursing
A.S.N., Gardner-Webb College
B.S.N., University of N.C. at Chapel Hill

Stewart, Terersa T. 1986
Director, Emergency Medical Services
B.S.H.S., Western Carolina University

Stokes, Steven L. 1990
Department Chairperson, Machinist
B.S., Southern Illinois University
M.S., Northern Illinois University

Stroup, Edward R. 1994
Grounds Technician

Stroup, Joyce E. 1978
Instructor, English
A.A., Gaston College
B.A., M.Ed., University of N.C. at Charlotte

Thackston, Judith M. (R.N.) 1984
Instructor, Nursing
B.S.N., M.S.N., University of N.C. at Charlotte

Trueman, Margaret S. (R.N.) 1991
Instructor, Nursing
B.S., Indiana University of Pennsylvania
B.S.N., Queens College

Wall-Hill, Sheila N. 1992
Laboratory Staff Associate, Science Dept.
B.S., Johnson C. Smith University

Walters, Jimmy W. 1975
Grounds Technician

Warren, C. James 1985
Instructor, Computer Science
B.S., Gardner-Webb College

Wash, Allen G. (C.P.A.) 1977
Instructor, Accounting
B.B.A., Augusta College
M.B.A., M.Acc, University of South Carolina

Weaver, Paulette H. 1978
Instructor, Coordinator, Life Skills
A.A., Gaston College
B.A., Sacred Heart College

Weisgerber, Amy E. 1988
Administrative Assistant to Dean of Nursing & Health Sciences

Welch, Philip B., Jr. 1990
Director, Fire Protection Technology, Fire & Rescue Training, RESTC
A.A.S., Gaston College

Whisenant, David H. 1980
Instructor, Business
B.S., M.A., Ed.S., Appalachian State University

Whitesides, H. Annette 1986
Early Childhood Teacher
A.A.S., Gaston College

Whitesides, Linda H. 1989
Bookstore Assistant

Whitley, Roger W. 1979
Director, Criminal Justice Adacemy
B.S., Mars Hill College

Wiles, Mary 1993
Secretary, Continuing Education
A.S., Gaston College

Williams, Pamela C. 1991
Administrative Assistant, Dean/Administrative Serv and Strategic Planning
B.S., Appalachian State University

Witherspoon, Pinkie T. 1991
Lead Day Custodian/Recycling Coordinator

Wood, Bobby G. 1975
Department Chairperson, Welding
Catawba Valley Technical Institute
Gaston College

Wright, Cathy B. 1984
Payroll Specialist

Wright, H. Floyd 1991
Dean, Lincoln Campus
A.A., Gardner-Webb University
B.S., Appalachian State University
M.Ed., University of N.C. at Charlotte
Ed.S., Western Carolina University
Ed.D., Nova University

Wynn, James R. 1992
Associate Dean for Corporate Education
B.I.E., Georgia Institute of Technology
M.B.A., University of New Mexico

Yarborough, Leslie 1991
Printing Assistant

Yates, Judy W. 1980
Counselor, Career Center
A.A., A.A.S., Gaston College
B.A., Sacred Heart College
M.H.D.L., University of N.C. at Charlotte

GLOSSARY

Accreditation: Gaston College is accredited by the Southern Association of Colleges and Schools. Four engineering technology programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. The nursing programs are accredited by the North Carolina Board of Nursing.

ACT: American College Test (a placement exam).

ASSET: Standards for Assessment Student Success Entry Transfer. A placement instrument required of all students seeking a degree or diploma.

Associate of Applied Science: A 2-year degree that prepares you for the job market.

Associate of Arts: A 2-year degree that prepares you to transfer to a 4-year school.

Audit: When you audit a course you get neither a grade nor credit for taking it. You attend class as often as you want, and are not required to take the exams or turn in assignments. You do pay tuition and fees.

Certificate: A 1-year program that teaches a special skill or prepares you for a job.

Contact hours: The actual number of hours you are in a certain class every week. In the schedule, each course lists its contact hours.

Corequisite: A course that must be taken at the same time as another course.

Corporate and Community Education: The division of the college that offers non-credit courses for upgrading skills or for personal enrichment.

Credit by Exam: You may, under certain conditions, taken an exam and receive credit for a course without having taken the course. See this section in the catalog for more details.

Credit hours: Every class is worth a value called a credit hour. Every degree, diploma, and certificate program requires you to take a certain number of credit hours. In the quarterly schedule, each course lists its credit hours.

Curriculum: Usually refers to all the courses you have to take in order to get the degree you want.

Degree-seeking: You are working on a degree (rather than taking only a few courses).

Diploma program Vocational and technical programs that usually take four quarters to complete. They are not designed to transfer to a 4-year school.

Drop/Add: When you adjust your schedule by dropping courses you register for but no longer wish to take and/or adding others. Drop/Add usually takes place after the first day of registration.

Dual Enrollment: Dual enrollment students are high school students who are taking some college courses.

Elective: Any course in a curriculum that is not a specific required course.

Full-time/part-time status: You are a full-time student when you are taking at least 12 credit hours.

GPA: Grade point average. See this section in the catalog to learn how to compute yours.

In-state: You have lived in North Carolina for at least the past 12 months.

Lab fee: A fee you pay when you take certain classes that have lab hours.

Non-degree status: A non-degree student is one who is just taking a few courses and doesn't want a degree, diploma or certificate. Also called "special student."

Out-of-state: You have maintained residency outside of North Carolina for 12 months or longer immediately prior to application.

Overload: When you sign up for more than 20 credit hours.

Prerequisite: A course you must take before enrolling in another particular course. A prerequisite is intended to give you the background you need for certain courses.

Publication fee: The fee you pay that is used toward the printing of the catalog, schedule and other publications that you'll use during your time at Gaston.

Quality point: Same as grade point. See GPA.

Re-admission: If you don't take classes for more than a year, your admission file is dropped from the computer and you must re-apply.

SGA: Student Government Association.

Student activity fee: The fee you pay every quarter (except summer) which pays for activities such as cook-outs, bands, lecturers, etc.

Transcript: A listing of every course you've taken at Gaston and the grades you've received. Available from the Registrar.

Transient: A transient student is one who goes to another college or university and who is taking a few courses at Gaston to transfer. (We may also say 'in transit' or 'visitor'.)

Tuition: The cost of taking courses at a college. Tuition is based on the number of credit hours you take and whether you are an in-state or out-of-state student.

Withdrawal: To discontinue enrollment in one or more courses. Withdrawal forms are found in the Student Records Office.

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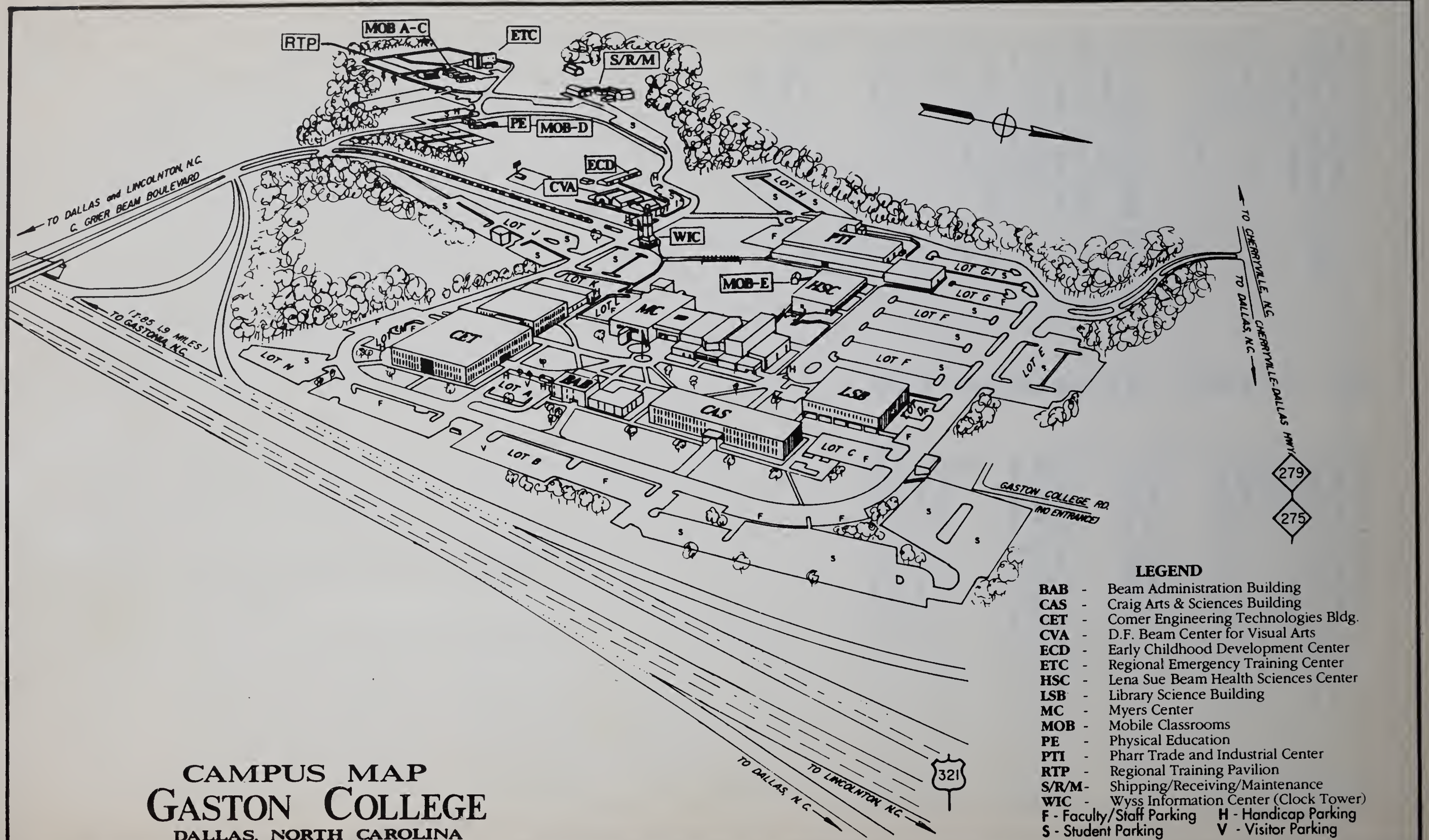

CAMPUS MAP
GASTON COLLEGE
DALLAS, NORTH CAROLINA

MAP COURTESY OF FOX & RITTER, INC.

LEGEND

BAB - Beam Administration Building
CAS - Craig Arts & Sciences Building
CET - Comer Engineering Technologies Bldg.
CVA - D.F. Beam Center for Visual Arts
ECD - Early Childhood Development Center
ETC - Regional Emergency Training Center
HSC - Lena Sue Beam Health Sciences Center
LSB - Library Science Building
MC - Myers Center
MOB - Mobile Classrooms
PE - Physical Education
PTI - Pharr Trade and Industrial Center
RTP - Regional Training Pavilion
S/R/M - Shipping/Receiving/Maintenance
WIC - Wyss Information Center (Clock Tower)

F - Faculty/Staff Parking **H** - Handicap Parking
S - Student Parking **V** - Visitor Parking

GASTON COLLEGE
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