ERS
CENTER
ASTON
COLLEGE

GASTON COLLEGE

Dallas, North Carolina 28034

704/922-8041

APPLICATION FOR ADMISSION

TO THE APPLICANT: Please print (in ink) all information and fill out front and back completely. Incomplete forms may delay your acceptance. Return this form to the Admissions Office, Gaston College, Dallas, North Carolina 28034.

SOCIAL SECURITY NUMBER

LAST NAME (Jr., Sr., etc.) | LEGAL FIRST NAME | MIDDLE NAME | MAIDEN NAME

STREET, RR OR P.O. BOX | CITY | STATE | ZIP

Have you lived outside North Carolina for the last twelve (12) months? ☐ Y = Yes N = No

If yes, what date did you move to North Carolina to live: ☐☐☐☐

STATE OR FOREIGN COUNTRY — NAME

COUNTY OF RESIDENCE ☐☐☐

036 = GASTON
055 = LINCOLN
023 = CLEVELAND
060 = MECKLENBURG
018 = CATAWBA

IF OTHER THAN SHOWN — COUNTY NAME

TELEPHONE — AREA CODE | HOME NUMBER | AREA CODE | BUSINESS NUMBER

Sex ☐ M = MALE F = FEMALE

Date of Birth ☐☐ (Month) ☐☐ (Day) ☐☐ (Year)

Race Ethnic Group ☐
1 White
2 Black
3 Am. Ind.
4 Asian
5 Hispanic

U.S. Citizen ☐ Y = Yes N = No

ENTERING DATE ☐☐☐ FALL 09 WINTER 12 SPRING 03

MAJOR ☐☐☐☐ ☐ D = Day E = Evening ☐ F = Freshman T = Transfer ☐ F = Full-time P = Part-time

DATE [QTR.] [YEAR] SUMMER 06

[ ] [ ] [ ] [ ] [ ]

[ ] S = Special
R = Returning
X = In-transit

EMPLOYMENT [ ] F = Full-time
P = Part-time
U = Unemployed

RECORD HIGHEST GRADE **COMPLETED** [ ][ ] 00-17 or GED

[ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
NAME OF HIGH SCHOOL

TESTS TAKEN: ACT [ ] SAT [ ]

RECEIVE VA BENEFITS [ ] Yes [ ] No

LAST COLLEGE ATTENDED

NAME	LOCATION

OTHER COLLEGES ATTENDED

NAME	LOCATION

PREVIOUS GC ATTENDANCE FOR CREDIT [ ] Yes [ ] No IF YES

YEAR	NAME USED DURING PREVIOUS ATTANDANCE
[ ][ ]	

In an emergency, notify:_____ TELEPHONE _____

I CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND ACCURATE AND THAT MY LEGAL RESIDENCE FOR TUITION PURPOSES IS AS SHOWN.

X_____
STUDENT'S SIGNATURE DATE

---------- FOR OFFICE USE ONLY ----------

ADVISOR _____ CURRICULM CODE [ ][ ][ ][ ] HIGH SCHOOL CODE [ ][ ] RESIDENCY CODE [ ][ ] TRANSFER COLLEGE CODE [ ][ ][ ][ ]

DATE TRANSCRIPT RECEIVED [ ][ ][ ][ ][ ][ ][ ][ ] FINANCIAL AID CODE [ ] FINANCIAL AID DATE [ ][ ][ ][ ][ ][ ][ ][ ]

GASTON COLLEGE IS COMMITTED TO FAIR AND EQUAL TREATMENT FOR ALL PERSONS WITHOUT REGARD TO RACE, COLOR, SEX, RELIGION, NATIONAL ORIGIN, AGE, OR HANDICAP.

Printed: March 1986

GASTON COLLEGE CATALOG

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 handicap. Inquiries concerning the College's affirmative action/equal opportunity policy should be directed to: Vice-President for Administrative Services and Human Resources, Box 3, Gaston College, Dallas, North Carolina 28034, (704) 922-8041.

Changes in Curriculum, Fees, and Other Requirements

The Board of Trustees and/or Administration of Gaston College reserve 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.

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Gaston College
Dallas, N.C.

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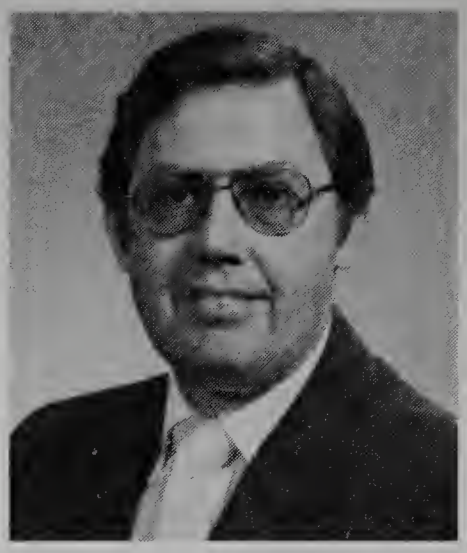

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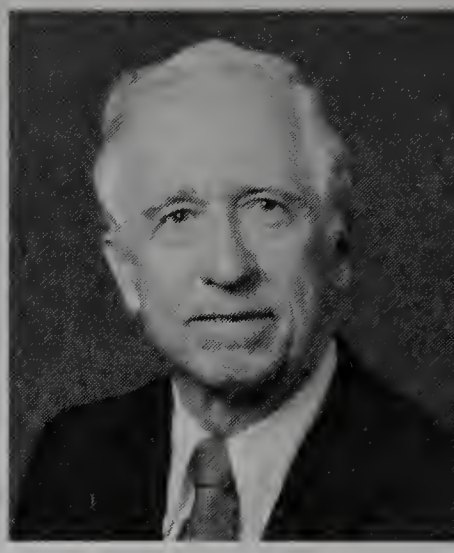

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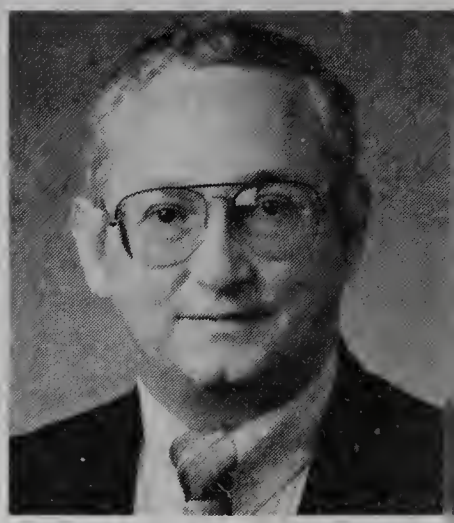

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"Our goal is to help you achieve--or surpass-- your goal."

Wayne Scott

President

Serving Gaston and Lincoln Counties . . . and the surrounding areas.

★ GASTON COLLEGE
Highway 321 North
Dallas, North Carolina 28034-1499
(704) 922-8041

★ LINCOLN COUNTY CAMPUS OF GASTON COLLEGE
310 West Main Street
Lincolnton, North Carolina 28092
(704) 735-0487

TABLE OF CONTENTS

Academic Calendar 8

Admission to the College 11
- Dual Enrollment 12

Fee Schedule 12

Refunds 13
- Drop/Add 14

Student Financial Aid 14

EDUCATIONAL PROGRAMS

Degree Programs 17
- Liberal Arts and Sciences 17
- Career and Technical/Occupational Programs 17
- Career Programs 18

Continuing Education and Community Service Programs 19
- Off-Campus Credit Classes 19
- Non-Credit Classes 19
- Business and Industry Programs 19
- Community Service Programs 19
- Continuing Education Unit 19
- Seminars and Workshops 19

Developmental Educational Programs 20
- Adult Basic Education 20
- General Education Development 20
- Human Resources Development Program 20
- Learning Laboratories 20

Graduation and Transfer Requirements 21
- Associate of Arts Degree 22
- Associate of Fine Arts Degree 23
- Associate of Science Degree 25
- Associate of Applied Science Degree 26

CURRICULA 28-125

COURSE DESCRIPTIONS

- How to Read the Course Descriptions 126
- Course Descriptions 128-185

GENERAL INFORMATION

- Statement of Purpose 187
- About the College 187
- Board of Trustees 188
- Visiting Artist Program 188
- Accreditations and Memberships 189

Registration and Records 189
- Course Overloads 190
- Fee Schedule 190
- Program Adjustment (Drop/Add) 14
- Refunds 191
- Student Identification 191

Withdrawal 191
Residency Requirements 192
Change of Address 192
Insurance 192
International Students 192
Transfer to Gaston College 193
Advanced Placement 193
Credit By Examination (CE) 193
Veterans Information 193
Vocational Rehabilitation 194
Course Auditing 194
Full-Time/Part-Time Status 194
Access to Student Records 195
Transfer of Credits 195
Transcript of Grades 195
Cross Registration (Transient Status) 195

Academic Regulations 196
Grounds for Student Dismissal 196
Dismissal for Occupational Program 196
Standards of Honesty 197
Grading System 197
Grade Symbols 197

Policies and Procedures 199
Academic Probation 199
Suspension 199
Change of Program 200
Student Classification 200
Repeating A Course 201
Honors Lists 201
Class Attendance 201
Progress Policy 199

Graduation 202
Graduation Procedures 202
Graduation Marshals 202
Graduation Honors 202

Student Services 202
Counseling 202
Student-Faculty Conference 203
Career Planning and Placement Services 203
Library 203
Housing 203
Book Store 203
Student Activities 204
Alumni Association 205

Executive Officers 206

Academic and Student Development Deans 206

Full-Time Faculty 206-212

Index 213

Gaston College Campus Map 218

ADMISSIONS

COLLEGE CALENDAR OF INSTRUCTION

Spring 1986

Thursday, March 6	Registration
Friday, March 7	Professional Development Day
Monday, March 10	First Day of Classes
Wednesday, March 19	Last Day to Withdraw Under Refund Policy
Friday, March 28	Official Holiday
Monday, March 31	Official Holiday
Tuesday, May 27	Last Day of Classes
Thursday, May 29	Graduation

Summer 1986

Thursday, June 5	Registration
Friday, June 6	Registration/Faculty Workday
Monday, June 9	First Day of Classes
Wednesday, June 18	Last Day to Withdraw Under Refund Policy
Friday, July 4	Official Holiday
Friday, July 25	General Faculty Meeting/ Faculty Development Day
Monday, August 18	Last Day of Classes
Wednesday, August 20	Graduation

Fall 1986

Tuesday, September 2	Registration
Wednesday, September 3	Registration/Faculty Workday
Thursday, September 4	First Day of Classes
Monday, September 15	Last Day to Withdraw Under Refund Policy
Monday, October 27	N.C. Community College Instructors Conference
Tuesday, October 28	N.C. Community College Instructors Conference
Friday, November 21	Last Day of Classes

Winter 1986-87

Monday, December 1	Registration
Tuesday, December 2	Registration/Faculty Workday
Wednesday, December 3	First Day of Classes
Friday, December 12	Last Day to Withdraw Under Refund Policy
Friday, December 19	Last Day of Classes Before Christmas
Monday, January 5	Classes Resume
Friday, January 30	General Faculty Meeting/ Faculty Development Day
Tuesday, March 3	Last Day of Classes

Spring 1987

Monday, March 9	Registration
Tuesday, March 10	Registration/Faculty Workday
Wednesday, March 11	First Day of Classes
Friday, March 20	Last Day to Withdraw Under Refund Policy
Friday, April 10	General Faculty Meeting/ Faculty Development Day
Friday, April 17	Official Holiday
Monday, April 20	Official Holiday
Thursday, May 28	Last Day of Classes
Sunday, May 31	Graduation

Summer 1987

Monday, June 8	Registration
Tuesday, June 9	Registration/Faculty Workday
Wednesday, June 10	First Day of Classes
Friday, June 19	Last Day to Withdraw Under Refund Policy
Friday, July 3	Official Holiday
Friday, July 24	General Faculty Meeting/ Faculty Development Day
Wednesday, August 19	Last Day of Classes
Friday, August 21	Graduation

Fall 1987

Tuesday, September 8	Registration
Wednesday, September 9	Registration/Faculty Workday
Thursday, September 10	First Day of Classes
Monday, September 21	Last Day to Withdraw Under Refund Policy
Friday, October 23	General Faculty Meeting/ Faculty Development Day
Wednesday, November 25	Last Day of Classes

Winter 1987-88

Thursday, December 3	Registration
Friday, December 4	Registration/Faculty Workday
Monday, December 7	First Day of Classes
Wednesday, December 16	Last Day to Withdraw Under Refund Policy
Friday, December 18	Last Day of Classes Before Christmas
Monday, January 4	Classes Resume
Friday, January 22	General Faculty Meeting/ Faculty Development Day
Friday, March 4	Last Day of Classes

Spring 1988

Thursday, March 10	Registration
Friday, March 11	Registration/Faculty Workday
Monday, March 14	First Day of Classes
Wednesday, March 23	Last Day to Withdraw Under Refund Policy
Friday, April 1	Official Holiday
Monday, April 4	Official Holiday
Friday, April 22	General Faculty Meeting/ Faculty Development Day
Tuesday, May 31	Last Day of Classes
Thursday, June 2	Graduation

Summer 1988

Thursday, June 9	Registration
Friday, June 10	Registration/Faculty Workday
Monday, June 13	First Day of Classes
Wednesday, June 22	Last Day to Withdraw Under Refund Policy
Monday, July 4	Official Holiday
Friday, July 22	General Faculty Meeting/ Faculty Development Day
Monday, August 22	Last Day of Classes
Wednesday, August 24	Graduation

ADMISSION TO THE COLLEGE

Admission to Gaston College is open to ALL high school graduates as well as to non-high school graduates, eighteen years of age or older. Anyone eighteen years of age or older who does not possess a high school diploma or its equivalent may be admitted to degree programs on a probationary status. Upon successful completion of the first ten credit hours of work attempted the student may qualify for regular status. Applicants to the Trade and Industrial Division are not required to be high school graduates. Applications should be submitted to the Admissions Office. Applications will be processed in order of their receipt. Students may enroll in as few as one or two courses to pursue a general interest. They may enroll in a two-year program to prepare to transfer to a four-year college, or choose a career/occupational program to prepare for a job upon completion. THE GENERAL ADMISSIONS POLICY OF THE COLLEGE DOES NOT INSURE ADMITTANCE TO A PARTICULAR COURSE OR PROGRAM. In some instances, certain courses may be restricted to program majors. Some students may be requested to enroll in special courses to eliminate scholastic deficiencies. ACT or SAT scores are accepted. The scores are used for placement purposes and not for admission to the College. Applicants are admitted to Gaston College without regard to race, color, creed, national origin, sex, or handicap.

If you plan to apply at Gaston College for general admission and . . .

YOU HAVE NEVER ATTENDED COLLEGE . . .

You should submit the following materials before registering for classes:

- A completed APPLICATION FOR ADMISSION form.
- A high school transcript (ask your high school to forward this transcript directly to the Admissions Office).

All applicants eighteen years of age or older, except diploma candidates who have not been awarded a high school diploma, are asked to consult with a college counselor before completing admissions procedures.

or . . .

YOU ARE CURRENTLY ENROLLED AT ANOTHER COLLEGE OR UNIVERSITY AND PLAN TO CONTINUE ENROLLMENT THERE . . .

You should submit the following materials before you register:

- A completed APPLICATION FOR ADMISSION form.
- A letter from the dean or other appropriate administrator of your institution granting permission for you to enroll at Gaston College.

or . . .

YOU HAVE ATTENDED ANOTHER COLLEGE OR UNIVERSITY . . .

You should submit the following materials before you register.

- A completed APPLICATION FOR ADMISSION form.
- A high school transcript (ask your high school to forward this transcript directly to the Admissions Office).
- Official transcripts from all colleges or universities you have attended (ask your former college or university to forward these transcripts directly to the Admissions Office).

If you were not in good standing at the last college or university attended, please see a counselor at Gaston College.

or . . .

IF YOU PLAN TO REGISTER FOR ONLY ONE OR TWO CLASSES AND ARE NOT A DEGREE CANDIDATE . . .

- You should submit a completed APPLICATION FOR ADMISSION form. You may enroll for one or two courses each quarter. All applicants eighteen years of age or older who have not been awarded a high school diploma are asked to consult with a counselor before completing admission procedures.

SPECIAL ADMISSIONS

Permission has been granted for nonhigh school graduates sixteen or seventeen years of age to attend classes at state supported community colleges. Persons in this category, who have been withdrawn from high school for at least six months, may be admitted to a high school completion or Human Resources Developmental programs at Gaston College. Those who have been withdrawn for less than six months must have written consent of the superintendent of the administrative unit in which the high school is located.

Dual Enrollment Program (Current High School students may enroll at Gaston College.)

High school junior and senior class students may be admitted to some courses at Gaston College under certain conditions. Students must be sixteen years old or older and must have completed a minimum of eight (8) units which include English 9 and 10. Students must have the approval of the superintendent or his designee of their public school system and the Director of Admissions of Gaston College for credit courses or the Dean of the Continuing Education Division for noncredit courses. Students must be taking at least three courses at their high school and be making appropriate progress toward graduation as determined by the school principal. For additional information concerning special admission to Gaston College, students should contact their high school principal. All admissions are contingent upon availability of adequate classroom space.

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 Program — Instructional Fee Per Quarter Hour of Credit

North Carolina Residents	Out-of-State Residents
$4.25	$21.25

The maximum quarterly instructional fee for residents of North Carolina is $51.00 for 12 or more credit hours. The maximum quarterly instructional fee for out-of-state residents is $255.00 for 12 or more credit hours.

CONTINUING EDUCATION PROGRAM
REGISTRATION FEES THROUGH JUNE 1985

There is a $10.00 registration fee per person per course for occupational and academic courses. Practical skills courses are $15.00 each. Avocational courses are $19.00 each.

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

Students (N.C. residents) 65 or older do not pay registration fees or parking fees.

OTHER GENERAL FEES

Student Activity Fee Per Quarter Hour of Credit

$1.00

The maximum quarterly student activity fee is $8.00 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.

Parking Fee

$4.00 per vehicle per year.

Parking permits are valid September 1 through August 31.

Graduation Fee

$15.00

American College Test

$9.50

The current cost is $9.50 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 $5.00 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

A student shall not be allowed a tuition refund unless compelled to withdraw for unavoidable reasons. If a student partially withdraws before the first day of classes, a full tuition refund will be granted for those credit hours which were dropped. No student activity fee or parking fee will be refunded. If a student completely withdraws before the first day of classes, a complete refund of tuition, student activity fee, and parking fee will be granted. If a student withdraws within ten calendar days after the first day of classes, as published in the school calendar, the student will receive a two-thirds refund of tuition only, by mail, if the refund is for more than $5.00. No student activity fee or parking fee will be refunded. No refunds will be considered following ten calendar days after the first day of classes. If a course fails to materialize, all the student's tuition will be refunded.

Continuing Education and Community Service Programs

The registration fee for Continuing Education students will be refunded only in the event the class is cancelled.

Drop/Add

Drop/add changes may be made after a student's initial enrollment and payment of fees through the end of the registration period for the quarter. The full registration fee will be charged for courses added up to a total of 12 quarter hours. A full refund will be granted for courses dropped before the first day of the quarter. Two-thirds of tuition will be refunded if the student withdraws within ten calendar days after the beginning of the quarter. No refunds are made of $5 or less.

STUDENT FINANCIAL AID

An awarding of scholarships, grants, loans and part-time employment is designed to supplement a student's own resources. Financial Aid is available for an entire academic year or for part of the year.

Selection of financial aid recipients is based upon financial need and academic ability. Any Gaston College student needing financial assistance should apply.

APPLICATION PROCEDURES FOR FINANCIAL AID: Students applying for financial assistance are required to complete an application for admission to the College and an appropriate financial aid application. All application forms are available in the Financial Aid Office in the Myers Center. Students are urged to submit their applications early. Financial aid decisions will be made after students have been accepted by the College.

SCHOLARSHIPS: The General Scholarship Fund was created and is sustained by civic minded individuals and groups interested in fostering the College's purposes, programs and objectives. Scholarships are renewable and do not have to be repaid. Recipients also may be considered for other types of financial assistance.

SPECIAL TALENT AWARDS: Gaston College's special talent awards broaden educational opportunities for the youth and adults of Gaston County. This form of financial aid is awarded to students who have demonstrated academic potential and special talents or abilities in such areas as music, art, dance, drama, foreign languages, journalism, public speaking, or student organizations, and athletic activities.

PELL GRANT: The Federal Government makes funds available for tuition and/or other college related expenses to needy undergraduate students who are citizens of the United States. Completed applications must be mailed directly to Iowa City, Iowa, for determination of grant eligibility. A certificate of eligibility will be mailed to the applicant approximately four weeks after the application is received.

GUARANTEED STUDENT LOANS: Loans are available to students in good standing. The repayment of the loan principal is not required while attending college and there is no interest during this period. Long term repayment is charged after the student leaves school. All loans are contingent upon available funds.

COLLEGE WORK—STUDY PROGRAM: This federal program provides part-time employment at the College for students needing current income to pursue their education. To be eligible, students must be enrolled for six or more credits during the quarter in which they wish to be employed. Students must also verify a need for financial assistance. Employment under this program is limited to 15

hours per week whenever regular classes are in session and 40 hours per week when classes are not in session.

MAINTAINING FINANCIAL AID ELIGIBILITY: Students must meet the satisfactory progress requirements established by Gaston College to maintain eligibility for financial aid. Satisfactory progress requirements can be obtained in the Financial Aid Office.

WHERE TO GET FURTHER INFORMATION: Students needing information on financial aid opportunities or assistance in completing financial aid forms should contact the Office of Student Financial Aid located on the second level of the Myers Center at the College.

EDUCATIONAL PROGRAMS

DEGREE PROGRAMS

Gaston College is supported by Gaston County and the State of North Carolina. As a locally controlled and administered institution, the College is attuned to the needs of its geographic area.

The close indentification with its home area, one of the prime advantages of the comprehensive community college, leads to a diversity of educational programs and services designed specifically to meet the needs of the area's residents. The Board of Trustees and the faculty, administrators and staff of the College are committed to providing high-quality, low-cost educational programs and services to all area residents desiring such opportunities.

Each student should confer with a counselor about course selection prior to or at the time of 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.

Liberal Arts and Sciences/College Transfer Program

The Liberal Arts and Sciences curriculum includes a wide range of course offerings in liberal arts for all students at the College. Some students take only a few courses each quarter, but many enroll in a two-year sequence and earn the Associate of Arts, Associate of Fine Arts, or Associate of Science Degree.

A large number of students plan their program in order to eventually transfer to four-year colleges and universities. Students enroll in what is usually referred to as the transfer, or college parallel, curriculum which offers courses that parallel those offered the first two years at a four-year institution. Most of the credits earned in this curriculum may be transferred to colleges and universities as the first and second years of a baccalaureate degree program.

Gaston College's college parallel curriculum includes many courses designed to prepare students for upper division study in such fields as business, education, engineering, dentistry, law, and medicine. A specially designed general transfer sequence of courses is also available for students who have not decided upon a major but intend to transfer their credits toward a four-year degree. 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 college and universities.

Career and Technical/Occupational Programs

The Career and Technical/Occupational preparation programs meet the ever-growing need of the local community for technicians and paraprofessionals at the associate degree and diploma levels. Many students enroll in a sequence leading to either an associate degree or a diploma. Others take shorter sequences in order to refresh or improve the knowledge and skills they already possess. Programs are provided in business, engineering technology, trades, health and public service. STUDY ON A FULL OR PART-TIME BASIS, DAY OR EVENING, IS POSSIBLE.

In many cases, associate degree students may transfer credits toward a four-year degree in a senior college or university. Students should consult with a Gaston College counselor when interested in transferring.

In all cases, knowledgeable professionals are available at Gaston College to help students identify occupational goals in line with their interests and abilities.

Programs are planned, not just for today, but for tomorrow, so that students may anticipate more realistic opportunities for employment following the attainment of their educational objectives.

Career Programs at Gaston College

ALLIED HEALTH TECHNOLOGY
T-058 Medical Assisting
T-059 Nursing

BUSINESS TECHNOLOGIES
T-016 Accounting
T-112 Banking and Finance
T-018 Business Administration/Management
T-022 Business Computer Programming (Computer Science)
T-143 Fashion Merchandising and Marketing Technology
T-020 Marketing and Retailing
T-058 Medical Assisting
T-030 Secretarial-Executive
T-031 Secretarial-Legal
T-032 Secretarial-Medical
T-034 Transportation

ENGINEERING TECHNOLOGIES
T-038 Civil Engineering Technology
T-044 Electrical Engineering Technology
T-045 Electronics Engineering Technology
T-047 Industrial Engineering Technology
T-049 Industrial Management Technology
T-051 Mechanical Engineering Technology

PUBLIC SERVICE TECHNOLOGIES
T-129 Criminal Justice Protective Services Technology
T-073 Early Childhood Associate
T-063 Fire Science
T-107 Social Services Associate
T-139 Emergency Medical Science

DIPLOMA PROGRAMS
V-024 Air Conditioning, Heating and Refrigeration
V-003 Automotive Mechanics
V-043 Radio and TV Broadcasting
V-013 Diesel Vehicle Maintenance
V-015 Architectural Drafting
V-017 Drafting-Mechanical
V-018 Electrical Installation and Maintenance
V-042 Electronics Servicing
T-165 General Office (Technical Specialty)
V-028 Industrial Maintenance
V-032 Machinist
V-050 Welding

CERTIFICATE PROGRAMS
Basic Computer Programming
Criminal Justice Academy (Basic)
Industrial Maintenance
Basic Law Enforcement Training

CONTINUING EDUCATION AND COMMUNITY SERVICE PROGRAMS

The College is committed to offering a broad range of educational, cultural, recreational and occupational offerings to meet the continuing and community education needs of county residents. In addition to offering credit courses at off-campus sites throughout the county and via media such as television and newspapers, the College provides noncredit courses, workshops and seminars. Special programs are designed as determined by public interest. The College also shares its resourses with community organizations and residents through use of the College facilities, extension of cultural activities, and sharing of faculty and administrative expertise.

Off-campus Credit Courses

The off-campus credit instructional program provides classes at times convenient to students in locations near their homes or places of employment. Classes are held in public schools as well as in businesses and industrial plants.

Noncredit Classes

Noncredit courses and programs in a variety of subjects are offered both on the campuses and at satellite sites throughout the county for career development, professional advancement, personal enrichment, and leisure time activities.

Community Service Programs

Courses are designed for students who wish to improve themselves culturally and educationally, or who wish to develop an avocational interest. Courses are offered to meet the needs and demands of the people served.

Business and Industry Programs

Courses, workshops, and seminars focus on industry-related topics to enable managers and employees to upgrade job skills.

Seminars and Workshops

Seminars and workshops are effective ways of meeting training needs of business and industry. Gaston College has developed the Professional Institute of the Gaston College Foundation, Inc., to provide quality instruction designed to improve professional, managerial and supervisory skills. The CEU is awarded to individuals who accomplish the stated objectives of the instruction.

Continuing Education Unit (CEU)

The CEU is awarded to individuals for those noncredit activities which have been organized to provide unified and systematic instruction measurable in duration of time, subject to performance evaluation for the participant, and which meet the specified criteria.

A large number of governmental agencies, professional associations, licensing boards and commissions, and private employers utilize the CEU to recognize noncredit educational experiences.

DEVELOPMENTAL/ADVANCEMENT STUDIES PROGRAM

Gaston College is committed to rendering assistance to those students of the community who desire to further their education but may not have the academic background to pursue their goals. As a means of demonstrating this commitment, the College has as one of its major goals, a developmental/advancement studies program consisting of a series of foundation courses in math, English, reading, study skills, chemistry, and self-development especially designed to help students overcome deficiencies in areas of weakness.

Credit hours earned for developmental or advancement courses generally do not transfer and may not be used to satisfy the requirements for an associate degree or diploma unless such courses are a part of the prescribed curriculum.

Students whose ACT admission scores fall below the prescribed scores for their chosen program of study can be required to take developmental courses.

Adult Basic Education (ABE)

The Adult Basic Education program offers the opportunity to acquire academic skills in reading, English, and mathematics from the most basic level through levels normally taught in junior high school. The ABE program is a joint federal-state activity and is offered free to the public.

General Education Development

The GED program offers adults an opportunity to prepare for and complete the General Educational Development Test. Upon successful completion of the five examinations, the student will receive a High School Equivalency Diploma from the North Carolina Department of Community Colleges.

Human Resources Development Program

The HRD program offers adults a comprehensive educational activity designed to increase the employability of the unemployed and underemployed.

Learning Laboratories

Learning Labs, which are multi-purpose instructional facilities, are located at the Dallas campus, Lincolnton campus, and at the Pharr-Stowe Learning Center in McAdenville. These labs are open to adults and students who need to complete high school, strengthen skills, and review or gain new knowledge in academic or technical areas.

A wide variety of auto-tutorial, programmed, video-taped, self-paced full course and skill module materials are available for refresher or review to high school graduates planning to gain new knowledge in a wide variety of academic or technical areas. Refresher and review materials are available for high school graduates planning to enter college and for others anticipating examinations necessary to qualify for specific jobs or occupational licensing. General interest courses are available for the adult who wishes to satisfy a specific need or to spend leisure time learning for self-enrichment. These courses are free to any adult eighteen years and older or to any high school student enrolled in the dual enrollment program.

A unique function of the learning lab is the skills lab and tutorial service for currently enrolled curriculum students having academic difficulty or who need

to make up assignments, gain mastery in certain skills, or fulfill the required lab portion of a curriculum class.

The labs are staffed by qualified instructors who help students determine their present level of learning before placing them in self-instructional texts. The labs are open from 8:00 a.m. each morning until the College closes at night.

English as a Second Language (E.S.L.)
Due to the immigration into Gaston and Lincoln counties of a large number of non-English speaking adults and their families, classes specifically designed to teach spoken and written English are offered. These classes are free of charge, may be organized at any time and instruction scheduled at any time of day or evening. (E.S.L. also offered for regular college credit.)

Credit Courses by Television and Radio
Television courses offer students the opportunity to earn college credits primarily at home. A qualified instructor is in charge of each course and is available for telephone and personal consultation. In addition, the instructor schedules lectures and seminars to augment the media instruction.

Transfer to Senior Colleges and Universities

The Associate of Arts, the Associate of Fine Arts, and the Associate of Science are two year programs that prepare the student to transfer to senior colleges. The student, in most cases, will transfer the entire two years of study from Gaston College and will enter the senior college or university as a third year student.

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
Mars Hill College
Sacred Heart College
Western Carolina University
University of North Carolina
Gardner-Webb College
Pfeiffer College
University of NC at Charlotte
Winston-Salem State University
North Carolina State University

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

The counseling staff 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.

GRADUATION REQUIREMENTS

Associate of Arts Degree

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

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

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.

B. Specific Graduation Requirements
   1. Skills in composition as verified by the following sequence:
      English 101, 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
      c. ENG 103, 201, 202, 203, 204, 290
      d. FRE 100, 101, 102, 106, 201, 202, 250
      e. MUS 101, 201, 290
      f. PHL 200, 201, 203, 290
      g. RDG 101
      h. REL 101, 102, 103, 210, 290
      i. SPA 100, 101, 102, 201, 202, 250
   3. Completion of 10 quarter hours of mathematics in one of the following sequences:
      a. MAT 101, 102
      b. MAT 101, 104
      c. MAT 101, 210
      d. MAT 105, 106, or 210
   4. Completion of 12 quarter hours of a biological or physical laboratory science* from the following courses:
      a. BIO 101, 105, 106, 107, 108, 121, 122, 124
      b. CHM 101, 102, 107, 211, 212
      c. GEO 101, 105
      d. GLY 102
      e. ESC 101, 102
      f. PHY 211, 212, 213

*Most four year colleges and universities require that a student have two laboratory courses in the same discipline.

   5. Completion of 15 quarter hours from at least two different disciplines of the following social sciences courses:
      a. ANT 201, 204, 206, 280, 290, 291
      b. GEO 100, 104, 111, 112, 204, 205

c. HIS 101, 102, 103, 104, 106, 201, 202, 203, 210, 280, 290, 291
d. POL 110, 201, 203, 280, 290
e. PSY 103, 201, 203, 204, 205, 206, 210, 229, 230, 250, 290
f. REL 101, 102, 103, 210
g. SOC 102, 103, 110, 202, 280, 290

activity courses, chosen from the following:

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, 117, 118, 119, 120, 122, 225, 227, 260
   b. Lecture Courses - PED 210, 230, 231

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 above in B-2 and to include no more than three quarter hours of studio courses in art, drama, and music)
      b. Mathematics (to be chosen from courses listed above in B-3 or MAT 107 or MAT 206 or MAT 207)
      c. Science (to be chosen from courses listed above in B-4 or BIO 205 or CHM 100)
      d. Social Science (to be chosen from courses listed above in B-5)
      e. Business Courses (ACT 150, 151, 152; DAP 121, 141, 142, 171, 172, 181, 182; ECO 201, 202; MCS 170)
      f. Education Courses (EDU 201, 203)
   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 requirement.

Associate of Fine Arts Degree

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
Crafts
Drama
Interior Design
Music
Music Education

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 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.

B. Specific Graduation Requirements
   1. Skills in composition as verified by 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
   c. ENG 103, 201, 202, 203, 204, 290
   d. FRE 100, 101, 102, 106, 201, 202, 250
   e. MUS 101, 201, 290
   f. PHL 200, 201, 203, 290
   g. RDG 101
   h. REL 101, 102, 103, 210, 290
   i. SPA 100, 101, 102, 201, 202, 250

*Pre-art students may not take ART 101 (Art Appreciation) to fulfill degree requirements.
*Pre-music students may not use MUS 101 (Music Appreciation) to fulfill the humanities requirement.

3. The completion of 5-10 quarter hours in mathematics and/or science from the following courses:
   a. MAT 101, 102, or 104
   b. CHM 100
   c. BIO 101, 105, 106, 107, 108, 121
   d. GEO 101, 105, 205
   e. GLY 102
   f. ESC 101, 102
4. The completion or 9 quarter hours of social sciences from at least two different disciplines of the following courses:
   a. ANT 201, 204, 280, 291
   b. GEO 100, 104, 111, 112, 204, 205
   c. HIS 101, 102, 103, 104, 106, 201, 202, 203, 210, 280, 290, 291
   d. POL 110, 201, 203, 280
   e. PSY 103, 201, 203, 204, 205, 250
   f. REL 101, 102, 103, 210
   g. SOC 102, 103, 110, 202, 280
5. 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, 122,
      225, 227, 260
6. A total of no fewer than 36 quarter hours of professional courses in art or music to be chosen from the following:

Pre-Visual Arts Major

a. ART 103 required
b. ART 110, 111, 112 all required
c. ART 121, 131, 141, 151, 161 all required
d. ART 102
e. ART 109, 113
f. ART 114, 115, 116, 117, 215
g. ART 122, 123, 125

Pre-Voice or Instrumental Majors

MUS 101, 102 both required
MUS 111, 112, 113 all required
MUS 125, 126, 127 all required for pre-voice majors
MUS 131 (6 quarter hours required-for pre-voice—course must be repeated
MUS 134, 135, 136 (6 quarter

h. ART 132, 133
i. ART 142, 143, 145
j. ART 152, 153, 155
k. ART 162, 163, 165
l. ART 290

hours required-repeat each one time)
MUS 141 or 161 (6 quarter hours required-repeat each one time)
MUS 142, 143, 144
MUS 154, 155, 156
MUS 211, 212, 213
MUS 290

C. Elective Graduation Requirement
   1. A total of no fewer than 3 quarter hours of electives should be selected from any of the following areas:
      a. Humanities (to be chosen from courses listed above in B-2 and to include no more than three quarter hours of studio courses in art, drama, and music)
      b. Science/Mathematics (to be chosen from courses listed above in B-3)
      c. Social Science (to be chosen from courses listed above in B-4)
   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 requirement.

Associate of Science Degree

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

Agriculture	Medicine	Science-Chemistry Option
Dentistry	Optometry	Science-Physics Option
Engineering	Pharmacy	Veterinary Medicine
Forestry	Physical Therapy	
Mathematics	Science-Biology Option	

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.

B. Specific Graduation Requirements
   1. Skills in composition as verified by the following sequence:
      ENG 101, ENG 102
   2. Completion of 6 quarter hours from the following humanities courses:
      a. ART 101, 103, 290
      b. DRA 101, 102
      c. ENG 103, 201, 202, 203, 204, 217, 290
      d. FRE 100, 101, 102, 106, 201, 202, 250
      e. MUS 101, 102, 290
      f. PHL 200, 201, 203, 290
      g. RDG 101
      h. REL 101, 102, 103, 210, 290
      i. SPA 100, 101, 102, 201, 202, 250

3. Completion of 20 quarter hours of mathematics* in one of the following sequences:
   a. MAT 101, 104 or 105, 106, 107 or 210
   b. MAT 105, 106, 107, 206, 207, 210 (any 4)

*Pre-engineering students are advised to take all of the courses listed under b.

4. Completion of 24 quarter hours of laboratory science** from the following courses:
   a. BIO 101, 105 or 106, 107, 108
   b. CHM 101, 102, 107, 211, 212
   c. GEO 101, 105
   d. GLY 102
   e. ESC 101, 102
   f. PHY 211, 212, 213

**Most four-year colleges and universities require that a student have two laboratory sciences in the same discipline.

5. Completion of 9 quarter hours of social sciences from the following courses:
   a. ANT 201, 204, 206, 280, 290, 291
   b. GEO 100, 104, 111, 112, 204, 205
   c. HIS 101, 102, 103, 104, 106, 201, 202, 203, 210, 280, 290, 291
   d. POL 110, 201, 203, 280, 290
   e. PSY 103, 201, 203, 204, 205, 206, 210, 229, 230, 250, 290
   f. REL 101, 102, 103, 210
   g. SOC 102, 103, 110, 202, 280, 290
6. Completion of 3-6 quarter 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, 117, 118, 119, 120, 122, 225, 227, 260
   b. Lecture Courses - PED 210, 230, 231

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 above in B-2)
   b. Mathematics (to be chosen from courses listed above in B-3)
   c. Science (to be chosen from courses listed above in B-4 or BIO 204 or CHM 100)
   d. Social Sciences (to be chosen from courses listed above in B-5)
   e. Business Courses (ACT 150, 151, 152; DAP 121, 141, 142, 171, 172, 181, 182; ECO 201, 202; MCS 170)
   f. Engineering Courses (DFT 101, 102)
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 requirement.

Associate of Applied Science

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 100 or above. 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.

Diplomas

The minimum requirement for a diploma varies with the field of concentration.

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

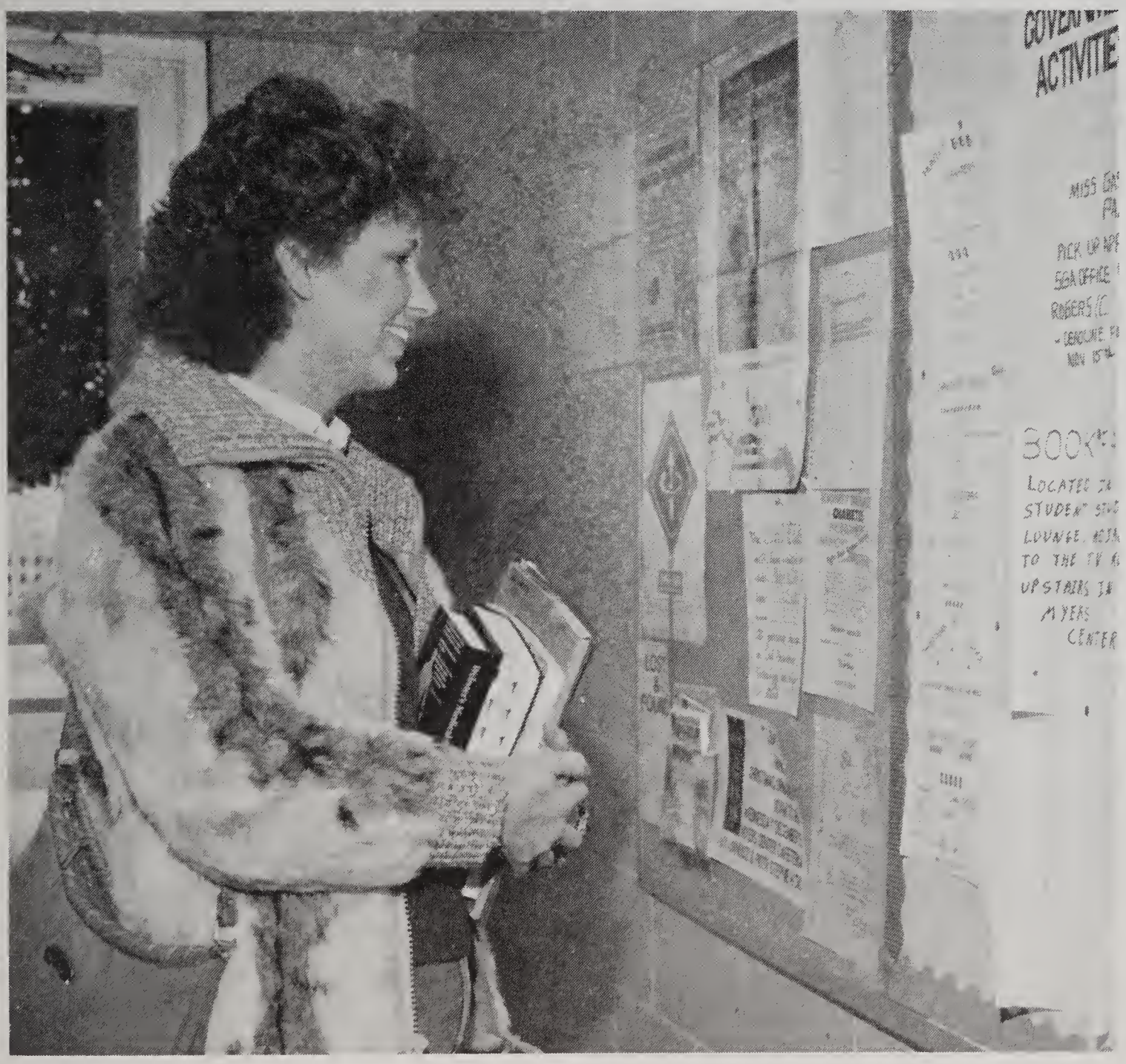
A student must have a 2.00 grade point average on courses presented for graduation.

Certificates

A minimum requirement for a certificate varies with the field of concentration.

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.



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

Curriculum Description

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

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
ACT	150	Principles of Accounting I	3	2	4
BUS	111	Business Mathematics	5	0	5
ENG	101	Freshman Grammar & Composition	5	0	5
BUS	260	Keyboarding	0	2	1
BUS	261	10-Key	0	2	1
			13	6	16

SECOND QUARTER

ACT	151	Principles of Accounting II	3	2	4
BUS	104	Introduction to Business	5	0	5
BUS	121	Principles of Management	5	0	5
DAP	150	Computer Fundamentals	3	2	4
			16	4	18

		THIRD QUARTER			
ACT	152	Principles of Accounting III	3	2	4
BUS	213	Principles of Finance	5	0	5
BUS	108	Business Communications	5	0	5
		Humanities Course	3	0	3
			16	2	17
		FOURTH QUARTER			
ACT	203	Intermediate Accounting I	5	0	5
ACT	206	Federal Income Tax	5	0	5
ACT	208	Managerial Accounting	5	0	5
DAP	173	Spreadsheet Processing & Data Base Systems	3	4	5
			18	4	20
		FIFTH QUARTER			
ACT	204	Intermediate Accounting II	5	0	5
ACT	207	Auditing	5	0	5
BUS	209	Business Law	5	0	5
ECO	101	Economic Concepts I, or	5	0	5
ECO	201	Principles of Economics			
			20	0	20
		SIXTH QUARTER			
ACT	205	Cost Accounting	5	0	5
ACT	290	Seminar/Workshop	3	0	3
BUS	210	Business Law	5	0	5
ECO	102	Economic Concepts II, or	5	0	5
ECO	202	Principles of Economics			
			18	0	18
		Total Hours Required for Graduation			109

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, services, 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	1101	Principles of Refrigeration	3	12	7
MAT	1101	Trade Math I	4	0	4
ELC	1141	Air Conditioning Electricity	4	3	5
WLD	1111	Gas Welding Fundamentals	0	3	1
			11	18	17

		SECOND QUARTER			
AHR	1102	Domestic and Commercial Refrigeration	3	12	7
AHR	1122	Automatic Controls I	3	3	4
DFT	1115	Air Condition Blueprint Reading	0	3	1
ENG	1102	Communication Skills	2	0	2
MAT	1102	Trade Math II	4	0	4
			12	18	18
		THIRD QUARTER			
AHR	1103	Principles of Air Conditioning	3	9	6
AHR	1113	Calculation of Heat Loss and Gain	6	0	6
AHR	1143	Automatic Controls II	3	3	4
AHR	1153	Transport Refrigeration	0	3	1
WLD	1112	Arc Welding Fundamentals	0	3	1
			12	18	18
		FOURTH QUARTER			
AHR	1104	All-Year Comfort System	3	6	5
AHR	1114	Estimating	4	3	5
AHR	1154	Reverse Refrigeration	2	6	4
AHR	1164	Automotive Air Conditioning	3	3	4
			12	18	18
		Total Hours Required for Graduation			71

DIPLOMA IN TRADE AND INDUSTRIAL PROGRAMS IN AUTOMOTIVE MECHANICS (V-003)

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.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
AUT	1101	Automotive Engines	3	12	7
DFT	1131	Auto Schematic and Diagrams	2	0	2
MAT	1101	Trade Math I	4	0	4
ELC	1111	Basic Auto Electricity	3	3	4
WLD	1111	Gas Welding Fundamentals	0	3	1
			12	18	18

		SECOND QUARTER			
AUT	1102	Auto Electrical Systems	6	9	9
AUT	1112	Auto Fuels	4	6	6
ENG	1102	Communication Skills	2	0	2
WLD	1112	Arc Welding Fundamentals	0	3	1
			12	18	18
		THIRD QUARTER			
AUT	1103	Automotive Power Train Systems	3	12	7
AUT	1113	Automotive Chassis and Suspensions	3	3	4
AHR	1115	Auto Air Conditioning Systems	3	3	4
PSY	1102	Human Relations	2	0	2
			11	18	17
		FOURTH QUARTER			
AUT	1104	Automotive Servicing	6	9	9
AUT	1154	Introduction to Diesel Engines	3	6	5
AUT	1164	Braking Systems	3	3	4
			12	18	18

Total Hours Required for Graduation 71

ASSOCIATE OF APPLIED SCIENCE DEGREE IN BANKING AND FINANCE (T-112)

Curriculum Description

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

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
AIB	202	Principles of Banking Operations	3	0	3
BUS	111	Business Math	5	0	5
BUS	272	Principles of Supervision	3	0	3
ENG	101	Freshman Grammar & Composition	5	0	5
			16	0	16

SECOND QUARTER

AIB	215	Accounting for Banking I	4	0	4
AIB	209	Installment Credit	3	0	3
AIB	210	Money & Banking	3	0	3
AIB	230	Selling Bank Services	1	0	1
ENG	103	Public Speaking	5	0	5
BUS	209	Business Law	5	0	5
			21	0	21

		THIRD QUARTER			
AIB	216	Accounting for Banking II	4	0	4
AIB	206	Law & Banking	3	0	3
AIB	208	Consumer Compliance	1	0	1
AIB	231	International Banking	3	0	3
BUS	108	Business Communications	5	0	5
			16	0	16
		FOURTH QUARTER			
AIB	203	Bank Cards	3	0	3
AIB	233	Analysis of Financial Statements	3	0	3
BUS	210	Business Law	5	0	5
DAP	150	Computer Fundamentals	3	2	4
		Social Science Course	5	0	5
			19	2	20
		FIFTH QUARTER			
AIB	204	Economics in Banking	3	0	3
AIB	205	Inside Commercial Banking	3	0	3
AIB	234	Loan Officer Development	3	0	3
AIB	235	Trust Functions & Services	3	0	3
DMK	132	Salesmanship	5	0	5
			17	0	17
		SIXTH QUARTER			
AIB	207	Bank Investments	3	0	3
AIB	220	Bank Management	3	0	3
AIB	232	Corporate Banking	3	0	3
BUS	242	Human Relations in Business	3	0	3
DAP	292	Introduction to Specified Computer Languages	3	4	5
		Humanities Course	3	0	3
			18	0	20
		Total Hours Required for Graduation			110

ASSOCIATE OF APPLIED SCIENCE DEGREE IN BUSINESS ADMINISTRATION/MANAGEMENT (T-018)

Curriculum Description

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

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
BUS	104	Introduction to Business	5	0	5
BUS	111	Business Mathematics	5	0	5
BUS	242	Human Relations in Business	3	0	3
DAP	150	Computer Fundamentals	3	2	4
BUS	260	Keyboarding	0	2	1
BUS	261	10-Key	0	2	1
			16	6	19

SECOND QUARTER

BUS	121	Principles of Management	5	0	5
BUS	209	Business Law	5	0	5
MCS	170	Microcomputer Awareness	1	0	1
ENG	101	Freshman Grammar & Composition	5	0	5
BUS	272	Principles of Supervision	3	0	3
			19	0	19

		THIRD QUARTER			
BUS	107	Office Management	5	0	5
BUS	108	Business Communications	5	0	5
BUS	210	Business Law	5	0	5
		Social Science Course	5	0	5
			20	0	20
		FOURTH QUARTER			
ACT	150	Principles of Accounting I	3	2	4
ACT	208	Managerial Accounting	5	0	5
ECO	101	Economic Concepts I, or			
ECO	201	Principles of Economics	5	0	5
		Humanities Course	6	0	6
			19	2	20
		FIFTH QUARTER			
ACT	151	Principles of Accounting II	3	2	4
BUS	167	Small Business Management	5	0	5
ECO	102	Economic Concepts II, or			
ECO	202	Principles of Economics	5	0	5
		Social Science Course	5	0	5
			18	2	19
		SIXTH QUARTER			
ACT	152	Principles of Accounting III	3	2	4
BUS	213	Principles of Finance	5	0	5
BUS	233	Personnel Management	3	0	3
BUS	251	Principles of Insurance	5	0	5
ACT	290	Seminar/Workshop	3	0	3
			19	2	20
		Total Hours Required for Graduation			117

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 and making engineering computation of earthwork, storm drainage and property surveys.

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
CIV	101	Surveying I	3	6	5
DFT	101	Engineering Drawing I	0	6	2
EGR	221	Computer Programming	3	3	4
ENG	121	Composition I	3	0	3
MAT	111	Algebra & Trigonometry I	5	0	5
			14	15	19

		SECOND QUARTER			
DFT	112	Civil Drafting	0	6	2
ENG	122	Composition II	3	0	3
MAT	112	Algebra & Trigonometry II	5	0	5
PHY	121	Mechanics	3	3	4
PSY	112	Psychology	3	0	3
			14	9	17
		THIRD QUARTER			
CIV	103	Surveying II	3	6	5
EGR	103	Engineering Mechanics	3	3	4
ENG	123	Report Writing	3	3	4
MAT	113	Analytic Geometry & Calculus I	5	0	5
			14	12	18
		FOURTH QUARTER			
CIV	201	Surveying III	3	3	4
EGR	201	Strength of Materials	3	3	4
MAT	114	Analytic Geometry & Calculus II	5	0	5
PHY	122	Mechanics & Heat	3	3	4
			14	9	17

SECOND YEAR

FIFTH QUARTER

			Class	Lab	Credit
CIV	212	Construction Methods & Equipment	3	3	4
CIV	242	Properties of Concrete	3	3	4
ECO	212	Economics	3	0	3
CIV	214	Construction Management	3	0	3
PHY	123	Electricity & Magnetism	3	3	4
			15	9	18

SIXTH QUARTER

CIV	232	Soils & Foundations	3	3	4
CIV	253	Basic Hydrology	2	3	3
CIV	263	Basic Structural Design	3	3	4
ENG	223	Public Speaking	3	0	3
PHY	124	Sound, Light, & Modern Physics	3	3	4
			14	12	18

SEVENTH QUARTER

CIV	211	Properties of Engineering Materials	2	3	3
CIV	223	Construction Estimates & Costs	3	3	4
CIV	231	Contracts & Specifications	3	0	3
CIV	251	Basic Environmental Technology	3	3	4
EGR	231	Industrial Ecology Analysis	2	3	3
			13	12	17

Total Hours Required for Graduation 124

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 operation of equipment.

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DAP	150	Computer Fundamentals	3	2	4
DAP	171	BASIC Programming I	3	4	5
ENG	101	Freshman Grammar and Composition	5	0	5
		Social Science	5	0	5
			16	6	19

SECOND QUARTER

DAP	141	COBOL Programming I	3	4	5
DAP	172	BASIC Programming II	3	4	5
DAP	290	Information Management	3	0	3
ACT	150	Principles of Accounting I	3	2	4
			12	10	17

		THIRD QUARTER			
DAP	142	COBOL Programming II	3	4	5
MAT	101	College Algebra	5	0	5
DAP	181	RPG Programming I	3	4	5
ACT	151	Principles of Accounting II	3	2	4
			14	10	19
		FOURTH QUARTER			
DAP	182	RPG Programming II	3	4	5
DAP	271	Computer Applications I	1	8	5
DAP	173	Spreadsheet Processing & Data Base Systems	3	4	5
ACT	152	Principles of Accounting III	3	2	4
			10	18	19
		FIFTH QUARTER			
DAP	146	PC DOS/UNIX Systems	3	4	5
DAP	272	Computer Applications II	1	8	5
DAP	295	Computer Assisted Statistics	3	4	5
ACT	207	Auditing	5	0	5
			12	16	20
		SIXTH QUARTER			
DAP	121	FORTRAN Programming	3	4	5
DAP	280	Data Communications	3	0	3
BUS	242	Human Relations in Business	3	0	3
ENG	103	Public Speaking	5	0	5
			14	4	16
		Total Hours Required for Graduation			110

Certificate in Business Computer Programming (T-022)

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 the uses 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

			Class	Lab	Credit
FIRST QUARTER					
DAP	150	Computer Fundamentals	3	2	4
DAP	171	Introduction to BASIC Programming	3	4	5
			6	6	9
SECOND QUARTER					
DAP	141	Introduction to COBOL Programming	3	4	5
DAP	172	Advanced BASIC Programming	3	4	5
			6	8	10
THIRD QUARTER					
DAP	142	Advanced COBOL Programming	3	4	5
DAP	181	Introduction to RPG Programming	3	4	5
			6	8	10
		Total Hours Required for Graduation			29

5

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 multifaceted program of study. It may consist of study options in corrections, law enforcement, and security services.

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

In addition to core 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.

CRIMINAL JUSTICE-PROTECTIVE SERVICES TECHNOLOGY

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 & Process	5	0	5
SOC	103	Introduction to Sociology	5	0	5
			20	0	20

SECOND QUARTER

ENG	103	Freshman Literature	5	0	5
CJC	101	Introduction to Criminal Justice	5	0	5
CJC	115	Criminal Law	5	0	5
PHI	101	Introduction to Philosophy	3	0	3
			18	0	18

THIRD QUARTER

ENG	103	Public Speaking	5	0	5
CJC	117	Constitutional Law I	5	0	5
CJC	210	Criminal Investigation	5	0	5
PSY	201	General Psychology	5	0	5
			20	0	20

FOURTH QUARTER

CJC	118	Constitutional Law II	5	0	5
PSY	220	Abnormal Psychology	5	0	5
CJC	220	CJ Organization and Mgt	5	0	5
BUS	208	Business Law	5	0	5
			20	0	20

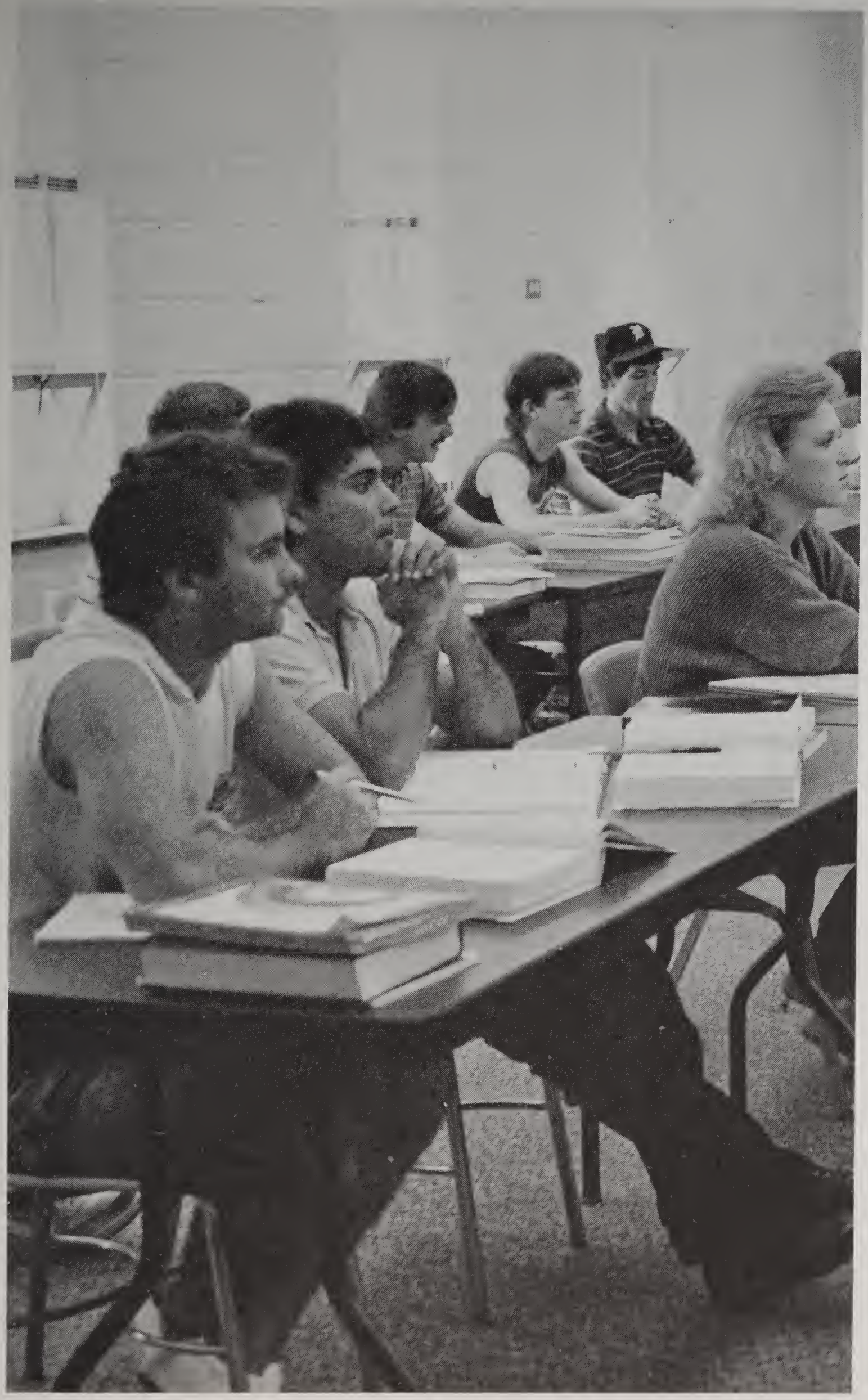
FIFTH QUARTER

CJC	205	Criminal Evidence	5	0	5
SOC	202	Contemporary Social Problems	5	0	5
CJC	109	Juvenile Delinquency	5	0	5
PHL	203	Logic	5	0	5
			20	0	20

SIXTH QUARTER

CJC	211	Criminalistics	5	0	5
CJC	262	Issues in Criminal Justice	5	0	5
POL	203	State and Local Government	5	0	5
MCS	170	Microcomputer Awareness	1	0	1
			16	0	16

Total Hours Required for Graduation 114



Certificate Program - Criminal Justice Academy (Basic)

The basic program for the beginning policeman is designed to give training in areas which are most vital to this occupation. Candidates for this course are usually employed by a police department before entry but it is **not** a requirement. The basic 369 hour course is set by The Criminal Justice Standards Division of the Department of Justice.

		Hours
1.	Course Orientation	2
2.	Constitutional Law	4
3.	Laws of Arrest, Search and Seizure	16
4.	Mechanics of Arrest; Arrest Procedure	8
5.	Law Enforcement Communications and Information Systems	4
6.	Elements of Criminal Law	20
7.	Defensive Tactics	16
8.	Juvenile Laws and Procedures	8
9.	Emergency Medical Services	24
10.	Firearms	40
11.	Patrol Techniques	16
12.	Crime Prevention Techniques	6
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.	Deviant Behavior	10
19.	Civil Disorders	12
20.	Criminal Investigation	28
21.	Interviews; Field and In-Custody	8
22.	Controlled Substances	6
23.	ABC Laws and Procedures	4
24.	Electrical and Hazardous Material Emergencies	6
25.	Motor Vehicle Law	20
26.	Techniques of Traffic Law Enforcement	6
27.	Traffic Accident Investigation	20
28.	Law Enforcement Driving Training	16
29.	Preparing for Court and Testifying in Court	12
30.	Dealing with Victims and the Public	8
31.	Practicals	17
	Total	369

Diploma in Trade and Industrial Programs in Diesel Vehicle Maintenance - (V-013)

Purpose of Curriculum

The Diesel Vehicle Maintenance curriculum provides a program for developing the basic knowledge and skills needed in diesel vehicle maintenance. Manual skills are developed in practical shop work.

The use of diesel engines is found in farm and construction equipment, electric generators, trucks, buses, trains, automobiles and ships. Many diesel vehicle mechanics specialize in maintenance and repair of equipment, others specialize in rebuilding engines.

Diesel vehicle mechanics are instructed through class assignments, discussion and shop practice to maintain and repair engines, chassis and suspensions, and power trains used to power farm equipment, construction equipment, buses and trucks. They use hand tools, precision measuring and testing instruments and power tools in overhauling and maintaining diesel powered equipment.

SPECIFIC PROGRAM REQUIREMENTS

Completion of Automotive Mechanics Program or approval for experience by the department chairperson.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DSE	1101	Diesel Engines	3	12	7
DSE	1111	Diesel Fuels	3	6	5
ENG	1101	Reading Improvement	2	0	2
MAT	1102	Trade Math II	4	0	4
			12	18	18

		SECOND QUARTER			
DSE	1102	Electrical Systems	3	6	5
PHY	1122	Hydraulics and Pneumatics	3	3	4
PHY	1112	Basic Electricity	3	3	4
DSE	1132	Braking Systems	1	6	3
ENG	1102	Communication Skills	2	0	2
			12	18	18
		THIRD QUARTER			
DSE	1103	Power Trains I	3	6	5
DSE	1113	Chassis and Suspension	3	3	4
WLD	1163	Gas and Arc Welding	2	3	3
DSE	1143	Hydraulic and Pneumatic Systems	3	3	4
DFT	1173	Schematics and Diagrams	1	3	2
			12	18	18
		FOURTH QUARTER			
DSE	1104	Power Trains II	3	6	5
DSE	1114	Diesel Servicing	3	9	6
PSY	1102	Human Relations	2	0	2
DSE	1124	Air Conditioning System	3	3	4
			11	18	17
		Total Hours Required for Graduation			71

Diploma in Trade and Industrial Programs in Architectural Drafting (V-015)

Curriculum Description

The Architectural Drafting curriculum prepares individuals to do drafting for the building industry. Courses are arranged in sequence to develop drafting skills and proficiency in mathematics and science. The drafter associates with many levels of personnel—administrators, architects, engineers, and skilled workers—and must be able to communicate effectively with them.

The architectural drafter performs the general duties of a drafter and also specialized in organizing and making detail and working drawings of structures and mechanical equipment from preliminary sketches of the designer. The graduate utilizes knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DFT	1114	Drafting Fundamentals	3	12	7
MAT	1101	Trade Math I	4	0	4
DFT	1100	Architectural Fundamentals	3	0	3
DFT	1150	Introduction to CAD	3	3	4
ENG	1101	Reading Improvement	2	0	2
			15	15	20

SECOND QUARTER

DFT	1120	Residential Architecture	3	12	7
DFT	1121	Architectural Sections	2	3	3
MAT	1102	Trade Math II	4	0	4
DFT	1160	CAD I	3	3	4
			12	18	18

		THIRD QUARTER			
DFT	1130	Commercial Architecture I	3	12	7
DFT	1134	Building Codes & Laws	0	3	1
DFT	1163	Construction Estimating	0	3	1
DFT	1153	Architectural Materials and Supplies	3	0	3
MAT	1103	Algebra and Trigonometry	4	0	4
ENG	1102	Communication Skills	2	0	2
			12	18	18
		FOURTH QUARTER			
DFT	1140	Commercial Architecture II	3	9	6
DFT	1141	Technical Illustration	1	3	2
PSY	1102	Human Relations	2	0	2
DFT	1105	Electrical Drafting	3	3	4
DFT	1106	Steel Detailing	3	3	4
			12	18	18
		Total Hours Required for Graduation			74

Diploma in Trade and Industrial Programs in Drafting - Mechanical (V-017)

Curriculum Description

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DFT	1101	Drafting Fundamentals	3	12	7
ENG	1101	Reading Improvement	2	0	2
MAT	1101	Trade Math I	4	0	4
MEC	1111	Machine Process I	0	3	1
DFT	1150	Introduction to CAD	3	3	4
			12	18	18

SECOND QUARTER

DFT	1102	Precision Drafting	3	12	7
MAT	1102	Trade Math II	4	0	4
DFT	1160	CAD I	3	3	4
MEC	1123	Structure of Metals	4	0	4
			14	15	19

		THIRD QUARTER			
DFT	1103	Specialized Drafting	3	12	7
ENG	1102	Communication Skills	2	0	2
MAT	1103	Algebra and Trigonometry	4	0	4
DFT	1170	CAD II	3	3	4
MEC	1112	Machine Processes II	0	3	1
			12	18	18
		FOURTH QUARTER			
DFT	1104	Advanced Drafting	3	9	6
DFT	1144	Electronics and Drafting	2	3	3
DFT	1124	Technical Illustration	1	3	2
PSY	1102	Human Relations	2	0	2
PHY	1111	Basic Mechanics	3	3	4
			11	18	17
		Total Hours Required for Graduation			72

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	Credit
FIRST QUARTER					
DMK	105	Personal Development	3	0	3
EDU	101	Introduction to Early Childhood Education	4	2	5
EDU	113	Behavior of Children	4	2	5
RDG	101	Reading Improvement	5	0	5
			16	4	18
SECOND QUARTER					
EDU	114	Health and Safety for Young Children	2	2	3
EDU	207	Music for Young Children	4	2	5
ENG	101	Freshman Grammar and Composition	5	0	5
MUS	101	Music Appreciation	3	0	3
PED	230	First Aid	3	0	3
			17	4	19

		THIRD QUARTER			
EDU	190	Workshop in Stories for Young Children	1	0	1
EDU	116	Communicating with Young Children	4	2	5
EDU	212	Math for Young Children	4	2	5
ENG	102	Freshman Literature	5	0	5
			14	4	16
		FOURTH QUARTER			
EDU	106	Practicum I	1	6	3
EDU	208	Art for Young Children	4	2	5
EDU	211	Science for Young Children	4	2	5
PSY	201	General Psychology	5	0	5
			14	10	18
		FIFTH QUARTER			
PED	270	Motor Development	4	2	5
PSY	203	Child Psychology	5	0	5
RED	111	Reading Methods	4	2	5
EDU	192	Workshop in Phonics	1	0	1
			14	4	16
		SIXTH QUARTER			
BUS	101	Beginning Typewriting	2	3	3
EDU	106	Practicum II	1	6	3
ENG	103	Public Speaking	5	0	5
ENG	217	Children's Literature	3	0	3
SOC	103	Marriage and Family Relations	3	0	3
			14	9	17
		Total Hours Required for Graduation			104

Associate of Applied Science Degree in Electrical Engineering Technology (T-044)

Curriculum Description

This curriculum is designed to train technicians for jobs in the areas of research, design, development, production, maintenance and sale of electrical and power generation equipment.

The electrical engineering technician may work as a laboratory technician or as an engineering aide in research, design or development in direct support of an engineer, or as a liaison between the engineer and the skilled craftsperson. The graduate may accept a position in maintenance or sale work requiring a strong background in electrical equipment design and operation.

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

ELECTRICAL ENGINEERING TECHNOLOGY

ELECTRICAL ENGINEERING TECHNOLOGY

FIRST QUARTER

			Class	Lab	Credit
DFT	101	Engineering Drawing I	0	6	2
EGR	221	Computer Programming	3	3	4
ELC	101	Electrical Fundamentals	3	3	4
ENG	121	Composition I	3	0	3
MAT	111	Algebra & Trigonometry I	5	0	5
			14	12	18

SECOND QUARTER

DFT	122	Electrical Drawing	0	3	1
ELC	102	Direct-Current Circuits	3	3	4
ELC	122	Techniques of Fabrication	0	3	1
ENG	122	Composition II	3	0	3
MAT	112	Algebra & Trigonometry II	5	0	5
PHY	121	Mechanics	3	3	4
			14	12	18

THIRD QUARTER

ELC	103	Alternating-Current Circuits	3	3	4
ELN	103	Electronics I	2	3	3
ENG	123	Report Writing	3	3	4
MAT	113	Analytic Geometry & Calculus I	5	0	5
PHY	122	Mechanics & Heat	3	3	4
			16	12	20

FOURTH QUARTER

ELC	221	Electrical Machines	3	3	4
ELC	241	Codes and Specifications	2	3	3
MAT	114	Analytic Geometry and Calculus II	5	0	5
PHY	123	Electricity & Magnetism	3	3	4
PSY	112	Psychology	3	0	3
			16	9	19

SECOND YEAR

FIFTH QUARTER

			Class	Lab	Credit
ELC	222	Alternating-Current Machinery	3	3	4
ELC	242	Illumination	2	3	3
ELN	201	Electrical Circuits I	3	0	3
ELN	211	Electronics II	3	3	4
PHY	124	Sound, Light & Modern Physics	3	3	4
			14	12	18

SIXTH QUARTER

ECO	212	Economics	3	0	3
ELC	223	Electrical Control Systems I	3	3	4
ELC	253	Power Systems I	2	3	3
ELN	202	Electrical Circuits II	3	0	3
ELN	212	Electronics III	3	3	4
			14	9	17

SEVENTH QUARTER

ELC	224	Electrical Control Systems II	3	3	4
ELC	243	Design Methods and Estimates	2	3	3
ELC	262	Power Systems II	3	3	4
ENG	223	Public Speaking	3	0	3
MEC	233	Industrial Instrumentation	3	3	4
			14	12	18

Total Hours Required for Graduation 128

11 12 1
10 2
9
8
7 6 5
4

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
ENG	1101	Reading Improvement	2	0	2
			12	18	18

SECOND QUARTER

ELC	1102	AC Circuits	3	12	7
DFT	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

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.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DFT	101	Engineering Drawing I	0	6	2
EGR	221	Computer Programming	3	3	4
ELC	101	Electrical Fundamentals	3	3	4
ENG	121	Composition I	3	0	3
MAT	111	Algebra & Trigonometry I	5	0	5
			14	12	18

SECOND QUARTER

DFT	122	Electrical Drawing	0	3	1
ELC	102	Direct-Current Circuits	3	3	4
ELC	122	Techniques of Fabrication	0	3	1
ENG	122	Composition II	3	0	3
MAT	112	Algebra & Trigonometry II	5	0	5
PHY	121	Mechanics	3	3	4
			14	12	18

THIRD QUARTER

ELC	103	Alternating—Current Circuits	3	3	4
ELN	103	Electronics I	2	3	3
ENG	123	Report Writing	3	3	4
MAT	113	Analytic Geometry & Calculus I	5	0	5
PHY	122	Mechanics & Heat	3	3	4
			16	12	20

FOURTH QUARTER

ELC	221	Electrical Machines	3	3	4
ELN	241	Digital Principles	2	3	3
MAT	114	Analytic Geometry & Calculus II	5	0	5
PHY	123	Electricity and Magnetism	3	3	4
PSY	112	Psychology	3	0	3
			16	9	19

SECOND YEAR

FIFTH QUARTER

			Class	Lab	Credit
ELN	201	Electrical Circuits I	3	0	3
ELN	211	Electronics II	3	3	4
ELN	242	Microprocessors I	2	3	3
ELN	251	Field Effect Transistors	3	3	4
PHY	124	Sound, Light & Modern Physics	3	3	4
			14	12	18

SIXTH QUARTER

ECO	212	Economics	3	0	3
ELN	202	Electrical Circuits II	3	0	3
ELN	212	Electronics III	3	3	4
ELN	273	Pulse Circuits	2	3	3
ELN	243	Microprocessors II	3	3	4
			14	9	17

SEVENTH QUARTER

ELN	213	Electronics IV	3	3	4
ELN	244	Microprocessors III	3	3	4
ELN	253	Communications Circuits	3	3	4
ELN	283	Integrated Circuits	2	3	3
ENG	223	Public Speaking	3	0	3
			14	12	18

Total Hours Required for Graduation 128

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
ELN	1121	D.C Circuits	7	6	9
ELN	1100	Introduction to Electronics	3	12	7
ENG	1101	Reading Improvement	2	0	2
			12	18	18

SECOND QUARTER

ELN	1102	A.C. Circuits	3	12	7
DFT	1183	Printed Circuits and Soldering	3	3	4
ENG	1102	Communication Skills	2	0	2
MAT	1112	Electrical Math	4	0	4
			12	18	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 II	0	3	1
ELN	1174	Digital Techniques	3	0	3
			12	18	18
		Total Hours Required for Graduation			71

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

Curriculum Description

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

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

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

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

QUARTER SEQUENCE

First Quarter

			Class	Lab	Clinical	Credit
EMS	101	Fundamentals of EMS	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	110	Integrated Paramedical Biology	5	2	0	6
			16	4	3	19

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 & Practicum I	1	0	10	4
PSY	201	General Psychology	5	0	0	5
			14	4	10	19

		THIRD QUARTER				
EMS	108	Clinical Seminar and Practicum II	2	0	10	5
EMS	110	Pharmacology for EMS	4	0	0	4
EMS	112	Emergency Vehicle Operations and Maintenance	2	2	0	3
ENG	223	Public Speaking	3	0	0	3
			11	2	10	15
		FOURTH QUARTER				
EMS	213	Communications and Documentation for EMS	4	2	0	5
SOC	102	Sociology	5	0	0	5
BUS	273	EMS Management	5	0	0	5
			14	2	0	15
		FIFTH QUARTER				
EMS	201	Advanced Life Support I	4	2	0	5
EMS	202	Clinical Seminar and Practicum III	2	0	10	5
EMS	203	Emergency Psychiatric Care	3	0	0	3
DAP	150	Computer Fundamentals	3	2	0	4
			12	4	10	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
DAP	292	Introduction to Special Languages Lotus 1 2 3	3	4	0	5
			12	6	9	18
		SEVENTH QUARTER				
EMS	211	Clinical Seminar and Practicum V	2	0	10	5
BUS	233	Personnel Management	3	0	0	3
PSY	229	Abnormal Psychology	3	0	0	3
		Elective	3	0	0	3
			11	0	10	14
		Total Hours Required for Graduation				117

Associate of Applied Science Degree in Fashion Merchandising and Marketing Technology (T-143)

Curriculum Description

The Fashion Merchandising and Marketing curriculum is designed to provide individuals with fundamental skills in fashions and merchandising activities. The individuals will become familiar with the properties, characteristics and construction of fabrics, leather, fur, millinery, wigs, jewelry and cosmetics. Emphasis will be placed on selling techniques, buying, mechandising, displaying, pricing and stock planning and control.

Employment opportunities as assistant buyers, buyers, fashion coordinators, fashion stylists, indoor display specialists, merchandise clerks and store managers or owners will be available in department stores and specialty stores, wholesale and manufacturing firms, buying offices and advertising agencies.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
ART	101	Art Appreciation	3	0	3
BUS	111	Business Mathematics	5	0	5
BUS	242	Human Relations in Business	3	0	3
DMK	102	Fundamentals of Fashion Merchandising	5	0	5
DMK	105	Personal Development	3	0	3
			19	0	19

SECOND QUARTER

ACT	150	Principles of Accounting I	3	2	4
BUS	260	Keyboarding	0	2	1
BUS	104	Introduction to Business	5	0	5
DMK	204	Fashion Design	3	0	3
ENG	101	Freshman Grammar and Composition	5	0	5
			16	4	18

		THIRD QUARTER			
DMK	109	The History and Psychology of Dress	5	0	5
ENG	103	Public Speaking	5	0	5
DMK	132	Sales Development	5	0	5
ACT	151	Principles of Accounting II	3	2	4
			18	2	19
		FOURTH QUARTER			
BUS	108	Business Communications	5	0	5
BUS	209	Business Law	5	0	5
ACT	152	Principles of Accounting III	3	2	4
DMK	120	Principles of Marketing	5	0	5
			18	2	19
		FIFTH QUARTER			
MCS	170	Microcomputer Awareness	1	0	1
ECO	101	Economic Concepts I	5	0	5
BUS	121	Principles of Management	5	0	5
DMK	211	Fashion Show Production	5	0	5
BUS	120	Personal Finance	5	0	5
			21	0	21
		SIXTH QUARTER			
DMK	101	Retailing	5	0	5
DMK	261	Commercial Display and Design	2	3	3
DMK	243	Advertising	5	0	5
DMK	231	Distribution Management	3	0	3
DAP	150	Computer Fundamentals	3	2	4
			18	5	20
		Total Hours Required for Graduation			116

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

Curriculum Description

The Fire 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.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
ENG	121	Composition I	3	0	3
FIP	101	Introduction to Fire Protection Hazards	3	0	3
FIP	115	Fire Prevention Programs	3	0	3
MAT	111	Algebra & Trigonometry I	5	0	5
PHY	101	Physics: Properties of Matter	3	2	4
			17	2	18

SECOND QUARTER

BUS	272	Principles of Supervision	3	0	3
ENG	122	Composition II	3	0	3
FIP	102	Municipal Fire Protection	3	0	3
FIP	211	Grading of Fire Defenses	3	0	3
PSY	201	General Psychology	5	0	5
BUS	121	Principles of Management	5	0	5
			22	0	22

		THIRD QUARTER			
DFT	136	Drafting & Blueprint Interpretation**	0	6	2
ENG	223	Public Speaking	3	0	3
FIP	105	Applied Electricity for Fire Protection	3	2	4
FIP	120	Municipal Finance	5	0	5
FIP	135	Training Programs & Methods of Instruction	3	0	3
DAP	150	Computer Fundamentals	3	2	4
			17	10	21
		FOURTH QUARTER			
CHM	100	Introduction to Chemical Concepts	3	0	3
ENG	123	Report Writing	3	3	4
FIP	103	Construction Codes and Material Rating	2	2	3
FIP	201	Fire Detection & Investigation	3	0	3
FIP	230	Hydraulics & Water Distribution Systems	3	2	4
FIP	205	Industrial Hazards	3	2	4
			17	9	21
		FIFTH QUARTER			
FIP	208	Municipal Public Relations	3	0	3
FIP	218	Chemistry of Hazardous Materials	3	2	4
FIP	220	Fire Fighting Strategy	3	2	4
FIP	231	Sprinkler & Standpipe Systems	3	2	4
DAP	292	Introduction to Specified Computer Language	3	2	4
			15	10	20
		SIXTH QUARTER			
BUS	223	Personal Management	3	0	3
FIP	225	Fire Protection Law	3	0	3
FIP	226	Industrial Safety	3	0	3
FIP	235	Inspection Principles & Practices	3	4	5
FIP	245	Automatic Alarm & Extinguishing Systems	3	2	4
			15	6	18
		Totals Hours Required for Graduation			120

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

FIRST QUARTER

			Class	Lab	Credit
*BUS	101	Beginning Typewriting	2	3	3
BUS	111	Business Mathematics	5	0	5
BUS	209	Business Law	5	0	5
ENG	101	Freshman Grammar and Composition	5	0	5
		Elective			
			17	3	18

SECOND QUARTER

BUS	102	Intermediate Typewriting	2	3	3
BUS	108	Business Communications	5	0	5
BUS	120	Personal Finance	5	0	5
BUS	280	Electronic Word Processing	2	3	3
DMK	105	Personal Development	3	0	3
			17	6	19

		THIRD QUARTER			
BUS	103	Advanced Typewriting	2	3	3
BUS	281	Word Processing I	2	3	3
DAP	150	Computer Fundamentals	3	2	4
		Elective			
			7	8	10
		FOURTH QUARTER			
BUS	109	Secretarial Practice	2	3	3
BUS	242	Human Relations in Business	3	0	3
BUS	282	Word Processing II	2	3	3
ENG	103	Public Speaking	5	0	5
		Elective			
			12	6	14
		Total Hours Required for Graduation			71

*Students who have taken typewriting in high school may, with permission of the department chairman, omit BUS 101. Another course must be substituted for one omitted.

ELECTIVES (Each student must choose at least 10 hours from the following courses.)

ACT	150	Principles of Accounting I	4 Credits
ACT	151	Principles of Accounting II	4 Credits
BUS	165	Speedwriting I	5 Credits
BUS	166	Speedwriting II	5 Credits
BUS	261	10-Key	1 Credit
MCS	170	Microcomputer Awareness	1 Credit

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

Curriculum Description

The Industrial Engineering Technology curriculum is designed for students who are interested in the manufacturing phase of industry. The curriculum provides basic training in the application of inspection, time and motion study, production planning, materials handling, plant layout, statistical quality control, and cost control of a modern manufacturing enterprise.

The following are titles of some positions held by graduates: industrial engineering technician, methods analyst, production planner, inspector, quality control analyst, time study person, cost estimator, plant layout draftsman, foreman and production scheduler.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DFT	101	Engineering Drawing I	0	6	2
EGR	221	Computer Programming	3	3	4
ENG	121	Composition I	3	0	3
MAT	111	Algebra & Trigonometry I	5	0	5
MEC	101	Production Technology I	3	3	4
			14	12	18

SECOND QUARTER

DFT	102	Engineering Drawing II	0	6	2
ENG	122	Composition II	3	0	3
MAT	112	Algebra & Trigonometry II	5	0	5
MEC	102	Production Technology II	3	3	4
PSY	112	Psychology	3	0	3
			14	9	17

THIRD QUARTER

			Class	Lab	Credit
ENG	123	Report Writing	3	3	4
MAT	113	Analytic Geometry & Calculus I	5	0	5
MEC	103	Physical Metallurgy	3	3	4
PHY	121	Mechanics	3	3	4
			14	9	17

FOURTH QUARTER

			Class	Lab	Credit
ISC	201	Production Planning	3	0	3
MAT	114	Analytic Geometry and Calculus II	5	0	5
MEC	201	Jig & Fixture Design	2	3	3
MEC	252	Fundamentals of Mechanical Design	3	0	3
PHY	122	Mechanics & Heat	3	3	4
			16	6	18

SECOND YEAR

FIFTH QUARTER

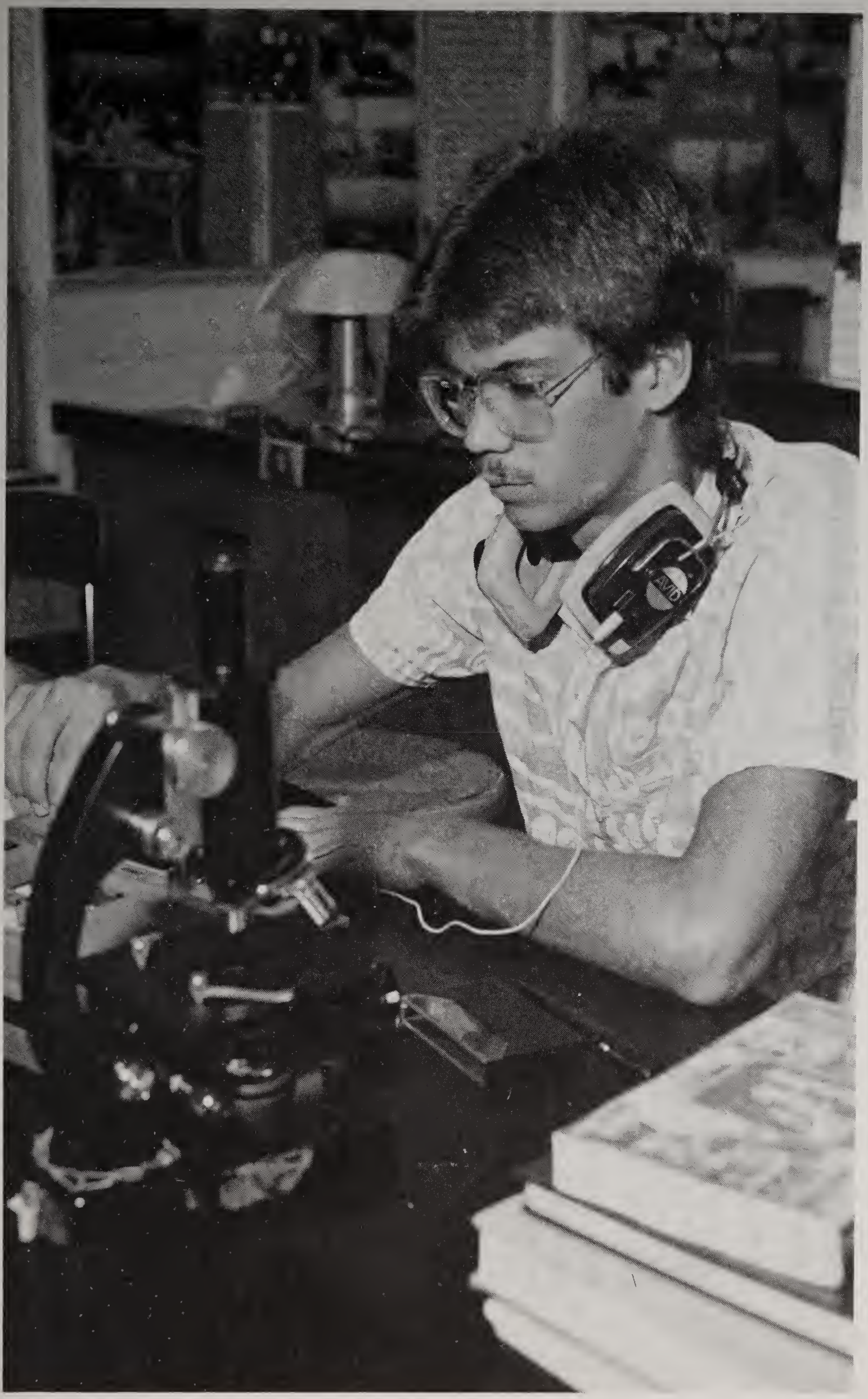
			Class	Lab	Credit
ECO	212	Economics	3	0	3
ISC	113	Industrial Safety	3	0	3
ISC	202	Industrial Systems	3	3	4
ISC	222	Methods Analysis	2	3	3
PHY	123	Electricity & Magnetism	3	3	4
			14	9	17

SIXTH QUARTER

EGR	241	Robotics I	3	3	4
ELC	282	Electric Circuits & Machines	3	3	4
ISC	223	Work Measurement	2	6	4
PHY	124	Sound, Light & Modern Physics	3	3	4
			11	15	16

SEVENTH QUARTER

ENG	223	Public Speaking	3	0	3	
ISC	103	Plant Layout & Materials Handling	0	6	2	
ISC	212	Profit Improvement	3	3	4	
ISC	213	Statistics & Quality Control	3	3	4	
ISC	233	Industrial Organization & Management	3	0	3	
			12	12	16	
		Total Hours Required for Graduation				119



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

Curriculum Description

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

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

QUARTER SEQUENCE

FIRST YEAR

FIRST QUARTER

			Class	Lab	Credit
BUS	104	Introduction to Business	5	0	5
BUS	111	Business Mathematics	5	0	5
EGR	221	Computer Programming	3	3	4
ENG	121	Composition I	3	0	3
			16	3	17

SECOND QUARTER

ACT	150	Principles of Accounting I	3	2	4
ENG	122	Composition II	3	0	3
ISC	102	Principles of Industrial Management	5	0	5
		Elective	3	0	3
			14	2	15

THIRD QUARTER

ACT	205	Cost Accounting	5	0	5
ENG	123	Report Writing	3	3	4
SOC	102	Introductory Sociology	5	0	5
			13	3	14

FOURTH QUARTER

ANT	204	General Cultural Anthropology	5	0	5
DFT	101	Engineering Drawing I	0	6	2
ISC	201	Production Planning	3	0	3
ISC	253	Management Problems	5	0	5
MEC	252	Fundamentals of Mechanical Design	3	0	3
			16	6	18

SECOND YEAR

FIFTH QUARTER

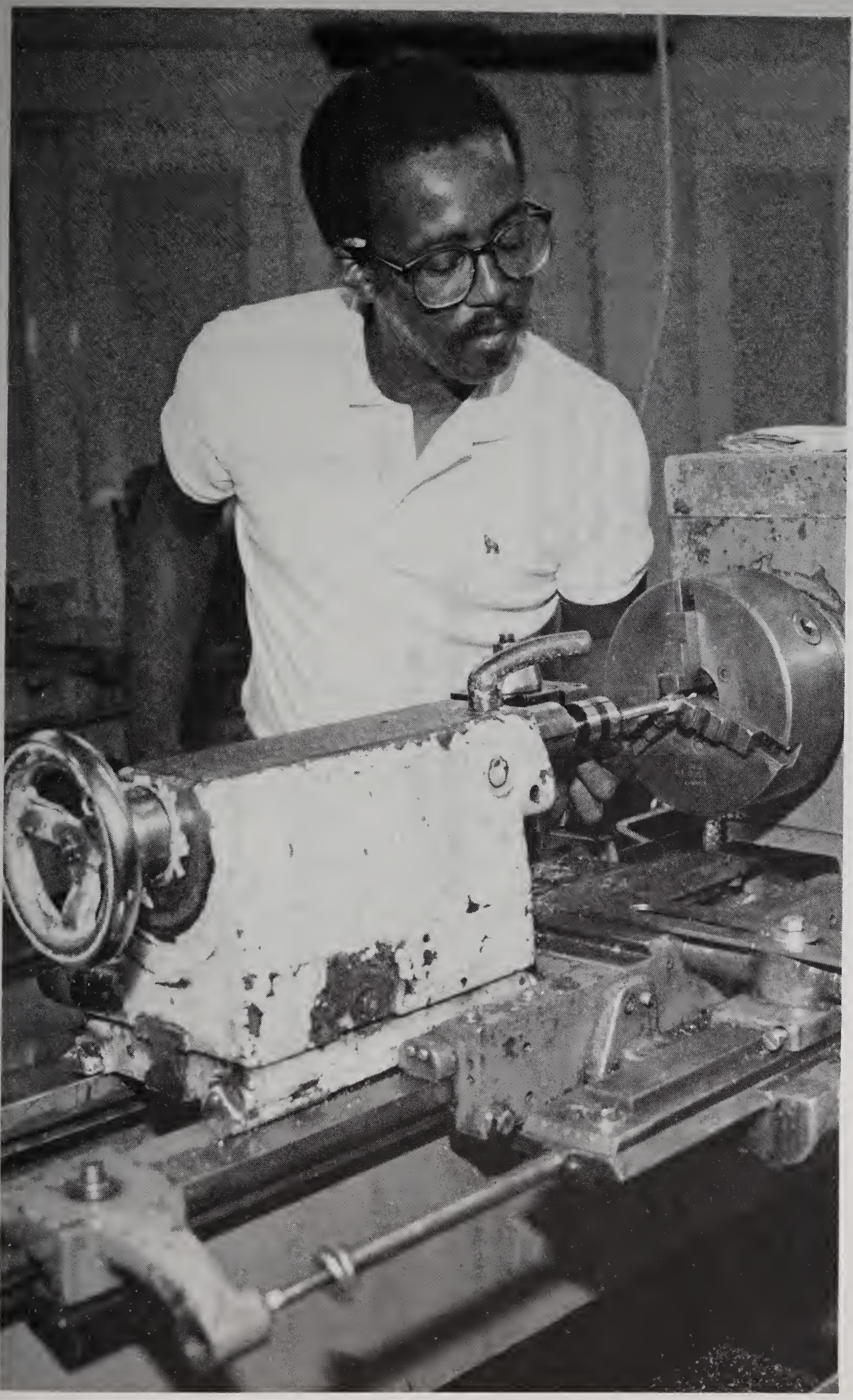
GEO	204	Economic Geography	3	0	3
ISC	113	Industrial Safety	3	0	3
ISC	222	Methods Analysis	2	3	3
PSY	112	Psychology	3	0	3
		Elective	5	0	5
			16	3	17

SIXTH QUARTER

ECO	201	Principles of Economics	5	0	5
EGR	241	Robotics I	3	3	4
ISC	223	Work Measurement	2	6	4
PED	230	First Aid	3	0	3
			13	9	16

SEVENTH QUARTER

BUS	167	Small Business Management	5	0	5
ENG	223	Public Speaking	3	0	3
ISC	103	Plant Layout & Materials Handling	0	6	2
ISC	213	Statistics & Quality Control	3	3	4
			11	9	14
		Total Hours Required for Graduation	99	35	111



Diploma in Trade and Industrial Programs in Industrial Maintenance (V-028)

Curriculum Description

The curriculum in Industrial Maintenance prepares students to repair and maintain machinery, electrical wiring and fixtures, and hydraulic and pneumatic devices found in industrial establishments.

Industrial maintenance persons may be required to install, maintain and service mechanical equipment; follow blueprints and sketches; and use hand tools, metalworking machines, measuring instruments and testing instruments. They operate metalworking machines such as the lathe, milling machine and drill press to make repairs. They use the micrometer and calipers to verify dimensions. They assemble wires, insulation, and electrical components using hand tools and soldering equipment. They test electrical circuits and components to locate shorts, faulty connections and defective parts. They inspect, test and repair hydraulic equipment.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DFT	1111	Blueprint Reading	0	3	1
MAT	1101	Trade Math I	4	0	4
MEC	1115	Maintenance Machine Shop I	3	6	5
WLD	1111	Gas Welding Fundamentals	0	3	1
ISC	1101	Industrial Safety	2	0	2
MEC	1119	Piping and Tubing	3	3	4
DFT	1135	Construction Fundamentals	3	0	3
			15	15	20

SECOND QUARTER

MEC	1125	Maintenance Machine Shop II	2	3	3
ELC	1110	AC and DC Circuits	3	9	6
ENG	1102	Communication Skills	2	0	2
MEC	1126	Mechanical Systems	1	3	2
PHY	1111	Basic Mechanics	3	3	4
			11	18	17

THIRD QUARTER

MEC	1135	Hydraulic & Pneumatics	3	3	4
AHR	1116	Basic Refrigeration Systems	3	9	6
ELC	1115	Electric Motors	3	0	3
ELC	1113	Electric Controls	3	3	4
MEC	1136	Lubrication Systems	3	0	3
			15	15	20

FOURTH QUARTER

MEC	1145	Pumps and Valves	1	3	2
AHR	1117	HVAC Systems	3	3	4
ELC	1114	Electrical Wiring	3	6	5
MEC	1146	Rigging and Moving	0	3	1
AUT	1114	Small Engine Maintenance	0	3	1
MEC	1117	Preventive Maintenance	2	0	2
WLD	1112	ARC Welding Fundamentals	0	3	1
			9	21	16

Total Hours Required for Graduation 73

Certificate Program in Industrial Maintenance

Curriculum Description

This curriculum is prepared to prepare the student in the shortest possible time to enter the field of industrial maintenance as a helper.

All of his work will include the main courses absolutely essential in Maintenance work, consisting of shopwork and related instruction.

The courses taken in this certificate program can count as credit toward the full Industrial Maintenance course (V-028).

The student who finishes the Industrial Maintenance Certificate Program will usually be a helper to a certified electrician or refrigeration repair man. He will help repair electrical and mechanical equipment, including refrigeration equipment, found in the industrial plants. He will use both hand and power tools.

QUARTER SEQUENCE

			Class	Lab	Credit
FIRST QUARTER					
AHR	1101	Principles of Refrigeration	3	12	7
DFT	1111	Blueprint Reading	0	3	1
			3	15	8
SECOND QUARTER					
ELC	1101	DC Circuits	7	6	9
AHR	1122	Automatic Controls I	3	3	4
			10	9	13
THIRD QUARTER					
ELC	1102	AC Circuits	3	12	7
AHR	1143	Auto Controls II	3	3	4
			6	15	11

FOURTH QUARTER

WLD	1112	Arc Welding Fundamentals	0	3	1
MEC	1101	Machine Tool Fundamentals	3	12	7
			3	15	8
		Total Hours Required for Graduation			40

Certificate Program in Basic Law Enforcement Training (T-189)

Curriculum Description

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Shop	Credit
CJC	270	Introduction to Criminal Justice	2	0	10	5
CJC	271	Function of Judicial Process	3	0	8	5
CJC	272	Criminal Law	4	2	0	5
CJC	273	Criminal Investigation	4	2	0	5
CJC	274	Issues in Criminal Justice	3	2	0	4
			16	6	18	24

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 and hand tools. Machinists must be able to set up and operate the 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

FIRST QUARTER

			Class	Lab	Credit
PSY	1102	Human Relations	2	0	2
DFT	1147	Machinist Drafting	3	6	5
MAT	1101	Trade Math I	4	0	4
MEC	1101	Machine Tool Fundamentals	3	12	7
			12	18	18

SECOND QUARTER

ENG	1102	Communication Skills	2	0	2
MAT	1153	Machinist Mathematics	4	0	4
MEC	1153	Introduction to Numerical Controls	2	3	3
MEC	1102	Machine Operation and Setups	3	12	7
MEC	1123	Structure of Metals	4	0	4
			15	15	20

		THIRD QUARTER			
MAT	1103	Algebra and Trigonometry	4	0	4
MEC	1103	Machine Tool Operations	3	12	7
MEC	1143	Machine Repair	2	3	3
MEC	1113	Tool and Cutter Grinding	3	0	3
WLD	1111	Gas Welding Fundamentals	0	3	1
			12	18	18
		FOURTH QUARTER			
DFT	1154	Blueprint Reading for Machinist	2	3	3
MEC	1104	Advanced Machine Shop	3	12	7
MEC	1140	Gear Making	4	3	5
MEC	1164	Numerical Control Practice	0	3	1
			9	21	16
		Total Hours Required for Graduation			72

Associate of Applied Science Degree in Marketing and Retailing (T-020)

Curriculum Description

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

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
BUS	101	Beginning Typewriting	2	3	3
BUS	104	Introduction to Business	5	0	5
BUS	111	Business Mathematics	5	0	5
DMK	120	Principles of Marketing	5	0	5
			17	3	18

SECOND QUARTER

ACT	150	Principles of Accounting I	3	2	4
BUS	121	Principles of Management	5	0	5
ENG	101	Freshman Grammar and Composition	5	0	5
DMK	101	Retailing	5	0	5
			18	2	19

THIRD QUARTER

ACT	151	Principles of Accounting II	3	2	4
ENG	103	Public Speaking	5	0	5
BUS	209	Business Law	5	0	5
DMK	132	Sales Development	5	0	5
			18	2	19

FOURTH QUARTER

ACT	152	Principles of Accounting III	3	2	4
BUS	210	Business Law	5	0	5
BUS	242	Human Relations in Business	3	0	3
ECO	101	Economic Concepts I	5	0	5
DMK	231	Distribution Management	3	0	3
			19	2	20

FIFTH QUARTER

BUS	108	Business Communications	5	0	5
ECO	102	Economic Concepts II	5	0	5
DMK	151	Principles of Transportation	5	0	5
DMK	243	Advertising	5	0	5
			20	0	20

SIXTH QUARTER

DMK	232	Marketing Management	3	0	3
DMK	233	Marketing Research	3	2	3
DMK	234	International Marketing	5	0	5
DMK	105	Personal Development	3	0	3
DAP	150	Computer Fundamentals	3	2	4
			17	4	18

SEVENTH QUARTER

			Class	**Lab**	**Credit**
DMK	269	Marketing and Distribution Applications	1	10	2
			1	10	2

Total Hours Required for Graduation 116

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 speciality 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.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
DFT	101	Engineering Drawing I	0	6	2
EGR	221	Computer Programming	3	3	4
ENG	121	Composition I	3	0	3
MAT	111	Algebra & Trigonometry I	5	0	5
MEC	101	Production Technology I	3	3	4
			14	12	18

SECOND QUARTER					
DFT	102	Engineering Drawing II	0	6	2
ENG	122	Composition II	3	0	3
MAT	112	Algebra & Trigonometry II	5	0	5
MEC	102	Production Technology II	3	3	4
PHY	121	Mechanics	3	3	4
			14	12	18
THIRD QUARTER					
ENG	123	Report Writing	3	3	4
ISC	103	Plant Layout & Materials Handling	0	6	2
MAT	113	Analytic Geometry & Calculus I	5	0	5
MEC	103	Physical Metallurgy	3	3	4
PHY	122	Mechanics & Heat	3	3	4
			14	15	19
FOURTH QUARTER					
EGR	103	Engineering Mechanics	3	3	4
ENG	223	Public Speaking	3	0	3
MAT	114	Analytic Geometry & Calculus II	5	0	5
PHY	123	Electricity & Magnetism	3	3	4
PSY	112	Psychology	3	0	3
			17	6	19

SECOND YEAR

FIFTH QUARTER

			Class	Lab	Credit
EGR	201	Strength of Materials	3	3	4
MEC	201	Jig & Fixture Design	2	3	3
MEC	232	Thermodynamics	3	0	3
MEC	242	Fluid Flow	3	0	3
PHY	124	Sound, Light & Modern Physics	3	3	4
			14	9	17

SIXTH QUARTER

EGR	241	Robotics I	3	3	4
ELC	282	Electric Circuits & Machines	3	3	4
ISC	222	Methods Analysis	2	3	3
MEC	203	Tool & Die Design	2	3	3
MEC	222	Machine Design I	3	3	4
			13	15	18

SEVENTH QUARTER

ECO	212	Economics	3	0	3
EGR	242	Robotics II	3	3	4
ISC	213	Statistics & Quality Control	3	3	4
MEC	223	Machine Design II	3	3	4
MEC	233	Industrial Instrumentation	3	3	4
			15	12	19

Total Hours Required for Graduation 128

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. Responsibilities include patient care management, administrative and clinical procedures, and managerial and supervisory functions. Developing competencies in effective communication, adhering to ethical and legal standards of medical practice, recognizing and responding to emergencies, demonstrating professional behavior and technical skills are emphasized.

Advanced credit may be allowed for completion of the Medical Assistant Grade I program approved by the Council on Medical Education of the American Medical Association in collaboration with the American Association of Medical Assistants.

Graduates are eligible to take the examination for certification as a Certified Medical Assistant given by the American Association of Medical Assistants.

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

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

Specific Program Requirements

A minimum grade of "C" (80%) in each medical assisting course is required to pass each 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 BUS 102. A medical assisting student must earn a minimum grade of "C" in BUS 102 or repeat the course.

A medical assisting student must have completed 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. Attain a minimum composite score of 12 on the ACT examination.
2. Submit a satisfactory physical examination report. (Current within six months prior to entry).
3. Schedule a personal interview with the program director.
4. Successfully complete (with a minimum grade of "C") either one year of high school typing or one quarter of college level beginning typing, prior to being accepted into the program.

Health Career Program enrollments are limited. Applicants are advised to apply early.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Clinical	Credit
BIO	121	Anatomy and Physiology I	3	2	0	4
BUS	111	Business Mathematics	5	0	0	5
ENG	101	Freshman Grammar and Composition	5	0	0	5
MED	100	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

ACT	110	Secretarial Accounting	3	2	0	4
BIO	122	Anatomy & Physiology II	3	2	0	4
MED	101	Medical Terminology and Vocabulary II	3	0	0	3
SOC	215	Interpersonal Relationships	3	0	0	3
PSY	201	General Psychology	5	0	0	5
			17	4	0	19

THIRD QUARTER

BUS	102	Intermediate Typing	2	3	0	3
DAP	150	Computer Fundamentals	3	2	0	4
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	5
			16	11	0	20

FOURTH QUARTER

			Class	Lab	Clinical	Credit
MED	201	Medical Assisting II	3	6	0	6
MED	206	Laboratory Orientation I	3	6	0	6
MED	211	Medical Transcription I	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 Practicum	0	0	20	2
MED	210	Medical Assisting Seminar	6	0	0	6
MED	213	Medical Law & Ethics	3	2	0	4
			9	2	20	12
		Total Hours Required for Graduation				102

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

Curriculum Description

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

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

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

Specific Program Requirements:

A minimum grade of "C" (80%) and satisfactory clinical performance are required to pass in each nursing course. Readmission will be considered on an individual and space available basis.

Persons admitted to the ADN Program will attend an orientation program prior to initial enrollment. This will generally be conducted during the Spring or Summer quarters.

In addition to meeting the college admission requirements, applicants to the Associate Degree Nursing Program must meet the following:

1. Attain a minimum composite score of 17 on the ACT test (taken within the past five years).
2. Submit a physician's statement, including record of updated immunizations and physical and emotional status.
3. Must be a high school or GED graduate.
4. Successfully complete high school chemistry or the equivalent. If five years or more have lapsed since the chemistry course was taken, an exam will be given to determine if additional work is needed.
5. Schedule a personal interview with nursing faculty if recommended.
6. CHM 100 must be completed before entrance to the nursing sequence.

Health Career Programs are limited. Applicants are advised to apply early.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Clinical	Credit
BIO	121	Anatomy and Physiology I	3	2	0	4
NSG	101	Basic Nursing Concepts	6	3	4	8
PSY	201	General Psychology	5	0	0	5
			14	5	4	17

SECOND QUARTER

BIO	122	Anatomy and Physiology	3	2	0	4
NSG	102	Integration of Basic Nursing Concepts	5	3	9	9
NSG	132	Pharmacology in Nursing	2	0	0	2
NUT	101	Nutrition	3	0	0	3
			13	5	9	18

THIRD QUARTER

BIO	108	General Microbiology	5	2	0	6
NSG	104	Medical-Surgical Nursing I	5	2	10	9
PSY	229	Abnormal Psychology	5	0	0	5
			15	4	10	20

FOURTH QUARTER

ENG	101	Freshman Grammar & Composition	5	0	0	5
NSG	204	Psychiatric Nursing	5	0	12	9
PSY	250	Life Span Development	5	0	0	5
			15	0	12	19

			Class	Lab	Clinical	Credit
FIFTH QUARTER						
NSG	201	Maternity Nursing	5	3	12	10
SOC	102	Introductory Sociology	5	0	0	5
			10	3	12	15
SIXTH QUARTER						
NSG	202	Child Health Nursing	5	3	12	10
ENG	102	Freshman Literature, or	5	0	0	5
ENG	103	Public Speaking				
			10	3	12	15
SEVENTH QUARTER						
NSG	203	Medical-Surgical Nursing II	5	0	18	11
NSG	206	Comprehensive Nursing	3	0	0	3
NSG	207	Perspectives of Nursing Practice	2	0	0	2
			10	0	18	16
		Total Hours Required for Graduation				120

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

Curriculum Description

The Associate Degree (ADN) Program leading to a degree of Associate of Applied Science (LPN to RN Track) varies in length, depending upon the student's ability to challenge nursing courses within the ADN curriculum. The program incorporates courses in the behavioral, biological, and physical sciences as well as a concentration in nursing theory and practice. Upon successful completion of the program and with the recommendation of the nursing faculty, the graduate is eligible to take the licensing examination for Registered Nurse (RN).

Students in the Associate of Applied Science Nursing Program receive clinical experience in providing patient care at local health agencies: Gaston Memorial Hospital, Gaston County Health Department, Broughton Hospital, Lincoln County Hospital and Cleveland Memorial Hospital. Local physicians' offices and the Child Development Center provide additional experiences for students.

A minimum grade of "C" (80%) and satisfactory clinical performance are required to pass in each nursing course (NSG prefix). Readmission will be considered on an individual and space available basis.

Persons admitted to the ADN Program, LPN to RN Track must complete NSG 090 before beginning the nursing sequence.

Program Information

In addition to meeting the college admission requirements, applicants to the Associate Degree Nursing Program must meet the following admission requirements:

1. Complete admission application to LPN-RN Track Program.
2. Secure recommendations from the current or most recent employer or supervisor
   or
   Secure recommendations from Director or Dean of School of Nursing which applicant graduated within the past three years.
3. Current license to practice nursing in the State of North Carolina
4. Attain an ACT composite score of 17 or above. ACT must be taken within the past five years,
   or
   Complete CHM 100, BIO 121, and BIO 122 with 2.50 average before entrance in the nursing sequence. The Biology courses must be taken at Gaston College.
5. Submit a physician's and dentist's statement of physical and emotional health. The faculty reserves the right to request additional information from physicians when necessary to determine applicant's ability to conform to the nursing curriculum.
6. Submit transcripts of high school, GED, and LPN curriculum and all college work. Science and Psychology courses must have been completed within five years of application. Nursing courses may be challenged but not transferred.
7. Achieve a grade point average of 2.00 in all academic work taken in applicant's nursing curriculum.
8. Schedule personal interview with nursing faculty if recommended.
9. Satisfactorily complete and pass challenge exams with 80 percent accuracy.
10. Complete nine hours of related course work before entrance to nursing sequence.
11. Complete CHM 100 or its equivalent before entrance to the nursing sequence unless high school chemistry was completed within five years.

Transfer students must meet the following requirements:

1. Students will only be admitted to the nursing sequence in the summer and winter quarter.
2. The nursing department cannot guarantee a completion date for the LPN to RN Track. This program is an individual, self-paced progression with a time frame depending upon the individual student and available college resources.
3. Admission of students is determined by the nursing faculty.
4. Applicants will be notified of their admission status by the Director of Admissions. Those students who are not admitted may reapply at a later date.

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

BUS	101	Beginning Typewriting	2	3	3
ENG	101	Grammar and Composition	5	0	5
RTV	1101	Introduction to Broadcasting	4	3	5
RTV	1111	Broadcast Speech	3	3	4
			14	9	17

SECOND QUARTER

RTV	1102	Broadcast Announcing & Performance I	4	3	5
RTV	1112	Broadcast Copywriting & Commercial Prod.	4	3	5
RTV	1121	Broadcast Reading Skills	5	0	5
RTV	1122	Radio Programming, Formats & Systems	3	0	3
RTV	1132	Broadcast Operations	1	6	3
			17	12	21

		THIRD QUARTER			
DMK	120	Principles of Marketing	5	0	5
RTV	1103	Broadcast Announcing & Performance II	4	3	5
RTV	1113	Broadcast Sales & Promotion	3	3	4
RTV	1123	Radio News Gathering, Writing, Announcing	3	3	4
RTV	1133	Broadcast Projects	3	3	4
			18	12	22
		FOURTH QUARTER			
DAP	150	Computer Fundamentals	3	2	4
PSY	103	Psychology of Human Relations	3	0	3
RTV	1104	Broadcast Practicum	1	18	7
RTV	1114	Broadcast Administration	3	0	3
RTV	1115	Broadcast Public Affairs	2	0	2
			12	20	19
		Total Hours Required for Graduation			79

Associate of Applied Science Degree in Secretarial-Executive (T-030)

Curriculum Description

The Secretarial-Executive curriculum is designed to: (1) prepare the individual to enter the secretarial profession, (2) provide an educational program for individuals wanting education for upgrading (moving from one secretarial position to another) or retraining (moving from present position to secretarial position), and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
*BUS	101	Beginning Typewriting	2	3	3
*BUS	201	Beginning Shorthand	5	0	5
ENG	101	Freshman Grammar and Composition	5	0	5
BUS	111	Business Mathematics	5	0	5
			17	3	18

SECOND QUARTER

BUS	102	Intermediate Typewriting	2	3	3
BUS	104	Introduction to Business	5	0	5
BUS	202	Intermediate Shorthand	5	0	5
BUS	261	10-Key	0	2	1
MCS	170	Microcomputer Awareness	1	0	1
		Humanities Course	3	0	3
			16	5	18

		THIRD QUARTER			
BUS	103	Advanced Typewriting	2	3	3
BUS	107	Office Management	5	0	5
BUS	203	Advanced Shorthand	5	0	5
DAP	150	Computer Fundamentals	3	2	4
DMK	105	Personal Development	3	0	3
			18	5	20
		FOURTH QUARTER			
ACT	110	Secretarial Accounting	3	2	4
BUS	209	Business Law	5	0	5
BUS	280	Electronic Word Processing	2	3	3
ENG	103	Public Speaking	5	0	5
			15	5	17
		FIFTH QUARTER			
BUS	204	Advanced Shorthand-Executive	5	0	5
BUS	281	Word Processing I	2	3	3
ECO	101	Economic Concepts I	5	0	5
		Social Science	5	0	5
			17	3	18
		SIXTH QUARTER			
BUS	108	Business Communications	5	0	5
BUS	109	Secretarial Practice	2	3	3
BUS	120	Personal Finance	5	0	5
BUS	242	Human Relations in Business	3	0	3
BUS	282	Word Processing II	2	3	3
			17	6	19
		Total Hours Required for Graduation			110

*Students who have taken typewriting and/or shorthand in high school may, with permission of the department chairperson, omit BUS 101 and/or BUS 201. Other courses must be substituted for any omitted.

Humanities Courses: Art, Literature (not ENG 102), Modern Language, Music, Philosophy (not PHL 203), Religion.

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

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

Curriculum Description

The Secretarial-Legal curriculum is designed to: (1) prepare the individual to enter the legal secretarial profession through work in a lawyer's office, in city, county, state or government offices, (2) provide an educational program for individuals wanting education for upgrading (moving from one legal secretarial position to another) or retraining (moving from present position to legal secretarial position), and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These objectives will be fulfilled through skill development in the areas of legal typewriting, shorthand transcription, word processing 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.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
*BUS	101	Beginning Typewriting	2	3	3
*BUS	201	Beginning Shorthand	5	0	5
DAP	150	Computer Fundamentals	3	2	4
ENG	101	Freshman Grammar and Composition	5	0	5
			15	5	17

SECOND QUARTER

BUS	102	Intermediate Typewriting	2	3	3
BUS	202	Intermediate Shorthand	5	0	5
BUS	261	10-Key	0	2	1
MCS	170	Microcomputer Awareness	1	0	1
BUS	209	Business Law	5	0	5
		Humanities Course	5	0	5
			18	5	20

		THIRD QUARTER			
BUS	102	Advanced Typewriting	2	3	3
BUS	111	Business Mathematics	5	0	5
BUS	203	Advanced Shorthand	5	0	5
POL	203	State and Local Government	5	0	5
			17	3	18
		FOURTH QUARTER			
ACT	110	Secretarial Accounting	3	2	4
**CJC	101	Criminal Justice System	5	0	5
BUS	280	Electronic Word Processing	2	3	3
		Social Science	8	0	8
			18	5	20
		FIFTH QUARTER			
BUS	108	Business Communications	5	0	5
BUS	205	Advanced Shorthand-Legal	5	0	5
BUS	281	Word Processing I	2	3	3
ECO	101	Economic Concepts I	5	0	5
			17	3	18
		SIXTH QUARTER			
BUS	109	Secretarial Practice	2	3	3
BUS	210	Business Law	5	0	5
BUS	242	Human Relations in Business	3	0	3
BUS	282	Word Processing II	2	3	3
DMK	105	Personal Development	3	0	3
			15	6	17
		Total Hours Required for Graduation			110

*Students who have taken typewriting and/or shorthand in high school may, with permission of the department chairperson, omit BUS 101 and/or BUS 201. Other courses must be substituted for any omitted.

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

Humanities Courses: Art, Literature (not ENG 102), Modern Language, Music, Philosophy (not PHL 203), Religion.

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

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

Curriculum Description

The Secretarial-Medical curriculum is designed to: (1) prepare the individual to enter the medical secretarial profession through work in a doctor's office, in city, county, state or government offices, (2) provide an educational program for individuals wanting education for upgrading (moving from one medical position to another) or retraining (moving from present position to medical secretarial position), (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

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

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
*BUS	101	Beginning Typewriting	2	3	3
*BUS	201	Beginning Shorthand	5	0	5
ENG	101	Freshman Grammar and Composition	5	0	5
MED	100	Medical Terminology & Vocabulary I	3	0	3
ACT	110	Secretarial Accounting	3	2	4
			18	5	20

SECOND QUARTER

BIO	110	Integrated Paramedical Biology	5	2	6
BUS	102	Intermediate Typewriting	2	3	3
BUS	202	Intermediate Shorthand	5	0	5
MCS	170	Microcomputer Awareness	1	0	1
BUS	261	10-Key	0	2	1
		Humanities Course	3	0	3
			16	7	19

		THIRD QUARTER			
BUS	103	Advanced Typewriting	2	3	3
BUS	111	Business Mathematics	5	0	5
BUS	203	Advanced Shorthand	5	0	5
DAP	150	Computer Fundamentals	3	2	4
			15	5	17
		FOURTH QUARTER			
BUS	120	Personal Finance	5	0	5
BUS	280	Electronic Word Processing	2	3	3
**MED	211	Medical Transcription I	3	2	4
		Social Science	5	0	5
			15	5	17
		FIFTH QUARTER			
BUS	108	Business Communications	5	0	5
BUS	206	Advanced Shorthand—Medical	5	0	5
BUS	281	Word Processing I	2	3	3
PSY	201	General Psychology	5	0	5
			17	3	18
		SIXTH QUARTER			
BUS	109	Secretarial Practice	2	3	3
BUS	209	Business Law	5	0	5
BUS	282	Word Processing II	2	3	3
DMK	105	Personal Development	3	0	3
ECO	101	Economic Concepts I	5	0	5
			17	6	19
		Total Hours Required for Graduation			110

*Students who have taken typewriting and/or shorthand in high school may, with permission of the department chairperson, omit BUS 101 and/or BUS 201. Other courses must be substituted for any omitted.

**Students are encouraged to take MED 212—Medical Transcription II, a continuation of MED 211. Successful completion of this course will entitle the student to receive the American Medical Records Association Medical Transcription Certificate.

Humanities Courses: Art, Literature (not ENG 102), Modern Language, Music, Philosophy (not PHL 203), Religion.

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

Associate of Applied Science Degree in Social Services Associate (T-107)

Curriculum Description

The Social Services Associate curriculum trains paraprofessionals for direct service delivery work in one of the many social services areas. These social service areas include family and child assistance, rehabilitation, health services, medical assistance, youth services, mental health and assistance to the aging, blind and developmentally disabled.

Graduates will find employment with federal, state, county and local government social service agencies and programs and with private organizations that have social service assistance programs.

QUARTER SEQUENCE

			Class	Lab	Credit
FIRST QUARTER					
ENG	101	Freshman Grammar and Composition	5	0	5
SOC	102	Introductory Sociology	5	0	5
SOC	103	Marriage and Family Relations	3	0	3
		Elective			
SECOND QUARTER					
PSY	201	General Psychology	5	0	5
SOC	202	Social Problems	5	0	5
SOC	214	Introductory to Social Problems	3	0	3
		Elective			
THIRD QUARTER					
ENG	102	Freshman Literature	5	0	5
PSY	250	Life Span Psychology	5	0	5
SOC	109	Community Resources	3	0	3
		Elective			
FOURTH QUARTER					
BUS	108	Business Communications	5	0	5
EDU	113	Behavior of Children	4	2	5
ENG	103	Public Speaking	5	0	5
		Elective			

FIFTH QUARTER

EDU	161	Computer Principles	2	0	2
PSY	206	Psychology of Adjustment	5	0	5
SOC	110	Human Sexuality	3	0	3
SOC	215	Interpersonal Relations	3	0	3
		Elective			

SIXTH QUARTER

PSY	103	Psychology of Human Relations	3	0	3
PSY	203	Child Psychology	5	0	5
SOC	218	Group Dynamics	3	0	3
SOC	240	Social Service Internship	0	10	1
		Elective			

Total Hours Required for Graduation 102

ELECTIVES: (Each student must choose at least 17 hours from the following courses:

			Credit
BUS	111	Business Mathematics	5
EDU	101	Introduction to Early Childhood Education	5
PHL	201	Ethics: Problems for a Just Society	3
POL	203	State and Local Government	5
BIO	107	General Zoology	6
BUS	104	Introduction to Business	5
PED	210	Health Education	3
PSY	204	Adolescent Psychology	5
PSY	229	Abnormal Psychology	5

Each student must choose 3 hours of electives from the following courses:

ANT	204	General Cultural Anthropology	5
ART	101	Art Appreciation	3
MUS	101	Music Appreciation	3

Each student must choose 3 additional elective hours from courses numbered 101-999 or CHM 100, FRE 100, PED 100, SPA 100.

Associate of Applied Science Degree in Transportation (T-034)

Curriculum Description

The Traffic and Transportation curriculum is designed to provide an educational program in the techniques of state and federal laws and regulations applicable to traffic and transportation which would prepare the individual to enter such careers as dispatcher, claims clerk, rate clerk, operational clerk, dock supervisor, loading supervisor and moving counselor. Objectives of this curriculum are to develop knowledge and skills in (1) the principles of organization and management in the traffic and transportation industry, (2) the Interstate Commerce Act and other related traffic and transportation acts, (3) the communication responsibility of traffic and transportation, and (4) the role and influence of traffic and transportation on the economy.

QUARTER SEQUENCE

FIRST QUARTER

			Class	Lab	Credit
ENG	101	Freshman Grammar & Composition	5	0	5
BUS	104	Introduction to Business	5	0	5
BUS	111	Business Mathematics	5	0	5
BUS	101	Beginning Typewriting	2	3	3
			17	3	18

SECOND QUARTER

DMK	151	Principles of Transportation	5	0	5
DMK	152	Traffic Management	5	0	5
DAP	150	Computer Fundamentals	3	2	4
MCS	170	Microcomputer Awareness	1	0	1
		Elective	2		2
			17	2	17

THIRD QUARTER

DMK	253	Carrier Rates	5	0	5
DMK	154	Transportation Law & Procedure	5	0	5
BUS	209	Business Law	5	0	5
		Humanities Course	3	0	3
			18	0	18

FOURTH QUARTER

ACT	150	Principles of Accounting I	3	2	4
BUS	108	Business Communications	5	0	5
ECO	101	Economic Concepts I	5	0	5
DMK	255	Domestic Transportation Claims	3	0	3
			16	2	17

FIFTH QUARTER

ACT	151	Principles of Accounting II	3	2	4
ECO	102	Economic Concepts II	5	0	5
DMK	256	International Transportation	5	0	5
DMK	231	Distribution Management	3	0	3
			16	2	17

SIXTH QUARTER

ACT	152	Principles of Accounting III	3	2	4
BUS	210	Business Law	5	0	5
DMK	132	Salesmanship	5	0	5
BUS	121	Principles of Management	5	0	5
			18	2	19

Total Hours Required for Graduation 106

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

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

Curriculum Description

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

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

QUARTER SEQUENCE

FIRST QUARTER

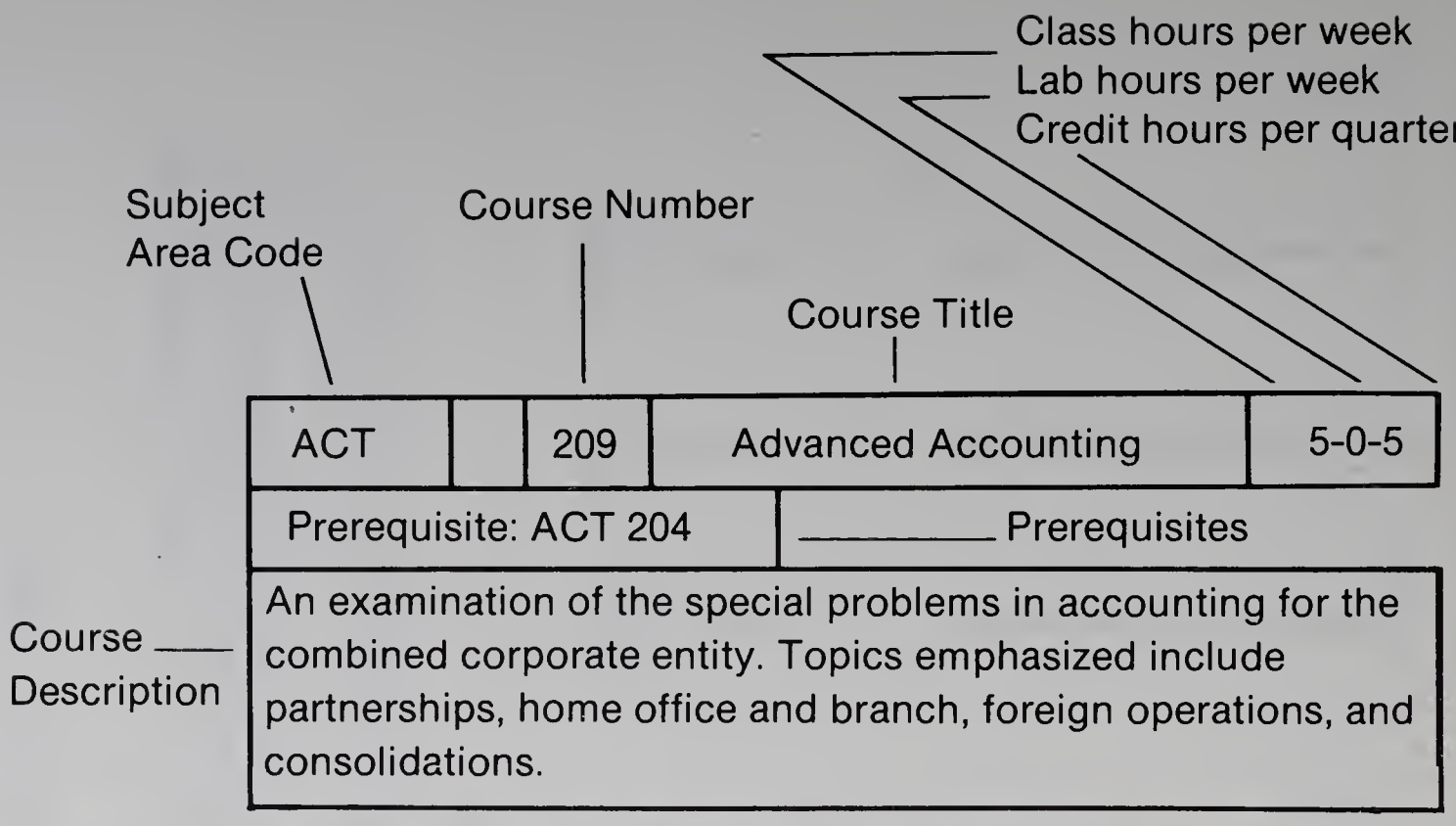
			Class	Lab	Credit
WLD	1101	Oxy-Acetylene Welding	3	12	7
MEC	1111	Machine Processes I	0	3	1
MAT	1101	Trade Math I	4	0	4
ENG	1102	Communication Skills	2	0	2
PHY	1112	Basic Electricity	3	3	4
			12	18	18

SECOND QUARTER

WLD	1102	Arc Welding	3	12	7
WLD	1124	Blueprint Reading for Welders	2	3	3
MEC	1123	Structure of Metals	4	0	4
MAT	1102	Trade Math II	4	0	4
PSY	1102	Human Relations	2	0	2
			15	15	20

		THIRD QUARTER			
WLD	1113	Inert Gas Welding	3	12	7
WLD	1132	Mechanical Test & Inspection	3	0	3
WLD	1114	Position Welding	3	6	5
WLD	1142	Estimating	3	0	3
			12	18	18
		FOURTH QUARTER			
WLD	1104	Advanced Welding	3	12	7
WLD	1134	Introduction to Pipe Welding	3	12	7
			6	24	14
		Total Hours Required for Graduation			70

How to Read the Course Description



COURSE DESCRIPTIONS

Accounting

ACT 110 Secretarial Accounting (3-2-4)

Prerequisite: None
This course covers the basic principles, practices, and techniques of accounting. Emphasis is placed on the development of skills in accounting that are needed by secretarial majors.

ACT 150 Principles of Accounting I (3-2-4)

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.

ACT 151 Principles of Accounting II (3-2-4)

Prerequisite: ACT 150
This course is primarily a study of partnership and corporation accounting including a study of payroll systems. Emphasis is placed on the concepts and principles of accounting and on the recording, summarizing, and interpreting of data for management control.

ACT 152 Principles of Accounting III (3-2-4)

Prerequisite(s): ACT 150, ACT 151
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.

ACT 203 Intermediate Accounting I (5-0-5)

Prerequisite: ACT 150, 151, 152
The 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.

ACT 204 Intermediate Accounting II (5-0-5)

Prerequisite: ACT 150, 151, 152, 203
A continuation of Accounting 203 with discussions relative to non-current assets and liabilities. Factors governing accounting for the corporation receive particular emphasis.

ACT 205 Cost Accounting (5-0-5)

Prerequisite: ACT 150
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. Designed to develop an appreciation of the uses of cost information in the administration and control of business organizations.

ACT 206 Federal Income Tax (5-0-5)

Prerequisite: None
A study of the Internal Revenue Code, regulations, and cases which apply to the determination of taxation for individuals, partnerships, and corporations. Consideration is given to income, deductions, and filing.

ACT 207 Auditing (5-0-5)

Prerequisites: ACT 150, 151
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.

ACT 208 Managerial Accounting (5-0-5)

Prerequisite: ACT 150
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.

ACT 290 Seminar/Workshop (3-0-3)

Prerequisite: None
A workshop in which a specialized area of Accounting is studied in a concise time period.

Air Conditioning, Heating and Refrigeration

AHR 1101 Principles of Refrigeration (3-12-7)

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 1102 Domestic & Commercial Refrigeration (3-12-7)

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 1103 Principles of Air Conditioning (3-9-6)

The history, theory, and factors covering air conditioning are studied. Instruction will include air conditioning terminology, temperature measurement, air movement, humidity, psychrometric properties, com fort zone, effective temperature, duct systems, air diffusion, air cleaning zone, testing instruments and heat loads.

AHR 1104 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, gas-fired systems, water-circulated systems, resistance-systems and the special controls used in the "all-year" comfort systems.

AHR 1113 Calculation of Heat Loss & Gain (6-0-6)
Practice in computing system loads, equip ment sizing and balancing, and the use of charts and tables pertaining to refrigeration and air-conditioning equipment.

AHR 1114 Estimating (4-3-5)
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 refrig eration and air conditioning systems used in domestic and commercial building.

AHR 1115 Auto Air Conditioning Systems (3-3-4)
Prerequisite: ELC 1111
A study of principles of refrigeration and the proper handling of refrigerant. Includes study of components, methods of operation and control; including manual air conditioning and automatic temperature controls. A thorough study of heating and ventilation systems including four seasons.

AHR 1116 Basic Refrigeration Systems (3-9-6)
A study of the basic principles of refrigeration systems, proper handling of refrigeration, and operation, control, and repair of these systems.

AHR 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.

AHR 1122 Automatic Controls I (3-3-4)
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 1143 Automatic Controls II (3-3-4)
Prerequisite(s): ELC 1141 and AHR 1122
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 1153 Transport Refrigeration (0-3-1)
This is a survey course in transport refrigeration. Material covered will be the types of engines used to drive units, three phase generators, variable voltage relays and solenoid valves, strip heaters, reversing systems, and unloading devices peculiar to this type mechanism.

AHR 1154 Reverse Refrigeration (2-6-4)
Complete study of heat pump installation, its control, theory and operation. Practical work experience in trouble shooting on systems.

AHR 1164 Automotive Air Conditioning (3-3-4)
General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.

AHR 1190 Independent Study (0-3-1)
Prerequisite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefits.

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 card 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 "how-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. AIB 215 will not substitute for ACT 201 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 202 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 bank management. It touches on objectives, planning, structure, control, and the interrelationship 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 areas 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 variation, 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 preliterate 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 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.)

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 109 Jewelry Design Casting (0-6-3)
Prereqisite: None
Instruction in the use of different types of waxes, production casting techniques, and finishing processes is taught.

ART 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.

ART 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.

ART 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.

ART 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.

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: ART 114
A further study in commercial art production for 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 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).

ART 122 Pottery II (0-6-3)
Prerequisite: ART 121 or Departmental Approval
This intermediate studio course is a continuation of Pottery I, but with a 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 non-functional 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).

ART 123 Pottery III (0-6-3)
Prerequisite: ART 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 will be continued. Production of either utilitarian or non-functional ceramic ware of high quality and excellence in craftsmanship is emphasized. (This course was formerly entitled Ceramics III).

ART 125 Special Studies in Pottery (0-6-3)
Prerequisite: ART 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 credits. (This course was formerly entitled Special Studies in Ceramics).

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, plastics, 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 painting process. An emphasis is placed on introducing the student to basic printing concepts and methods used the 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 silkscreen, 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 a directed individual study of student's choice of method (intaglio, relief, and serigraphy) is stressed. Emphasis will be placed on 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. This 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.

Automotive & Diesel Mechanics

AUT 1101 Automotive Engines (3-12-7)
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in automotive repair work. Study of the construction and operation of components of automotive engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.

AUT 1102 Auto Electrical (6-9-9)
A thorough study of the electrical system of the automobile including wiring, AC & DC generators, ignition systems, standard and electronic distributors, batteries, and starters. Electrical and electronic equipment will be used to diagnose problems.

AUT 1103 Automotive Power Train Systems (3-12-7)
Principles and functions of automotive power train systems; clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair.

AUT 1104 Automotive Servicing (6-9-9)
Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of testing, adjusting, repairing and replacing experiences.

AUT 1112 Auto Fuels (4-6-6)
A thorough study of the fuel system of the automobile including internal and external carburetor adjustments. Electrical and electronic equipment will be used to diagnose problems in carburetors, fuel pumps, fuel injectors, and emission control systems.

AUT 1113 Automotive Chassis And Suspensions (3-3-4)
Principles and functions of the components of the automotive chassis. Practical job instruction in adjusting and repairing of suspension, steering and braking systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, front end types and servicing of brakes.

AUT 1114 Small Engine Maintenance (0-3-1)
A study of electrical and fuel system associated with small engines in industry. The major emphasis will be on tune-ups and maintenance.

AUT 1154 Introduction to Diesel Engines (3-6-5)
Study of the construction and operation of components to Diesel engines. Testing of engine performance. Fuel, exhaust, and cooling systems. Methods of testing and trouble shooting on Diesel engines.

AUT 1164 Braking Systems (3-3-4)
A complete study of various braking systems employed on automobiles and trucks. Emphasis is placed on how they work and proper adjusting techniques and replacement.

AUT 1190 Independent Study (0-3-1)
Prerequisite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefits.

Biology

BIO 101 General Biology (5-3-6)
Prerequisite: None
A course which stresses biology as a conceptual Unit through the study of cellular and protoplasmic organization, growth, differentiation, ecology, genetics, and the process of evolution.

BIO 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.

BIO 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.

BIO 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.

BIO 108 General Microbiology (5-2-6)
Prerequisite(s): BIO 101
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, rickettsiae, protozoa, and algae), methods of control, and applied microbiology.

BIO 110 Integrated Paramedical Biology (5-2-6)
Prerequisite: None
This is an integrated study of anatomy and physiology and disease processes. This course is designed for programs requiring comprehensive rather than extended study of these areas for general students as well as paramedical students.

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 integumentary, 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 sytems.

BIO 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 GEO 205.

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.

Business

BUS 101 Beginning Typewriting (2-3-3)
Prerequisite: None
General theory and techniques in the skill of typewriting are stressed, as well as mastery of the keyboard operation, care of the machine, letter styles, short manuscripts, and drills on simple tabulation.

BUS 102 Intermediate Typewriting (2-3-3)
Prerequisite: BUS 101 or typing proficiency
Extensive drill on business letter styles, carbon copies, tabulations, and business forms. Emphasis on accuracy in continuity writing; production typewriting drill with emphasis on mailability.

BUS 103 Advanced Typewriting (2-3-3)
Prerequisite: BUS 102
Advanced problems in business forms and reports; composition; review and basic theory and techniques; development of maximum speed and accuracy in all phases of the typewriting skill.

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 107 Office Management (5-0-5)
Prerequisite: None
Designed to enable students to understand and apply the basic principles relating to efficient office management, this course includes organization, planning and control of physical factors, and personnel practices.

BUS 108 Business Communications (5-0-5)
Prerequisite: ENG 101
Prerequisite or co-requisite: BUS 101
This course is designed to assist the student in developing an awareness of the role communications play in the business environment and to increase his skill in using the English language in writing business letters and business reports that will project the company image to the public effectively and that will strengthen management-employee understanding for better decision making.

BUS 109 Secretarial Practice (2-3-3)
Prerequisite: BUS 102
This course is designed to acquaint the student with the responsibilities encountered by a secretary during the work day. Some of these responsibilities include the following: receptionist duties, handling the mail, using the business library, the purchasing of supplies, and copying and duplicating processes.

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 155 Transportation Seminar (3-0-3)
Prerequisite: None
A seminar covering contemporary problems in transportation from the carrier, shipper, and federal government viewpoints.

BUS 162 Fundamentals of Real Estate (5-0-5)
Prerequisite: None
This introductory course is designed to introduce students to the real estate industry. Fundamental principles and theories of real estate are covered including terminology, Real Estate Licensing Law, ethics, and organizational structure. Financing, appraising and law, and listing and closing real estate.

BUS 163 Fundamentals of Real Estate II (5-0-5)
Prerequisite: BUS 162
This introductory course is a continuation of BUS 162, Fundamentals of Real Estate I. The student will study theory and practice of real estate. Topics discussed include fundamental operation of real estate, the real estate industry and its relationship to financing, appraising and law, listing and closing of real estate and building construction.

BUS 164 Real Estate Law (5-0-5)
Prerequisite: BUS 162 or Salesman's or Broker's License
A survey course of real estate law including legal aspects of the sale, purchase, and management of real property. Special emphasis is placed on the legal steps required to handle a real estate transaction from the preparation of the listing contract to the closing of the sale.

BUS 165 Speedwriting I (5-0-5)
Prerequisite: ENG 101
A study of the theory of Stenoscript with emphasis on reading and drill in rapid execution and recall. Some dictation practice is provided. Non-Stenoscript and transcription factors are studied.

BUS 166 Speedwriting II (5-0-5)
Prerequisite: BUS 101, BUS 165
A systematic review of stenoscript theory with emphasis on skill building through dictation practice.

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 201 Beginning Shorthand (5-0-5)
Prerequisite: None
A study of the theory of Gregg shorthand, Series 90, with emphasis on reading and drill in rapid execution and recall on both familiar and unfamiliar material. Dictation practice is provided. Non-shorthand and transcription factors are studied.

BUS 202 Intermediate Shorthand (5-0-5)
Prerequisites: BUS 101, BUS 201 or proficiency
A systematic review of Gregg shorthand theory with emphasis on skill building through dictation practice and transcription.

BUS 203 Advanced Shorthand (5-0-5)
Prerequisite: BUS 202
A continuation of Intermediate Shorthand with emphasis on rapid dictation and transcription development.

BUS 204 Advanced Shorthand-Executive (5-0-5)
Prerequisite: BUS 203
This high speed dictation and transcription course is designed for Executive Secretarial students, with emphasis on business vocabulary dictation.

BUS 205 Advanced Shorthand-Legal (5-0-5)
Prerequisite: BUS 202
This course is designed to give the legal secretarial student knowledge and understanding of terms commonly used in the legal profession. Emphasis is placed on spelling, pronouncing, and defining legal terms. Dictation and transcription practice are provided.

BUS 206 Advanced Shorthand-Medical (5-0-5)
Prerequisite: BUS 202 and MED 100
This dictation and transcription course is designed for Medical Secretarial students with emphasis on medical vocabulary, medical vocabulary dictation, and medical office simulations.

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 topic to make the discussion of principles specific and meaningful.

BUS 210 Business Law (5-0-5)
Prerequisite: BUS 209
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 213 Principles of Finance (5-0-5)
Prerequisite: ACT 202
Study of the financial function of the business enterprise with special emphasis on capital budgeting and the rate of return. Sources and uses of funds included with study conducted from the standpoint of the financial manager.

BUS 214 Real Estate Finance (5-0-5)
Prerequisite: BUS 162 or Department Approval
A study of real estate finance including an analysis of financial techniques and instruments necessary in real estate financing. Topics include the structure of the mortgage market, the sources of funds, types of mortgages, role of governmental agencies, interest rates, loan organization and servicing, and competition in the money market.

BUS 233 Personnel Management (3-0-3)
Prerequisite: None
Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits, and security.

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.

BUS 251 Principles of Insurance (5-0-5)
Prerequisite: BUS 104
Survey of risk, risk management, role of insurance, structure and operations of the insurance business, and all lines of life, health, property, and liability insurance coverage.

BUS 260 Keyboarding (0-2-1)
Prerequisite: None
This course is designed to introduce the typewriting keyboard for those who wish to develop proficiency in the use of the alphabetic and numerical keys for the microcomputer and CHT.

BUS 261 10-Key (0-2-1)
Prerequisite: None
This course is designed to develop the touch system using the 10-Key keyboard. Percentages, discounts, markup, and interest will also be reviewed using the electronic calculator.

BUS 272 Principles of Supervision (3-0-3)
Prerequisite: None
Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed.

BUS 273 EMS Management (5-0-0-5)
Prerequisite: Acceptance as an EMS Student
The principles of managing a modern emergency medical service operation. Special emphasis will be given to time management techniques, medical legal problems, EMS grantsmanship, systems management, budget development, managing medical supplies and equipment maintenance, the structure and function of municipal governments.

BUS 280 Electronic Word Processing (2-3-3)
Prerequisite(s): ENG 101 and BUS 102
Instruction and practice is given in the operation of transcribing machines, the IBM Electronic typewriter, and the IBM Memory typewriter. Basic word processing concepts, such as editing, storing, and retrieving, are also introduced.

BUS 281 Word Processing I (2-3-3)
Prerequisite(s): BUS 290 or MCS 170
Co-requisite: BUS 280
Students are given additional instruction in the basic concepts and techniques required in most word processing tasks using a popular word processing software package for the microcomputer. Applications include the creation and revision of letters, reports and other manuscripts, tables, and forms.

BUS 282 Word Processing II (2-3-3)
Prerequisite(s): BUS 281
A word processing simulation using a popular word processing software package for the microcomputer.

BUS 290 Seminar/Workshop (1-0-1)
Prerequisite: None
A workshop in which a specialized area of Business is studied in a concise time period. Must meet eleven hours.

BUS 292 Real Estate Appraisal (5-0-5)
Prerequisite: BUS 162 or Salesman's or Broker's License
A study of the principles and theory of appraising real property. Topics include site evaluation, building materials and components, methods of appraising property, which include the income approach, the market approach, and the cost approach.

BUS 1105 Small Business Management (2-0-2)
Prerequisite: None
An introduction to the Business world, problems of small business operation, basic business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

Chemistry

CHM 100 An Introduction to Chemical Concepts (3-0-3)
Prerequisite: None
This course is primarily designed to provide an introduction to college chemistry courses for those who have not obtained an adequate background and for students investigating the nature of chemistry courses. Performance on the ACS High School Chemistry Exam will be used to indicate a student's need for the course.

CHM 101 Principles of Chemistry (4-6-6)
Prerequisite: MAT 101 or eligibility to enroll MAT 101
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 Quantitative Analysis (3-9-6)
Prerequisites: CHM 101, 102
A course in the theory and practice of classical volumetric and gravimetric analysis with an introduction to modern instrumental analysis.

CHM 211 Organic Chemistry (4-4-6)
Prerequisite: CHM 102
The presentation of the classification, nomenclature, reactions, bonding, and reaction mechanisms of the compounds of carbon.

CHM 212 Organic Chemistry (4-4-6)
Prerequisite: CHM 211
A continuation of CHM 211.

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 101 Surveying I (3-6-5)
Corequisite: MAT 111
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.

CIV 103 Surveying II (3-6-5)
Prerequisite: CIV 101
Topographic surveying, division of land, celestial observations, introduction to curves, field adjustments of transits and levels.

CIV 201 Surveying III (3-3-4)
Prerequisites: CIV 103, MAT 112
Reconnaissance, preliminary and location surveys; theory and application of simple, compound, and reverse circular curves; spirals, parabolic vertical curves; earthwork calculations.

CIV 211 Properties of Engineering Materials (2-3-3)
Prerequisite: EGR 201
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: CIV 103
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: None
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
Basic engineering law; owner, engineer, contractor relations and responsibilities; contract performance requirements, competitive bidding procedures; preparation and interpretation of specifications.

CIV 232 Soils & Foundations (3-3-4)
Prerequisite: MAT 112
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, and procedure for soil compaction and soil stabilization; basic theory of soil strength tests, plate bearing tests and earth embankment slope studies.

CIV 242 Properties of Concrete (3-3-4)
Prerequisite: MAT 112
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 251 Basic Environmental Technology (3-3-4)
Prerequisite: CIV 232
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.

CIV 253 Basic Hydrology (2-3-3)
Prerequisite: CIV 201
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)
Prerequisites: DFT 112, EGR 201
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)
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 109 Juvenile Delinquency (5-0-5)
Prerequisite: None
An overview of the Juvenile Delinquency phenomenon and the process involved in its causation, prevention, and control. Emphasis is placed on a multi-disciplinary approach to the problem, variables related to delinquency, and duties, responsibilities, and functions of the agencies in the Juvenile Justice System that deal with the juvenile delinquents.

CJC 110 Introduction to Criminology (5-0-5)
Prerequisite: None
The study is primarily concerned with scientific efforts to understand crime and to understand man in relation to crime phenomena. The course examines the theories behind the "whys" of criminal behavior and seeks to find solutions for criminal behavior of groups and individuals in society.

CJC 111 Function of the Judicial Process (5-0-5)
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, pretrial motions, discovery, jury trial, sentencing, appeal, and juvenile court and process are discussed.

CJC 115 Criminal Law (5-0-5)
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 117 Constitutional Law I (5-0-5)
Prerequsites: None
Due process—the fourth, fifth, sixth,

eighth, and fourteenth amendments—is covered in this course by an analysis of the past and present decisions dealing with these amendments. Also dealt with in this course are the exclusionary rule, stop and frisk laws, preliminary hearings, indictments, and informations. The identification process, habeas corpus hearings, extradition, double jeopardy and eavesdropping-wiretapping and bugging are also covered.

CJC 118 Constitutional Law II (5-0-5)
Prerequisite: None
A continuation of CJC 117. Due process, the fourth, fifth, sixth, eighth, and fourteenth amendments. An analysis of the past and present decisions dealing with these amendments. Also, the exclusionary rule, stop and frisk laws, preliminary hearings, indictments, and informations.

CJC 205 Criminal Evidence (5-0-5)
Prerequisite: None
To establish 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, the relevancy, materiality and competency of evidence, the hearsay rule and its exceptions, opinion evidence, character evidence, judicial notice, rebuttable and conclusive evidence, ordinary and expert witnesses, impeachment of witnesses, privileged communications, secondary evidence, etc. Leading cases are reviewed and discussed.

CJC 210 Criminal Investigation (5-0-5)
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 211 Criminalistics (4-2-5)
Prerequisite: None
Continuation of the study of criminal investigation including a general survey of the methods and techniques used in modern scientific investigation of crime, with emphasis upon the practical use of these methods by the students. Laboratory techniques will be demonstrated and the student will participate in practical application of the scientific equipment.

CJC 220 Criminal Justice Organization and Management (5-0-5)
Prerequisite: None
Introduction of principles of organization and administration: emphasis on personnel management, police management, training, management theory, communication, records, planning and budgeting.

CJC 262 Issues in Criminal Justice (5-0-5)
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.

CJC 270 Introduction to Criminal Justice (2-0-10-5)
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 271 Function of Judicial Process (3-0-8-5)
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 272 Criminal Law (4-2-0-5)
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 273 Criminal Investigation (4-2-0-5)

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 274 Issues in Criminal Justice (3-2-0-4)

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.

Business Computer Programming

DAP 121 Fortran Programming I (3-4-5)

Prerequisite: Departmental Approval
A fundamental course in computer programming. The FORTRAN IV compiler language will be used to develop program logic and write computer programs to solve sample problems.

DAP 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 students will also write, compile, correct their errors, and test their solutions to the above problems.

DAP 142 Cobol Programming II (3-4-5)

Prerequisite: DAP 141
The complete capabilities of COBOL will be used to solve sample business problems. Emphasis will be placed on creating indexed files then updating, maintaining and producing reports from these files.

DAP 143 PASCAL Programming (3-4-5)

Prerequisite(s): DAP 141 or Departmental Approval
The PASCAL Language will be used to develop the logic needed to solve a representative sample of business and logic problems. The student will write, compile, correct errors and run their programs to solve the problems.

DAP 146 PC DOS/UNIX Systems (3-4-5)

Prerequisite(s): DAP 150 or Departmental Approval
This course will expose the student into the functions of operating systems on micro-computers, their uses and capabilities. Extensive lab assignments on micro-computers will be utilized for hands-on working knowledge.

DAP 147 DOS/OS/JCL Systems (3-4-5)

Prerequisite(s): DAP 261 or Departmental Approval
This course will expose the student into the world of medium and large IBM Operating Systems, their uses, capabilities and functions. Extensive lab assignments will give the student a hands-on working knowledge of these systems.

DAP 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, word processing, data collection, information organization, and distribution will be investigated. Students will write several simple computer programs in the BASIC programming language.

DAP 155 Computer Concepts (5-0-5)

Prerequisite: None
A course that provides a basic understanding of the internal representation of data, computer components, number systems, and data manipulation. Emphasis will be placed on the IBM 3081 to illustrate operating systems, machine instruction formats, and electronic data representation.

DAP 171 BASIC Programming I (3-4-5)

Prerequisite: None
The BASIC language will be used to develop the logic needed to solve a representative sample of business problems. The students will also write, compile, correct their errors, and test their solutions to the above problems.

DAP 172 BASIC Programming II (3-4-5)

Prerequisite: DAP 171
The complete capabilities of BASIC will be used to solve sample business problems. Emphasis will be placed on creating index files then updating, maintaining and producing reports from these files. Students will also write BASIC programs that will produce data entry screens.

DAP 173 Spreadsheet and Data Base Processing (3-4-5)
Prerequisite(s): DAP 150 or Departmental Approval
This course will provide an introduction into the use of spreadsheets on the micro-computer and the development and application of data base systems on micro-computers. Extensive lab assignments will be used to give students a hands-on working knowledge of current packages.

DAP 174 CICS Programming (3-4-5)
Prerequisite(s): DAP 261 or Department Approval
The student will be exposed to the uses of CICS in a large scale IBM environment, including System Generation, Maintenance, and error correction. Upon completion of this course, the student will have a working knowledge of CICS and its uses.

DAP 181 Introduction to RPG Programming I (3-4-5)
Prerequisite: DAP 150
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 above problems.

DAP 182 Advanced RPG Programming II (3-4-5)
Prerequisite: DAP 181
The complete capabilities of RPG II will be used to solve sample business problems. Emphasis will be placed on creating indexed files then updating, maintaining and producing reports from these files.

DAP 261 Assembler Language Programming (3-4-5)
Prerequisite: DAP 155 or Departmental Approval
An introductory course to a symbolic language. The language will be taught using a particular example that emphasizes the capabilities of the language. The student will be required to solve sample problems using the assembler language.

DAP 262 Assembler Language Programming (3-4-5)
Prerequisite(s): DAP 261
An indepth course programming extensively in assembly language with particular emphasis in understanding more complex routines utilized in systems software and compilers. An analysis of Memory Dumps, uses of registers and error correction will be emphasized.

DAP 263 Introduction of PL/I Programming (3-4-5)
Prerequisite: DAP 121
The basic elements of PL/I will be used to write computer programs to solve a representative sample of simple problems.

DAP 271 Computer Applications I (1-8-5)
Prerequisite: Two (2) quarters of a computer language.
In a language of their choice (COBOL, RPG II, or BASIC) the student will be given one or more small applications using indexed files. The student will be required to create indexed files then update, maintain and produce several reports from these files.

DAP 272 Intermediate Computer Applications (1-8-5)
Prerequisite: Two (2) quarters of two (2) computer languages
The student will be given several computer programs on which he must do program maintenance. He will also be required to change programs from one computer language to another computer language, to modify programs to produce a modified report, and to correct programs containing logical and/or syntax errors.

DAP 273 Advanced Computer Applications (1-8-5)
Prerequisite: Departmental Approval
This course provides the student with the opportunity to develop, program, test, and document the installation of a significant computer application.

DAP 280 Data Communications (3-0-3)
Prerequisite: None
Analog and digital data transfer between computers and terminals as well as other peripheral devices. Alternative methods for reducing telephone line costs will be discussed. Modems, multiplexors, data concentrators, port selectors, and communications protocol will be covered.

DAP 290 Information Management (3-0-3)
Prerequisite: Departmental Approval
Introduction to professional standards and responsibilities, organizational and procedural controls, documentation standards, audit and control of batch systems recovery procedures.

DAP 291 Seminar Workshop (1-0-1)
Prerequisite: None
A workshop in which a specialized area of Computer Science is studied in a concise time period. Must meet eleven hours.

DAP 292 Introduction to Specified Computer Languages (3-4-5)

Prerequisite: None
An introductory course of a computer language selected to supplement the regular course offerings. Languages may be proposed by students/or faculty and must be approved by the Department. The student will deal with documentation, debugging, and computer solutions of business applications programmed in the selected language.

DAP 295 Computer Assisted Statistics (3-2-4)

Prerequisite: MAT 101
Introduction to elementary statistics to include rules of probability, sampling, statistical inference, t, chi square, and F test, Linear regression and decision theory. The statistical packages at the Triangle University Computation Center will be used to solve applicable problems.

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.

DFT 102 Engineering Drawing II (0-6-2)

Prerequisite: DFT 101
Continuation of DFT 101 is devoted to completion of sets of working drawings.

DFT 112 Civil Drafting (0-6-2)

Prerequisites: CIV 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, and graphing. Drawings are done in ink and pencil on paper. Clarity and reproducibility are stressed at all times.

DFT 122 Electrical Drawing (0-3-1)

Prerequisite: DFT 101
The use of standard templates and ANSI symbols in the preparation of block diagrams, schematics, and logic diagrams for electronic devices and electrical systems.

DFT 136 Drafting and Blueprint Reading (0-6-2)

Prerequisite: None
Basic drafting techniques are covered to provide a working knowledge of drafting as a tool for communicating ideas. Reading and interpreting of blueprints is emphasized.

DFT 1100 Architectural Fundamentals (3-0-3)

The history and fundamental differences of residential structures will be explored including different styles of floor plan layouts. Preliminary floor plans will be sketched.

DFT 1101 Drafting Fundamentals (3-12-7)

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 and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, section, and auxiliary views will be emphasized. The study of fasteners will be studied. Dimensioning and notes will be used according to the American Standards Institute practice. Methods of drawings will be included at the appropriate time.

DFT 1102 Precision Drafting (3-12-7)

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 the American Standards Institute. Military standards, company standards, and true position dimensioning practices. Detail drawings, with sections, will be most widely used.

DFT 1103 Specialized Drafting (3-12-7)

The drafting curriculum will be divided into two main phases. The student will choose to study architectural or mechanical drafting. Architectural students will design and draw a complete set of working drawings for a residence. The mechanical students will concentrate on tool design, dies, jigs and fixtures.

DFT 1104 Advanced Drafting (3-9-6)

This study will consist of special problems in mechanical or architectural drafting according to major.

DFT 1105 Electrical Drafting (3-3-4)

Prerequisite: DFT 1130
A study of the codes and electrical loads types of lighting systems, and layouts for commercial buildings. Drawings of these systems will be included.

DFT 1106 Steel Detailing (3-3-4)

Prerequisite: DFT 1130
The course will provide basic knowledge a student needs to detail concrete reinforcing bar, bar supports, welded wire fabric, beams and columns. The student will be able to prepare a drawing complete with a bill of materials, and sufficient information for the steel fabricators to cut and bend bars, and place columns and beams.

DFT 1111 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.

DFT 1114 Drafting Fundamentals (3-12-7)
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 and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, sections and auxiliary views will be emphasized. The study of fasteners will be studied. Dimensioning and notes will be used according to the Americal Standards Institute practice. Methods of drawings will be included at the appropriate time.

DFT 1120 Residential Architecture (3-12-7)
Prerequisite(s): DFT 1114, DFT 1100
A fundamental course in drawing and designing preliminary residential floor plans and elevations. Details of design will be studied.

DFT 1121 Architectural Sections (2-3-3)
Prerequisite(s): DFT 1114, DFT 1100
A study of all the sections required in residential drawings. These include chimney, stairs, wall, cabinet, and other special details.

DFT 1124 Technical Illustration (1-3-2)
A study of methods used in the preparation of pictorial drawings, methods of rendering, use of paste-up techniques for parts catalogs and/or technical manuals. Drawings will be inked on polyester film or illustration board.

DFT 1130 Commercial Architecture I (3-12-7)
Prerequisite(s): DFT 1100, DFT 1120
Students will design and draw a complete set of working drawings for a small office building. These will include floor plan, foundation plan, elevations, plumbing, electrical and all sectional details.

DFT 1131 Auto Schematics and Diagrams (2-0-2)
Prerequisite: None
A study of electrical, vacuum, hydraulic schematic drawings used in the automotive field will be used and will also include point - point diagram and harness diagrams.

DFT 1133 Construction Estimating (4-3-5)
A basic course dealing with the cost of materials and labor in the construction industry. The different types of estimates and the related costs of insurance, taxes, overhead, rentals, and profit will be studied. These will be applied to actual estimating problems in a systematic procedure.

DFT 1134 Building Codes and Laws (0-3-1)
A study of the codes and laws dealing with the construction of residential, commercial, public and institutional buildings. Both state and local codes will be examined in reference to safety, inspection, and enforcement procedures.

DFT 1135 Construction Fundamentals (3-0-3)
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.

DFT 1140 Commercial Architecture II (3-9-6)
Prerequisite: DFT 1130
Advanced drawings of commercial buildings including institutional and assembly buildings such as restaurant, a small church, and condominiums.

DFT 1141 Technical Illustration (1-3-2)
Prerequisite: DFT 1130
A study of methods used in the presentation of pictorial drawings. Methods of rendering, use of ink and various coloring materials will be used to present a rendering of an office building in perspective on illustration board.

DFT 1144 Electronics and Drafting (2-3-3)
A study is made of electricity and electronics as it relates to the drafting field. Electrical and electronic components, diagrams, and methods will be studied in relation to printed circuit boards and lighting layouts.

DFT 1147 Machinist Drafting (3-6-5)
Prerequisite(s): None
A study of drawing principles and practices for print reading and describing objects in graphic language. Basic skills and 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 practice of dimensioning

DFT 1150 Introduction to CAD (3-3-4)
Prerequisite: Departmental Approval
An introductory course to the computer aided drafting systems. Basic functions of the devices will be introduced and their uses explained. Use of the plotters will also be included.

DFT 1153 Architectural Materials and Systems (3-0-3)
The building materials area is studied using Sweet's Files and Catalogs as resources. The building of floor, wall, ceiling and roof systems is examined in detail.

DFT 1160 CAD I (3-3-4)
Prerequisite: DFT 1150
A continuation of DFT 1150 with emphasis on the use of the more advanced functions and plotting a controlled layout. Drafting of problems related to practical applications will be introduced.

DFT 1163 Construction Estimating (0-3-1)
A basic course dealing with the cost of materials and labor in the construction industry. The different types of estimates and the related costs of insurance, taxes, overhead, rentals, and profit will be studied. These will be applied to actual estimating problems in a systematic procedure.

DFT 1170 CAD II (3-3-4)
Prerequisite: DFT 1150, DFT 1160
A review of all the functions and plotting. Most of the time will be for practice and for drafting of practical problems such as assemblies and details.

DFT 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 and licenses, analysis of plans and specifications for the preparation of electrical estimates covering industrial, commercial, and residential wiring installations.

DFT 1173 Schematics and Diagrams (1-3-2)
A study of the electrical harness diagrams and other electrical schematic drawings used in the diesel industry. The basic techniques of using a diagram for troubleshooting will be carried out in the lab exercises.

DFT 1183 Printed Circuits and Soldering (3-3-4)
Prerequisites: ELN 1121 and ELN 1111.
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.

DFT 1190 Independent Study (0-3-1)
Prerequisite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefits.

Marketing Technology

DMK 101 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. (Formerly BUS 222)

DMK 102 Fundamentals of Fashion Merchandising (5-0-5)
Prerequisite: None
An introduction to fashion merchandising, giving the student an understanding of the basic principles of fashion; how fashions begin, move, and disseminate. The course also concerns itself with how fashions may be predicted along with a basic understanding of merchandising activities and operations. Emphasis will also be placed on fashion careers.

DMK 105 Personal Development (3-0-3)
Prerequisite: None
This course is designed to enable the student to enhance and train his/her mind and body in the following areas: self-esteem and personality, physical conditioning, nutrition and diet, clothing and appearance, habits of orderliness, overall grooming, graciousness, manners, and customer awareness. This course attempts to develop the student's on-the-job potential in making the most of his or her physical, mental and emotional attributes.

DMK 109 History and Psychology of Dress (5-0-5)
This course examines the interrelationship between clothing and its cultural, social, psychological, physical, economic, and aesthetic implications. The course enables the student to build a knowledge of the role clothing plays in the development and understanding of others. The course takes a look at clothing and textiles as a medium for artistic perception, expression, and experience. It enables the student to become aware of the impact of individual clothing choices or fashion and market trends.

DMK 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.

DMK 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.

DMK 151 Principles of Transportation (5-0-5)
Prerequisite: None
An introductory course designed to orient students in the economic, social, and political aspects of transportation. An analysis of the economic characteristics of air, motor, rail, and water transportation and regulatory agencies is made.

DMK 152 Traffic Management (5-0-5)
Prerequisite: None
An intermediate course in Traffic Management which is also designed as an introduction to the study of rates. Emphasis is placed on the problems and relationship between the shipper and the receiver of traffic on the one hand, and the various types of carriers on the other. Importance and place of modern industrial traffic management, traffic organizations, shipping documents, carrier liability, shipper responsibility, routing, diversion, reconsignment and transit privileges. Attention is given to the types or rates, classification, tariffs, rate bureaus and the ratemaking process.

DMK 154 Transportation Law and Procedures (5-0-5)
Prerequisite: DMK 151, 152, 253 or Departmental Approval
A detailed analysis of transportation, law, appropriate court and Commissions' decisions and procedure before the Commissions.

DMK 204 Fashion Design (3-0-3)
Prerequisite: None
This course is designed to develop fashion sketching techniques for promoting designs which are already complete, for illustrations in magazines, newspapers, poster design, display, etc. The course enables the student to understand different fabrics and the way they drape, develops creativity in design, and aids to understanding fashion design as it relates to the figure.

DMK 211 Fashion Show Production (5-0-5)
Prerequisite: DMK 102
This course enables the student to recognize the different objectives of various types of fashion shows and the necessary procedures and elements for their success as a promotional activity. The course culminates in an actual production put on by the students.

DMK 215 New York Field Studies Seminar (0-6-3)
Prerequisite: None
This course enables the student to spend seven days and six nights in New York with daily seminars by leading fashion professionals. The course gives the student an inside look at the fashion industry, from manufacturer to retailer.

DMK 219 Credit Procedures & Problems (3-0-3)
Prerequisite: None
The student will be able to describe and discuss principles and practices in the extension of credit, classes of credit, credit instruments, consumer credit and current collection methods and procedures, and federal, state, and local credit regulations.

DMK 231 Distribution Management (3-0-3)
Prerequisite: DMK 120
Provides an understanding and a frame of reference on how to plan, organize, and control the relationships among the institutions and agencies involved in making products and services available for consumption by consumers, and industrial and commercial users so there is assurance of adequate levels of time, place, and possession utilities available to users.

DMK 232 Marketing Management (3-0-3)
Prerequisite(s): DMK 120, BUS 121
An overview of the critical aspects of marketing management with major emphasis on achieving a balance between theory and practice. Emphasis is on strategic planning; marketing information systems and research; buyer behavior; product strategy; new product planning and development; promotion, distribution and pricing strategy, marketing of services and in social fields. Case problems are used extensively.

DMK 233 Marketing Research (2-3-3)
Prerequisite(s): BUS 111, BUS 121, DMK 120, DMK 232
Application of scientific methods of obtaining information for structuring marketing strategies, policies, and techniques with emphasis on the role of research in the solution of marketing problems.

DMK 234 International Marketing (5-0-5)
Prerequisite(s): DMK 120, DMK 232
Provides an understanding of the role of international trade in keeping with the current trend in world business which is creating more intense competition for American companies. Emphasis is on marketing strategies to overcome problems and realize opportunities. Both imports and exports are covered.

DMK 235 Consumer Behavior (3-0-3)
Prerequisite: None
A study of buyer behavior that examines consumers who purchase and consume goods as individuals or as members of individual household units. The course provides a study of consumer behavior in an attempt to better understand and predict human actions in the buying role.

DMK 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 the 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.

DMK 253 Carrier Rates (5-0-5)
Prerequisite: DMK 152
The purpose of this course is to assist the beginner in bridging the gap between the theoretical and the practical aspects of freight tariffs. Hypothetical shipments will be rated by using the tariffs.

DMK 255 Domestic Transportation Claims (3-0-3)
Prerequisite: None
A course to study the law and procedures for handling domestic loss, damage, and delay claims. Both regulated and unregulated carriers will be considered.

DMK 256 International Transportation (5-0-5)
Prerequisite: None
A course which considers the nature and scope of the U.S. international transportation; including water, air, rail, and highway transport. Also considered are international freight forwarders and customhouse brokers. Rate structures and regulation will also be analyzed.

DMK 261 Commercial Display & Design (2-3-3)
Prerequisite: None
This course is designed to study and plan, prepare and arrange effective types of displays, window and interior. Topics studied include basic layout and design of commercial displays as needed by various marketing and distribution businesses.

DMK 268 Merchandising Applications in Retailing (1-10-2)
Prerequisite: All other required DMK courses in Retailing Program
Course is designed to develop occupational competencies through experience and practice through on-the-job experience in a cooperative program where the student will be given opportunities to apply knowledges acquired in previous marketing and distribution studies. The student will be supervised and coordinated by the instructor and employer. These applications will include decision making relating to merchandise assortments, store operations, organizational division of responsibilities, and implementation of decisions.

DMK 269 Marketing & Distribution Applications (1-10-2)
Prerequisite(s): All other required DMK courses in program
Course is designed to develop occupational competencies through experience and practice through on-the-job experience in a cooperative program. Student will have opportunities to apply knowledges and skills acquired in previous marketing and distribution courses. Students will be placed with commercial and industrial organizations, and also service organizations. Supervision and coordinations will be by the instructor and the employer.

DMK 290 Marketing & Distribution Seminar/Workshop (1-0-1)
Prerequisite: None
Designed to cover areas of contemporary concerns and problems in the field of marketing.

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 101 or Departmental Approval
This course provides students with guided practice in carrying out responsibilities in play production under the pressure of preparing plays for audience approval. Students enrolled may expect to play roles and 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 201 History of Theatre—Ancient (3-0-3)
Prerequisite: DRA 101 or Departmental Approval
This course is a study of the specific conditions under which the great plays of the world have been produced. Consideration of audience, actors, physical conditions, social conditions, and playwright are studied. Representative plays are studied from the Ancient to the Renaissance Period.

DRA 202 History of Theatre—Renaissance (3-0-3)
Prerequisite: DRA 101 or Departmental Approval
This course is a study of the specific conditions under which the great plays of the world have been produced. Consideration of audience, actors, physical conditions, social conditions and the playwright are studied. Representative plays are studied from the Renaissance to the Realistic Period.

DRA 203 History of Theatre—Realistic (3-0-3)
Prerequisite: DRA 101 or Departmental Approval
This course is a study of the specific conditions under which the great plays of the world have been produced. Consideration of audience, actors, physical conditions, social conditions, and the playwright are studied. Representative plays are studied from Realistic Period to the present.

DRA 204 Play Production III (0-9-3)
Prerequisite: DRA 101 or Departmental Approval
This course provides students with guided practice in carrying out responsibilities in play production under the pressure of preparing plays for audience approval. Students enrolled may expect to play roles and serve as members of the scenery, sound, property, lighting, costume, publicity, or make-up staffs.

DRA 205 Play Production IV (0-9-3)
Prerequisite: DRA 101 or Departmental Approval
This course provides students with guided practice in carrying out responsibilities in play production under the pressure of preparing for audience approval. Students enrolled may expect to play roles and serve as members of the scenery, sound, property, lighting, costume, publicity or make-up staffs.

DRA 206 Costuming for the Stage (1-4-3)
Prerequisite: DRA 101 or Permission of Instructor
This course is a study of historical costume styles in relation to costuming for the modern theatre.

Diesel Vehicle Maintenance

DSE 1101 Diesel Engines (3-12-7)
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in diesel repair work. Study of the construction and operation of components of diesel engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams, and camshafts, fuel and exhaust systems, cooling systems, proper lubrication; and methods of testing; diagnosing and repairing.

DSE 1102 Electrical Systems (3-6-5)
A thorough study of the theory and operation of various farm and heavy equipment electrical systems including 24 volt starting and charging systems. Maintenance and testing procedures, diagnosis and repair of all types of electrical/electronic components, especially the transistor circuits found on modern heavy-duty equipment.

DSE 1103 Power Trains I (3-6-5)
The objectives of the course include the following: to give the student a basic understanding of power trains; to give the student practice in determining the nature of troubles developed in various component parts; to help the student understand the various types of systems and how they work; and to promote a full knowledge of adjusting, repairing and replacing different components and/or parts.

DSE 1104 Power Trains II (3-6-5)
Principles and functions of automotive power train systems; clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair.

DSE 1111 Diesel Fuels (3-6-5)
A thorough study of the fuel system of the diesel including internal and external repair of pumps and injectors. Electrical and electronic equipment will be used to diagnose problems in fuel pumps, fuel injectors, and emission control systems. Special tools and instruments used in maintenance and repair will be presented.

DSE 1113 Chassis and Suspensions (3-3-4)
Principles and functions of the components of the chassis. Practical job instruction in adjusting and repairing of suspension and steering. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end types.

DSE 1114 Diesel Servicing (3-9-6)
This course includes instruction in shop procedures necessary in determining the nature of trouble developed in various component systems. Trouble-shooting of all systems provides a full knowledge of all testing, adjusting, repairing, and replacing.

DSE 1124 Air Conditioning (3-3-4)
General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.

DSE 1132 Braking Systems (1-6-3)
A complete study of various braking systems that are used in construction equipment, road vehicles, and farm equipment. Emphasis is placed on how they work and proper adjusting techniques and replacement.

DSE 1143 Hydraulic and Pneumatic Systems (3-3-4)
This course deals with hydraulic and pneumatic systems that are used in construction equipment, road vehicles, and farm equipment. It covers basic theories, construction, adjustment, and repair of hydraulic and pneumatic systems.

DSE 1190 Independent Study (0-3-1)
Prerequisite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefits.

Economics

ECO 101 Economic Concepts I (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)
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 macroeconomic principles, problems, and issues with applications to United States consumers and business firms.

ECO 209 Money & Banking (5-0-5)
Prerequisite: ECO 201
A study of money, its nature and history, the commercial banking process, the structure and operations of the Federal Reserve System, significance and measurement of money and the national income, review of U.S. monetary policy, financial institutions other than commercial banks, and international banking.

ECO 212 Economics (3-0-3)
Prerequisite: MAT 112
A general survey of economics, economy studies, factors determining present economy, interest and annuity relationships, depreciation and valuation, and basic economy study patterns.

Education

EDU 101 Introduction to Early Childhood Education (4-2-5)
Prerequisite: None
An introduction to the various types of child-care provided for pre-school children. Emphasis will be placed upon understanding the concepts of readiness, motivation, and discipline as well as upon planning techniques for lessons and experiences which are appropriate to child's developmental stage. Consideration will be given to developing professional attitudes and behavior.

EDU 106 Practicum: Early Childhood Education (1-6-3)
Prerequisite: Permission of Department Approval
Practicum in teaching/learning. Includes a one-hour seminar each week plus field experience. Each student will be assigned to a qualified teacher and will be directly involved in special assignments (e.g. tutoring, setting up learning centers, presentation of small and large group activities.)

EDU 113 The Behavior of Children (4-2-5)
Prerequisite: None
The course will deal with the "whole child" in terms of his interaction with the social, emotional and physical aspects of his world. Behavior of children will cover prenatal development through the middle years of childhood. Stress will be placed on real life situations as well as academic proficiency. Course is particularly designed for individuals who plan on working with pre-school age children.

EDU 114 Health & Safety 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. Emphasis will be placed on the construction of teaching units for use with young children.

EDU 116 Communicating with the Young Child (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 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.

EDU 162 Microcomputer Word Processing (2-0-2)
Prerequisite: EDU 161 or Departmental Approval
This is designed to demonstrate the various editing and formating functions of word processors. Instruction and hands-on experience will be provided with four word processing software packages utlizing these functions.

EDU 165 Microcomputer Instructional Aids (2-0-2)
Prerequisite: EDU 161 or Departmental Approval
This is designed to demonstrate the varied ways that the microcomputer can aid the teacher in conducting the evaluating instruction. Instruction and hands-on experience will be provided in: quiz preparation and grading, test preparation, and record keeping (grades, tests, attendance, etc.).

EDU 169 Microcomputer Projects (1-0-1)
Prerequisite: EDU 161 or Departmental Approval
This is supervised independent study project submitted by the student and approved by the instructor.

EDU 190 Workshop in Stories for Young Children (1-0-1)
Prerequisite: None
This course will deal with the art of presenting literature to young children. Stress will be placed upon storytelling and oral reading as well as the importance of literature in helping children develop sex-role identification, achievement motivation, career awareness, and emotional security. This course is designed to be a terminal course.

EDU 191 Workshop in Planning and Organization (1-0-1)
Prerequisite: None
Class will deal with aspects of classroom organization such as integrated day and use of learning stations. Practice will be given in formulating objectives and choosing methods for evaluating outcomes. Lesson plans, game making, and unit construction will be discussed. This course is designed to be a terminal course.

EDU 192 Workshop in Phonics (1-0-1)
Prerequisite: None
Practical experience will be given in auditory discrimination and use of phonetic clues to assist reading skill development. Methods of teaching phonetic skills to young children will be explored and practiced.

EDU 201 Introduction to Education (5-0-5)
Prerequisite: None
A course designed for students beginning professional training in teacher education. It aims to acquaint the prospective teacher with four major aspects of education: the teaching profession, the school system, the teacher and the pupil.

EDU 203 The Exceptional Child (3-0-3)
Prerequisite: None
The study of children with developmental variations. Considerations is given to recognition of problems, community resources, and selection of appropriate activities for the child with exceptional mental or physical development.

EDU 207 Music in the Early Childhood Program (4-2-5)
Prerequisite: None
Study of music which is appropriate for young children and 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. Laboratory sessions provide opportunities for learning songs and developing extensive files; field experience provides opportunities to participate in and evaluate music activities for various age groups.

EDU 208 Art in the Early Childhood Program (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 of art activities which could be incorporated into a program for young children.

EDU 211 Science in the Early Childhood Program (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 Mathematics for Young Children (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 234 Production & Utilization of Audio-Visual Materials (3-3-4)
Prerequisite: None
An introduction of the various nonprint approaches to instructing children. Emphasis will be placed upon actual making of materials plus the instructional theory underlying nonprint media.

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.

Engineering Technology

EGR 103 Engineering Mechanics (3-3-4)
Prerequisite; PHY 122
Forces, resultants, and equilibruim by analytical and graphical methods; moments and couples; forces in simple structures and trusses; static and kinetic friction, kinetics; force, mass, acceleration and momentum.

EGR 201 Strength of Materials (3-3-4)
Prerequisite: EGR 103
Basic 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 in beams, stresses in beams, and design of beams.

EGR 221 Computer Programming (3-3-4)
Corequisite: MAT 111 or BUS 111
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.

EGR 231 Industrial Ecology Analysis (2-3-3)
Prerequisite: CIV 253
An introduction to the basic concepts of ecology. The subject matter deals with man, the organization, the environment, conservation, energy, the impact of man and his technology as it relates to the engineering technician.

EGR 241 Robotics I (3-3-4)
Prerequisite: EGR 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.

EGR 242 Robotics II (3-3-4)
Prerequisite: EGR 241
Robotics II assumes the student has a general knowledge of robots and robotic applications. This course examines task requirements and robot specifications. Emphasis in both class and lab work is on making a robot program.

Electrical Engineering Technology

ELC 101 Electrical Fundamentals (3-3-4)
Corequisite: MAT 111
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)
Prerequisites: ELC 101, MAT 111
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 112
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, printed circuit layout and drawing, 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 the transformers, alternators, and induction motors.

ELC 222 Alternating-Current Machinery (3-3-4)
Prerequisite: ELC 221
Construction, principles, characteristics, operation, efficiency, selection and application of transformers, single-phase and poly-phase induction motors, alternators and synchronous motors.

ELC 223 Electrical Control Systems I (3-3-4)
Prerequisite: ELC 222
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 tranducers, control media and actuators. Transfer functions and stability criteria are applied to closed loop controllers.

ELC 241 Codes & Specifications (2-3-3)
Prerequisite: ELC 103
A study of the provisions established by the National Electrical Code for the safeguarding of persons, buildings and their contents, from the hazards arising from the use of electricity for light, heat, power, radio signaling, and for other purposes. A review of standard specifications for installing electrical equipment.

ELC 242 Illumination (2-3-3)
Prerequisite: ELC 241
A study of the eye and vision, light characteristics and measurements, light sources, illumination levels, interior and exterior lighting design.

ELC 243 Design Methods and Estimates (2-3-3)
Prerequisite: ELC 241
Analysis of electrical plans and specifications. The development of current material costs and labor units. The preparation of electrical construction estimates for industrial, commercial, and residential wiring installations.

ELC 253 Power Systems I (2-3-3)
Prerequisite: ELN 201
This is an introductory course in power systems involving basic concepts, series impedance of transmission lines, capacitance of transmission lines, current and voltage relations on a transmission line and the representation of power systems.

ELC 262 Power Systems II (3-3-4)
Prerequisites: ELC 253, ELN 202
This is a follow-up course in power systems involving load flow, economic operation and fault, and stability studies in power systems.

ELC 282 Electric Circuits & Machines (3-3-4)
Prerequisite: PHY 123
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, electro-magnetic induction, direct-current generators, and direct-current motors.

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 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 1110 AC and DC Circuits (3-9-6)
Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements and transformers. Instruction in the use of the electrical test instruments in circuit analysis of both AC and DC current.

ELC 1111 Basic Auto Electricity (3-3-4)
Prerequisite: None
A study of basic principles of electricity, types of electricity, its production, transmission, and transformation as pertains to the automobile. The relationship between voltage, current, resistance in parallel and series parallel circuits. Review of electrical schematics and diagrams. Electrical symbols, and use of meters constitute major areas of study.

ELC 1113 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.

ELC 1114 Electrical 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, placements and safety features.

ELC 1115 Electric Motors (3-0-3)
Prerequisite(s): None
An examination of the different types of electric motors including their particular uses and advantages in different situations.

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 1141 Air Conditioning (5-3-6)
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 1143 Electrical Controls (3-6-5)
Prerequisites: ELC 1101, ELC 1102
Basic industrial electronic systems, such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems useing thyrathron tubes, and other basic types.

ELC 1144 Commercial Wiring (3-6-5)
Prerequsites: 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 Electical Code. Load calculations. Actual wiring of commercial type installation in building mock-ups.

ELC 1151 Residential Wiring Methods (3-12-7)
A complete study of residential wiring systems and components with particular emphasis on the National Electrical Code, State and Local Codes.

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 electical 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, or sequencing switches.

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 15 Kilowatts.

ELC 1184 Industrial Electronics (3-3-4)
Prerequisites: ELC 1101; ELC 1102
A survey course in electronic devices and circuits that are fundamental to the electrical trade.

ELC 1190 Independent Study (0-3-1)
Prerequsite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefits.

Electronics Engineering Technology

ELN 103 Electronics I (2-3-3)
Prerequisites: ELC 102, MAT 112
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 201 Electrical Circuits I (3-0-3)
Prerequisites: ELC 103, MAT 113
Introduction to alternating current circuit analysis techniques, Thevenin's and Norton's theorems, loop analysis, nodal analysis, series-parallel conversion techniques, maximum power transfer, delta-wye transformations.

ELN 202 Electrical Circuits II (3-0-3)
Prerequisite: ELN 201
Series and parallel resonance, Q and bandwidth, mutual induction and transformers, three phase systems.

ELN 211 Electronics II (3-3-4)
Prerequisite: ELN 103
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 III (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)
Prerequsite: 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 103 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, RS latches, D latches, JK flip-flops, counter design, ROM's PROM's, and RAM's.

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)
Prerequisite: ELN 242
Input/output operations of 8085 microprocessor. Support chips and the analog interface.

ELN 251 Field Effect Transistors (3-3-4)
Prerequsite: ELN 103
Operating principles, construction, and characteristics of JFET's and MOSFET's biasing the FET, the universal JFET bias curve; small signal analysis; the Miller effect.

ELN 253 Communications Circuits (3-3-4)
Prerequsites: ELN 212, ELN 202
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 273 Pulse Circuits (2-3-3)
Prerequsites: ELN 103, MAT 113
A study of basic pulse definitions, Fourier analysis of nonsinosoidal waveforms, transient response of R-L and R-C circuits, diode, switching, clipping and clamping circuits, transistor switching circuits.

ELN 283 Integrated Circuits (2-3-3)
Prerequisites: ELN 211, ELN 241, ELN 251
A study of the internal circuitry of selected digital and linear integrated circuits; differential and operational amplifiers; fabrication of monolithic IC's.

Electronics Servicing

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 1102 A.C. Circuits (3-12-7)
A study of the fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance, phase angle, power, and resocircuits.

ELN 1112 Trouble-Shooting Techniques I (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 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.

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, the 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; non-sinusoidal 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 TV 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 1190 Independent Study (0-3-1)
Prerequisite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefits.

Emergency Medical Science

EMS 101 Fundamentals of EMS (4-2-1-5)
Prerequisite: Acceptance as an EMS Student
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 (4-0-3-5)
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 is emphasized.

EMS 103 Principles of Extrication and Rescue (4-3-0-5)
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 specific 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 (2-0-9-5)
Prerequisites: EMS 102, BIO 110
Corequisite: EMS 103, EMS 104
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)
Prerequisite: 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 contraindictions for use of siren and lights). Advanced driving maneuver skills include lane changes, 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)
Prerequisite: EMS 101, EMS 102, EMS 105, BIO 110, Acceptance as an EMS Student
In this course, anatomy and physiology of the cardio-pulmonary systems are reviewed. Basic electrocardiography and the study of common cardiac arrhythmias is introduced. Coronory 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 basic arrhythmia recognition and familiarizes the student with cardiac monitoring techniques and devices.

EMS 202 Clinical Seminar and Practicum III (2-0-9-5)
Prerequisite: EMS 110, EMS 104, EMS 108, EMS 216
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 pre-hospital 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
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)
Prerequisite: 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 ante-partal, intra-partal, and post-partal phases of pregnancy. Concurrent with EMS 207-OB Newborn, Pediatric and Geriatric Emergencies.

EMS 207 OB, Newborn, Pediatric, and Geriatric Emergencies (4-0-0-4)
Prerequisite: PSY 201, Acceptance as an EMS Student
Corequisite: EMS 206
Assessment and decision-making concerning obstetrical and gynecological emergencies are covered in this course. The student is prepared to recognize iminent 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, BUS 273
Corequisite: BUS 233
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 Communications and Documentation for EMS (3-0-0-3)
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 electrocardiographic 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.

English

ENG 100 Essentials of English (5-0-5)
Prerequisite: None
This course is designed to assist the student to review the fundamental skills of grammar and to develop entry level proficiency in the basic writing skills. The

course includes parts of speech, sentence structure, vocabulary, spelling, and paragraph building. A diagnostic pre-test identifies area of weakness and enables the student to work at his own pace, without strict adherence to the quarter timetable.

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. Various types of themes are considered, and students write themes based upon the principles exemplified in the sample themes which are studied. 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: None
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 122 Composition II (3-0-3)
Prerequisite: ENG 121
A course presenting a fuller continuation of correct English usage. Comprehensive study of major principles of effective business correspondence and communication, and the application of these principles to specific types of practical writing through term paper, theme, and business writing projects. Special emphasis is given to writing assignments appropriate to the engineering technician.

ENG 123 Report Writing (3-3-4)
Prerequisite: ENG 122
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.

ENG 190 Freshman Literature-H (5-0-5)
Prerequisites: ENG 101 and an ACT composite score of 24 or above or 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)
Prerequisites: 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 the Civil War writers and continues through the Twentieth Century.

ENG 217 Children's Literature (3-0-3)
Prerequisite: None
English 217 is a study of children's literature which includes the various types of literature appropriate for young children. Evaluation of modern writers, illustrations, and books will be emphasized.

ENG 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 of material. Interplay between class members and role playing are also stressed.

ENG 290 Seminar/Workshop (1-0-1)
Prerequisite: None
A workshop in which a specialized area of languages or literature is studied in a concise period. It may include off-campus travel. Must meet 11 hours.

ENG 1101 Reading Improvement (2-0-2)
A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Reading faults of the individual are analyzed for improvement, and principles of vocabulary building are stressed.

ENG 1102 Communication Skills (2-0-2)
Development of ability to communicate effectively through the medium of good language usage in speaking and writing. Organizing thoughts, and presenting thoughts effectively in connection with problems.

English (As-a-second Language)

ESL 100 Practical English (3-0-3)
Prerequisite: None
The course will teach English-as-a-second language. It will approach cultural differences and attitudes which are caused by language deficiencies and will help students identify their language needs in relationship to their own goals. Students' individual language goals along with instruction in pronunciation, spelling, and word recognition will be primary course content.

Earth Science

ESC 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.

ESC 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 GLY 102.

Fire Science

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 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 103 Construction Codes and Material Rating (2-2-3)
Prerequisite: FIP 101
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 105 Applied Electricity for Fire Protection (3-2-4)
Prerequisite: None
A thorough study of methods and means of utilizing electricity to provide power. The installation and maintenance of electric circuit and machinery.

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 120 Municipal Finance (5-0-5)
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 audits.

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 205 Industrial Hazards (3-2-4)
Prerequisite: FIP 101
A study of hazardous processes in industries such as petroleum, furniture, chemical, tobacco, metal, and textile, and 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 is 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 covered briefly.

FIP 216 Chemical & Radiation Hazards (3-2-4)
Prerequisite: FIP 218, FIP 101
Intensive study and analysis of the special hazards encountered in the chemical and petroleum industries. Radiation hazards, effects of radiation on humans, exposure control, radiological instruments, operational and decontamination procedures, common uses of radioactive materials, transportation, storage, application of special inspection procedures.

FIP 218 Chemistry of Hazardous Materials (3-2-4)
Prerequisite: CHM 100
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 application of the laws and principles of chemistry and physics to the use, storage, and disposal of flammable liquids, solids, gases and ducts.

FIP 220 The Fighting Strategy (3-2-4)
Prerequisite: FIP 102
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 230 Hydraulics and Water Distributive Systems (3-2-4)
Prerequisites: MAT 101, PHY 101
Mechanics of the flow of fluids through fire hose, nozzles, and appliances, pumps, standpipes, watermains, and other devices. Design, testing, and use of nozzles, and 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 231 Sprinkler and Standpipe Systems (3-2-4)
Prerequisite: FIP 230
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 235 Inspection Principles and Practices (3-4-5)
Prerequisites: FIP 103, DFT 136
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 240 Multiple Line Insurance & Rating Schedule (4-0-4)
Prerequisite: FIP 211
A study of multiple line insurance, types of policies, selection, rate making, settlement of claims, handling of risks, and self-insurance. Types of rating schedules including the analytic and mercantile schedule. Methods of determining fire rating classification.

FIP 245 Automatic Alarm & Extinguishing Systems (3-2-4)
Prerequisite: FIP 105
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.

French

FRE 100 Conversational French (5-0-5)
Prerequisite: None
This is a one-quarter course for students desiring a basic vocabulary and the ability to engage in simple conversation. This course is designed as a study of the French people, their language, and their culture with emphasis on fundamental sounds and structures of the language. This course is planned for beginning students or for those desiring to up-grade previously acquired skills in French.

FRE 101 Elementary French (5-0-5)
Prerequisite: None
This 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
This is a course which stresses the continuing development of the basic language skills and cultural studies.

FRE 106 French Civilization (3-0-3)
Prerequisite: None
This is a course designed to foster a greater understanding and appreciation of French culture and civilization with emphasis on history, geography, culture, society, economics, politics, and government. The course consists of lecture, outside readings, class reports, a research project and is taught in English. It is also offered as HIS 106.

FRE 201 Intermediate French (5-0-5)
Prerequisite: FRE 101 and 102 or 2 years high school French
This is a course which 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
This is a course which stresses spoken and written expression. It includes a grammar review, extensive readings, and cultural studies.

FRE 250 Independent Study (5-0-5)
Prerequisite: Departmental Approval
A student who has completed the first two years of French may elect this course. The nature of the course and the amount may be determined by consultation with the instructor.

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, water, soils, and seas. Also offered as ESC 101.

GEO 104 Introduction to Cultural Geography (3-0-3)
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 105 Ecology of Man (5-2-6)
Prerequisites: BIO 101, BIO 121, or GEO 101
A course which examines the past and present relationships of man with his biophysical environment. Consideration will

be given to ecological concepts, population growth, pollution, human variation, and conservation of natural resources. This course is also offered as BIO 105 Ecology of Man.

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 BIO 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.

Geology

GLY 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 ESC 102.

History

HIS 101 World Civilization—Ancient (3-0-3)
Prerequisite: None
A history of civilizations 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 106 French Civilization (3-0-3)
Prerequisite: None
This is a course designed to foster a greater understanding and appreciation of French culture and civilization with emphasis on history, geography, culture, society, economics, politics, and government. The course consists of lecture, outside readings, class reports, a research project, and is taught in English.

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, educational, 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.

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)
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.)

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)
Prereqiusite: 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: PSY 111
A comprehensive review of industrial hazards, prevention of accidents, and a study of the laws covering occupational health and safety.

ISC 201 Production Planning (3-0-3)
Prerequisite: None
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)
Prerequisites: MAT 111 or BUS 111
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 223 Work Measurement (2-6-4)
Prerequisite: ISC 222
Basic time study concepts and familiarization with the tools of time study. The application of performance ratings and allowances to basic times 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 280 Quality Control Seminar (2-0-2)
Prerequisite: MAT 111
This course is designed to acquaint the student with basic probability theory as it is used in control charts. Interpretation of raw data, establishing production capabilities and evaluation of control chart data will be covered.

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. (Industrial Maintenance Program)

Law

LAW 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 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.

LAW 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.

LAW 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.

LAW 216 Property Law (3-0-3)
Prerequisite: None
The law of real property and personal property; estates in land and future interests. Leasing, transferring, mortgages, recording, covenants, easements, licenses, landlord and tenant, wills, and successions, probate.

Math

MAT 093 Basic Calculations for Drug Administration (5-0-5)
Prerequisite: None
This course is designed for students who plan to enter a nursing or allied health curriculum. Topics include a review of arithmetic operations, basic math skills, systems of measurements and computations of drug doses within these systems. A diagnostic pre-test identifies areas of weakness which the student needs to strengthen in order to complete course requirements. A grade of S (for satisfactory progress) is given each quarter until course requirements are complete at which time the student will receive a grade. Credit may not count for associate degree requirements.

MAT 100 Essentials of Math (5-0-5)
Prerequisite: None
This course is intended to develop the basic mathematical skills necessary in a wide variety of areas. Included are computational skills relative to whole numbers, fractions, ratios, and percentages with the natural flow from arithmetic to algebra. Topics include linear expressions and equations, factoring, exponents and radicals, graphing, quadratics, and others. A variety of instructional methods are used including individualized techniques. Diagnostic Testing is provided and students may begin and complete such materials as are deemed appropriate without strict adherence to the quarter timetable.

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, the binomial theorem, and elementary analytic geometry.

MAT 102 Topics in Mathematics (5-0-5)
Prerequisite: MAT 101
A continuation of the study begun in MAT 100 or MAT 101 including an introduction to trigonometry, permutations, and combinations, probability, statistics, and analytic geometry. The course also includes a discussion of the fundamental concepts of both differential and integral calculus with applications.

MAT 104 Trigonometry (5-0-5)
Prerequisite: MAT 101
A study of the trigonometric functions, complex numbers, and logarithms.

MAT 105 Advanced Algebra & Trigonometry (5-0-5)
Prerequisite: Departmental Approval
Selected topics in advanced algebra and intensive study of analytic trigonometry. This course is designed as a precalculus course. A student may not receive graduation credit for MAT 105 if he/she has successfully completed MAT 101 and MAT 104.

MAT 106 Analytic Geometry & Calculus (5-0-5)
Prerequisite: MAT 105, MAT 104
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.

MAT 107 Analytic Geometry & Calculus (5-0-5)
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.

MAT 111 Algebra & Trigonometry I (5-0-5)
Prerequisite: Minimum ACT math score of 35 or 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; exponents and radicals. Electronic calculator instruction is integrated to coincide with the appropriate lecture materials and applications appropriate to engineering technology.

MAT 112 Algebra and Trigonometry II (5-0-5)
Prerequisite: MAT 111
Exponential and logarithmic functions; systems of equations; determinants and matrices; inequalities; introduction to linear programming; arithmetric and geometric progressions, inverse trigonometric function, trigonometric identities and equations. Introduction to statistics and empirical curve fitting. Applications and further electronic calculator techniques.

MAT 113 Analytic Geometry and Calculus I (5-0-5)
Prerequisite(s): MAT 112, EGR 221
Introduction to analytic geometry, a study of the linear equation and the conic sections in rectangular and polar coordinates. Differentiation of algebraic, logarithmic and exponential functions. Applications of derivatives to physical problems such as velocity, acceleration, maxima and minima. Integration techniques and use of the table of integrals. Evaluation of the definite integral, plane areas and volumes of revolution, applications to centroids, moments of inertia, and work. Emphasis is placed on the use of the computer for problem solving appropriate to engineering technology.

MAT 114 Analytic Geometry and Calculus II (5-0-5)
Prerequisite: MAT 113
Methods of integration; introduction to solid analytic geometry; curves and surfaces in three dimensions. Partial derivatives and double integrals; centroids and moments of inertia by double integration. Differentiation and integration in polar coordinates with applications. Functions in series. Differential equations of the first and second order with an introduction to the Laplace transform. Computer usage is emphasized in empirical curve fitting and numerical solutions to differential equations appropriate to engineering technology.

MAT 206 Analytic Geometry and Calculus (5-0-5)
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.

MAT 207 Analytic Geometry and Calculus (5-0-5)
Prerequisite: MAT 206
A continuation of MAT 206. Included are physical applications including moments and centroids, multiple integrals, and an introduction to differential equations.

MAT 210 Elementary Statistics (5-0-5)
Prerequisite: MAT 101 or its 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, non-parametric 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, multiplication, 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)
Fundamental 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; fractions, 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: ELN 1111
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.

Microcomputer Awareness

MCS 170 Microcomputer Awareness (1-0-1)
Prerequisite: None
A course designed to introduce students to microcomputer systems, terminology, and software.

Mechanical Engineering Technology

MEC 101 Production Technology I (3-3-4)
A survey of manufacturing processes, machine tools, and inspection devices with regard to their capabilities, capacities, tolerances, finishes, etc. Laboratory involves field trips to several local industrial sites to observe machines and processes studied in class.

MEC 102 Production Technology II (3-3-4)
Prerequisite: MEC 101
Process planning of operation sequence for efficient production, tool planning, estimating; laboratory operation of machine tools in production projects.

MEC 103 Physical Metallurgy (3-3-4)
Prerequisite: PHY 121
A study of the physical properties of metal and other materials. The laboratory includes a study of the grain structure and microconstituents of metals, phase diagrams, and heat-treating processes.

MEC 201 Jig & Fixture Design (2-3-3)
Prerequisites: DFT 102, MAT 111
A study of basic locating and clamping principles and devices. Laboratory: Design of jigs and fixtures.

MEC 203 Tool & Die Design (2-3-3)
Prerequisite: MEC 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.

MEC 222 Machine Design I (3-3-4)
Prerequisite: EGR 201
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.

MEC 223 Machine Design II (3-3-4)
Prerequisite: MEC 222
A study of the design of basic machine elements such as shafts, keys, belts, gears, bearings, couplings, and clutches.

MEC 232 Thermodynamics (3-0-3)
Prerequisite: PHY 122
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.

MEC 233 Industrial Instrumentation (3-3-4)
Prerequisite: PHY 123
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, pressue, flow, humidity, etc.

MEC 242 Fluid Flow (3-0-3)
Prerequisites: PHY 122, MAT 112
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.

MEC 252 Fundamentals of Mechanical Design (3-0-3)
Prerequisite: PHY 121
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, etc., may be used.

Machinist

MEC 1101 Machine Tool Fundamentals (3-12-7)
An introduction to the machinist trade and the potential it holds for the craftsman. Deals primarily with the identification, care and use of basic hand tools and precision measuring tools. Elementary layout procedure and processes of the power cut-off saw, band saw, drill press, milling machine, lathe, and off hand grinding will be introduced both in theory and practice.

MEC 1102 Machine Operations and Setups (3-12-7)
Advanced operations in layout tools and procedures, surface grinding, milling machine, lathe, and planer. The students will be introduced to operations involved in cylindrical, cutter and internal cylindrical grinding. Projects will be selected encom passing proper setups and machine operations.

MEC 1103 Machine Tool Operations (3-12-7)
Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worm gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder.

MEC 1104 Advanced Machine Shop (3-12-7)
Development of class projects using previously learned procedures in planning blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylinder and surface grinder, advanced milling machine operations, etc. Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing of good work habits and attitudes acceptable to the industry.

MEC 1111 Machine Processes I (0-3-1)
An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

MEC 1112 Machine Processes II (0-3-1)
Advanced operations in layout tools and procedures, operational capabilities of all basic machines, finishes and finish symbols. Included will be a study of castings and casting specifications.

MEC 1113 Tool and Cutter Grinding (3-0-3)
Prerequisite(s): MEC 1101, MEC 1102
Tool and cutter grinding is designed to familiarize the student with various tool grinding machines and grinding applications. Stock removal clearance angles, feeds, and speeds will be studied.

MEC 1115 Maintenance Machine Shop I (3-6-5)
Basic hand tools and their proper use will be a large part of the course. Also included will be operations performed on the drill press and vertical milling machine such as drilling, countersinking, counterboring, and spotfacing.

MEC 1117 Preventive Maintenance (2-0-2)
All the elements of preventive maintenance will be studied including purpose and how to set up an effective program in mechanical, electrical, and heating and air conditioning areas.

MEC 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.

MEC 1123 Structure of Metals (4-0-4)
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 1125 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.

MEC 1126 Mechanical Systems (1-3-2)
The components of mechanical systems including drives, belts, couplings, clutches, gears, sprockets and chains, and shafts and component locking devices will be studied.

MEC 1135 Hydraulics and Pneumatics (3-3-4)
This course deals with hydraulic and pneumatic systems that are used in industry. It covers basic theories, construction, adjustment and repair of hydraulic pneumatic systems.

MEC 1136 Lubrication Systems (3-0-3)
To teach the student about lubrications and basic lubrication systems as they apply to industrial equipment.

MEC 1140 Gear Making (4-3-5)
Prerequisite(s): MEC 1101, MEC 1102
Basic principles of gearmaking will be studied. Practice in machining gear blanks and cutting teeth by the Hobbing, Shaping, and Milling machine method. Spur, helical, and bevel gears will be studied.

MEC 1143 Machine Repair (2-3-3)
Prerequisite: MEC 1101
General upkeep repairs including mechanical and hydraulic repairs. Replace bearings and gears and make replacement parts such as bushings and pins.

MEC 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.

MEC 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.

MEC 1153 Introduction to Numerical Controls (2-3-3)
Prerequisite: MEC 1101 or Departmental Approval
A first course in Numerical Controls exploring the different systems and basic fundamentals of numerical controls.

MEC 1154 Blueprint Reading For Machinist (1-3-2)
Advanced blueprint reading as related to actual complete detail drawings found in Machine Shop.

MEC 1164 Numerical Control Practice (0-3-1)
Prerequisite(s): MEC 1101, MEC 1153
The student will practice writing programs, and running them on CNC Trainers. Projects will be completed as a major part of the course.

MEC 1190 Independent Study (0-3-1)
Prerequisite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefits.

Medical Assisting

MED 100 Medical Terminology and Vocabulary I (3-0-3)
Prerequisite: None
Medical Terminology and Vocabulary I is a beginning course in medical terminology. This course provides a 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 101 Medical Terminology and Vocabulary II (3-0-3)
Prerequisite: MED 100
Medical Terminology and Vocabulary II is a continuation of MED 100 with greater emphasis on an understanding of terminology and its use in the medical office. Anatomical body parts, diseases, operations, tumors and descriptive terms 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: None
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 also placed on the medical assistant's role in community services, community resources available to offices, and an orientation to the actual medical office environment.

MED 200 Medical Assisting I (3-6-5)
Prerequisite: None
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 house-keeping functions in a medical office, care of instruments and supplies, body mechanics, recording of vital signs, sterile techniques, and basic administration of medications by injection.

MED 201 Medical Assisting II (3-6-5)
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, basic study in pharmacology, and the study of nutrition and diet therapy.

MED 202 Medical Assisting III (3-6-5)
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), physiotheraphy, and an orientation to x-ray procedures.

MED 206 Laboratory Orientation I (2-6-4)
Prerequisite: None
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 (3-6-5)
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 Practicum (0-20-2)
Prerequisite: Successful Completion of the first five quarters of the Medical Assisting Curriculum
Medical Practicum is the practical application of the skills previously 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 hours a week under the supervision of the medical office staff. Assignments will be related to encompass all phases of experiences in management, examination room 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 is a study of the personal and occupational responsibilities of a practitioner in the field of Medical Assisting. The primary focus will be on discussion of problems encountered during the experience in the medical practicum. The student will also be guided in further study of professional grooming.

MED 211 Medical Transcription I (3-2-4)
Prerequisite: BUS 102 and MED 102
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 212 Medical Transcription II (3-2-4)
Prerequisite: MED 211
Medical Transcription II is a continuation of MED 211. This is an optional course offered to Medical Assisting Students (one that can be taken in addition to the established curriculum for personal enrichment). Successful completion of this course will entitle the student to the American Medical Records Association Medical Transcription certificate.

MED 213 Medical Law and Ethics (3-2-4)
Prerequisite: None
Medical Law and Ethics is designed to acquaint the student with the legal aspects of medical practice acts; the relationship of the physician, patient, professional liabilities, and types of medical practice. The lab hours will be devoted to observing court sessions, role playing of various medical court cases with guest lawyers.

MED 220 Medical Assisting Administrative I (2-4-4)
Prerequisite: BUS 102 and MED 102
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.

Music

MUS 090 Basics of Music (1-0-1)
Prerequisite: None
The course is designed for those with little or no musical background who wish to enroll in the music theory or in the applied music courses. A systematic study is made of musical notation, music symbols, musical forms, elementary sight reading.

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. This course meets the requirements for North Carolina certification in elementary education. For non-music majors.

MUS 111 Theory I (3-0-3)
This course includes musical notation, major and minor diatonic scales, elementary harmony, elementary melodies, elementary sight-reading. It is designed primarily for music majors.

MUS 112 Theory I (3-0-3)
This course is a continuation of MUS 111. It includes inversion of triad, simple cadences, figured bass, simple voice leading, analysis of simple chords, the seventh chords, melodic dictation.

MUS 113 Theory I (3-0-3)
Prerequisite: MUS 112 or Departmental Approval
This course is a continuation of MUS 112. It includes modulation, secondary dominant chords, instruments and voice ranges, elementary harmonic dictation, two-part and three-part forms, movable C clef.

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 instructor as determined by the ability of the students.

MUS 131 Mixed Chorus (0-2-1)
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 group. 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. Required for music majors.

MUS 211 Theory II (3-0-3)
Prerequisite: MUS 113 or Departmental Approval
This course is a continuation of MUS 113. It includes intermediate level dictation, realization of a simple figured bass at the piano, writing piano accompaniments, minor seventh and ninth chords above the four basic triads: major, minor, diminished, augmented.

MUS 212 Theory II (3-0-3)
Prerequisite: MUS 211 or Departmental Approval
This course is a continuation of MUS 211. It includes writing simple compositions for a capella chorus and for solo voice with piano accompaniment, advanced level dictation.

MUS 213 Theory II (3-0-3)
Prerequisite: MUS 212 or Departmental Approval
This course is a continuation of MUS 212. It includes developing ideas into an extended work for orchestra and for voice(s) with instrumental accompaniment. Analysis of major compositions by the masters is included.

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

NSG 090 Basic Concepts of Associate Degree Nursing (3-0-3)
Prerequisite: Licensed Practical Nurse in State of North Carolina
Nursing 090 provides a foundation upon which the student develops an understanding of the individual in health and illness. The student becomes more aware of the role(s) and responsibilities of the registered nurse. The student is introduced to each major concept in the identified conceptual framework of the associate degree nursing program. Selected

concepts and principles are introduced as a basis for assessment of the client's needs and appropriate intervention.

NSG 101 Concepts to Basic Nursing (6-3-4-8)
Prerequisite: Admission to the ADN Program
This course acquaints the student with basic nursing theory and skills with an overall emphasis in meeting patient needs throughout the life span. The student is introduced to each major concept in the identified conceptual framework of the program. The nursing process, a man's basic needs and body systems are the primary concepts. Development theories throughout the life span, communication skills, stress-adaptation theory, the health illness continuum, and the nurse's role are all introduced as basic concepts utilized in nursing care. Provisions are made for the application of classroom knowledge and skills in an on-campus laboratory and in the hospital setting. The student is expected to develop a beginning confidence in the performance skills utilizing appropriate techniques.

NSG 102 Integration of Basic Nursing Concepts (5-3-9-9)
Prerequisite: NSG 101
This course utilizes the basic concepts of NSG 101 and applies the Nursing process to them in meeting the needs of the patient. Integration of Nursing Concepts focuses on health-illness continuum, and post-operative care. Specific problems dealing with pain, infection, neoplasms, chronic illness, death and dying are studied. Certain disease processes are studied including the skin, musculoskeletal, and gastrointestinal. Opportunity is provided for students to apply their performance skills in the on-campus laboratory as well as in the hospital setting. The student is expected to perform competently certain additional skills.

NSG 104 Medical-Surgical Nursing I (5-2-10-9)
Prerequisite(s): NSG 101, 102, 132
Medical-Surgical Nursing I utilizes the knowledge gained in Nursing 101 and Nursing 102 and applies them in the study of specific diseases. Problems of the reproductive, sensory, endocrine, respiratory, cardiovascular, neurologic systems, musculoskeletal, and genitourinary systems are studied. Concepts of human needs, nutrition and the nursing process are integrated. The student is expected to continue developing clinical skills and perform them with competence. Provisions are made for the application of classroom knowledge and skills in the on-campus laboratory.

NSG 132 Pharmacology in Nursing (2-0-0-2)
Prerequisite: NSG 101
NSG 132 covers the principles and skills used in the control, computation, and administration of medications. Major drug classifications are introduced as a basis for continued study of pharmacology in the nursing curriculum.

NSG 210 Maternity Nursing (5-3-12-10)
Prerequisites: NSG 101, 102, 104, 132
Corequisite: PSY 250
NSG 201 is designed around the concept of families as it relates to the members of the family during the maternity cycle. Major areas of content are normal pregnancy, labor and delivery, postpartum care of the newborn and complications which arise during pregnancy. The nursing process is utilized throughout the dealing with pregnancy and its complications.

NSG 202 Child Health Nursing (5-3-12-10)
Prerequisites: NSG 101, 102, 104, 132
Corequisite: PSY 250
NSG 202 is concerned with meeting the comprehensive health needs of the child and his family during wellness and illness to the end that every child should have the chance to become all that he is capable of becoming. The course begins with a review of the normal growth and development of children from birth through adolescence. Deviations from normal health will be studied with emphasis placed on the nursing process as a means to devise a comprehensive plan of care to meet the needs of individuals and their families.

NSG 203 Medical-Surgical Nursing II (5-0-18-11)
Prerequisites: NSG 101, 102, 104, 132, 201, 202, 204
This course acquaints the student with the person and his/her family who is experiencing complex health problems in the cardiovascular, pulmonary, and neurologic systems of the body. Emphasis is placed on critical and emergency care and advanced nursing techniques. The learner is introduced to management skills and responsibilities necessary for the transition from nursing student to graduate nurse. Additional concepts which are integrated throughout the course include the nursing process, leadership, problem solving, the change process, communication skills, pharmacology, and nutrition. Provisions are made for the application of classroom knowledge and skills in the clinical setting.

NSG 204 Psychiatric Nursing (5-0-12-9)
Prerequisite(s): NSG 101, 102, 104, 132, PSY 229
NSG 204 Psychiatric Nursing deals with the role of the nurse in the care of the emotionally disturbed individual who may or may not be confined to a hospital during his illness. The concept of stress as a factor in mental health is recognized. Difficulties experienced at various stages of the life span are explored. Various treatment modalities and approaches are examined. Current trends in delivery of care and legal aspects of psychiatry are included. History of the management of care of psychiatric patients is explored.

NSG 206 Comprehensive Nursing (3-0-0-3)
Prerequisite: All nursing courses
NSG 206 focuses on comprehensive nursing care for selected major health problems occurring in today's society. The student will be planning and implementing the nursing process for selected major health problems which the new graduate will encounter as a beginning practitioner. The student will be given the opportunity to solve nursing care problems through class discussion and the use of standardized test.

NSG 207 Perspectives of Nursing Practice (2-0-0-2)
Prerequisite: All nursing courses
An open-ended approach to current issues, problems, and conditions encountered in nursing practice. Legal implication with emphasis on the Nurse Practice Act of North Carolina are explored.

Nutrition

NUT 101 Nutrition (3-0-3)
Prerequisite: None
A basic course in normal and therapeutic nutrition of Registered Nursing students, with emphasis on specific diet as patient therapy, patient meal planning, and patient counseling and nutritional instruction.

Orientation

ORI 100 College Survival Skills (2-0-2)
Prerequisite: None
This course consists of two parts: Orientation and Study Skills and Reasoning and Critical Thinking. The course seeks to ease the transition from high school to college and to provide the skills necessary to succeed in college. Topics will include Gaston College resources, efficient time usage, note taking, test taking and reasoning skills.

Physical Education

PED 090 Exercise Lab (0-3-1)
Prerequisite(s): Departmental Approval
This course will provide the student with the knowledge, skills, and supervision to improve overall fitness levels. Instruction and participation will involve a variety of exercise activities. Emphasis will be given to improving overall fitness and strengthening identified physical weaknesses. The course does not apply toward graduation requirements.

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 117 Roller Skating (0-3-1)
Prerequisite: None
An analysis of the fundamental skills, techniques, and knowledge through participation in skating. Beginning.

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 (0-2-1)
Prerequisite(s): 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(s): 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 (1-2-2)
Prerequisite(s): 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: None
This course is designed to provide an individualized approach to physical fitness. Major emphasis will be given to the sciencific basis for setting up and engaging in personalized physical fitness programs.

PED 226 Physical Conditioning (0-6-3)
Prerequisite: Departmental Approval
This course is designed for developing a higher degree of physical fitness. Major emphasis will be given to cardiovascular and muscular endurance.

PED 227 Aerobic-Jazzercise (0-2-2)
Prerequisite: None
A course designed to build cardiovascular endurance through choreographed dances that condition the entire body. Specific muscle groups will be focused on through the specific 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 (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. (CPR)

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 National 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.

Philosophy

PHL 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.

PHL 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.

PHL 203 Introduction to Logic (5-0-5)
Prerequisite: None
A course designed to acquaint the student with the principles, methods, structures of induction, deduction, verification, and logical implications of ordinary language.

PHL 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.

Photography

PHO 101 Introduction to Photography (0-6-3)
Prerequisite: None
Photography 101 is an introductory study of basic theory, principles, and tech-

niques 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 the 35mm camera and basic development and enlargement practices will be of primary lab concern.

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.

Physics

PHY 121 Mechanics (3-3-4)
Prerequisite: MAT 111
An analytical approach to the principles of mechanics. Subject matter includes measurement, vector and scalar quantities, force and motion, work and energy, and statics. Emphasis is placed on problem solving and engineering applications. Lectures, problem drill, and laboratory work are coordinated to enable a better understanding of physical principles.

PHY 122 Mechanics and Heat (3-3-4)
Prerequisite: PHY 121
A continuation in the study of mechanics with an introduction to the principles of heat. Subject matter to include rotational motion; simple machines, elasticity, fluid mechanics, thermal behavior of matter, heat transfer, and thermodynamics. Laboratory work and problem solving to parallel work in the classroom.

PHY 123 Electricity and Magnetism (3-3-4)
Prerequisite(s): PHY 122 or ELC 101
A study of electricity and magnetism. Subject matter includes electrostatics, magnetism, basic electric circuits; capacitance and dielectrics, electromagnetic induction, and alternating current. Emphasis is placed on problem solving appropriate to engineering technology. Laboratory work to parallel work in classroom.

PHY 124 Sound, Light and Modern Physics (3-3-4)
Prerequisite: PHY 123
An introduction to the principles of sound, light, and modern physics. Subject matter to include harmonic motion, wave motion, sound production, sound reception and control; illumination, refraction, lenses, interference and diffraction; quantum physics, nuclear energy and an introduction to solar energy technology. Laboratory work and problem solving to parallel work in the classroom.

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; electromagnetic induction; motors and generators; alternating currents; transient circuits; thermionic emission; wave mechanics; radioactivity; and nuclear reactions. Emphasis 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 1111 Basic Mechanics (3-3-4)
Physical principles of force, energy, work, and power; equilibrium and the laws of motion; principles of machines, mechanical advantage, and transmission of power. Basic principles of heat, light, and sound applications to the future craftsman.

PHY 1112 Basic Electricity (3-3-4)
Basic principles of electricity, types of electricity, and its production, transmission, and transformation. Such factors as the electron theory, electrical measurement, magnetism, electromagnetism, and magnetic effects of electricity constitute major areas of study.

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 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 LAW 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.

Psychology

PSY 100 Psychology of Personality (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 112 Psychology (3-0-3)
Prerequisite: None
A study of psychological terms, language and concepts with emphasis toward applications. Psychological approaches to determine solutions that increase the effectiveness of people.

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 serving 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 encoun-

tered 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 229 Abnormal Psychology (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
An analysis of the symptoms, contributing factors, treatment and outcomes of maladjustive behavior. Classification and nomenclature of psychoneurosis, psychoses, personality disorders, and other psychopathological disorders are dis cussed.

PSY 230 The Psychology of Aging (5-0-5)
Prerequisite: PSY 201 or Departmental Approval
A survey course concerning the changing process and the changed individual from adolescence through old age. Physical, social, and psychological changes occurring in late middle age and old 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 stages of life.

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

RDG 100 Essentials in Reading (5-0-5)
Prerequisite: None
This course is designed to improve the student's basic reading skills. Content includes the reading comprehension, vocabulary, word attack skills, and word recognition which provides the students proficiency in their chosen curriculum. Students will practice reading contemporary and special interest materials. The student may work at his own pace without strict adherence to the quarter timetable.

RDG 101 Reading Improvement (5-0-5)
Prerequisite: None
The course is designed for students interested in improving their skills of reading, and to promote each reader's understanding of his own potential by knowing his strengths, weaknesses, and levels of reading achievement. The course will cover critical reading, rapid visual perception surveying, vocabulary, scanning, and other skills necessary for reading efficiently during and after the college years.

RED 101 Introduction to Reading Education (3-3-4)
Prerequisite: None
Identification of the role of the Teaching Associate or aide in the public school with particular emphasis upon assisting with the reading program. The student will study the organization of public school at all levels and look at varying school environments, the relationship among school personnel and professional work behavior. Laboratory experiences will consist of observation in various elementary school settings and a variety of reading teaching settings.

RED 102 Methods, Materials, & Techniques of Teaching Reading I (5-6-7)
Prerequisite: None
An overview of the major approaches to the teaching of children/adults to read. A major emphasis will be the study and utilization of materials actually found in the laboratory setting. Additional stress will be placed upon the acquisition of the vocabulary specific to reading education and to the piloting of reading lessons with small groups of school children.

RED 103 Methods, Materials, & Techniques of Teaching Reading II (5-6-7)
Prerequisite: RED 102
An overview of the major approaches to the teaching of children/adults to read. A major emphasis will be the study and utilization of materials actually found in the

laboratory setting. Additional stress will be placed upon the acquisition of the vocabulary specific to reading education and to the piloting of reading lessons with small groups of school children.

RED 110 Introduction to Reading (4-2-5)
Prerequisite: None
Identification of the role of the Teaching Associate or aide in the public school setting with particular emphasis upon assisting with the reading program. The student will study the organization of public schools and look at varying school environments, the relationships among school personnel, and develop professional work behavior. Laboratory experiences will consist of observation in various elementary school settings and a variety of reading/teaching settings.

RED 111 Reading Methods—Approaches (4-2-5)
Prerequisite: RED 110 or EDU 101
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 stress will be placed upon the acquisition of the vocabulary specific to reading education and to the designing of reading lessons with small groups of school children.

RED 112 Reading Methods—Skills (4-2-5)
Prerequisites: RED 110 and 111 or EDU 101 and RED 110
An in-depth study of the skills required for reading-phonics, structural analysis, context, dictionary skills, and comprehension skills. Additional stress will be placed upon the diagnosis of children's needs and the prescription of activities appropriate to meet those needs.

RED 202 Evaluation of Reading Programs, Teaching Materials, & Achievement Tests (4-3-5)
Prerequisite: None
A study of the formal and informal methods of assessing pupil growth in reading. The course will also touch upon those other areas of educational evaluation that parallel reading assessment. Students will acquire a systematic method of evaluating instructional materials. Attention will be devoted to role of the Teaching Associate within a school or system-wide scheme of pupil assessment.

RED 203 Reading in Content Areas (3-6-5)
Prerequisite: None
An exploration of the role of reading abilities in mastering content (mathematics, science, social studies, etc.) materials. The student will be required to translate knowledge of reading and the reading process into lessons designed to teach "content." It is expected that the student will rely upon the expected non-reading textbooks.

RED 204 Seminar & Practice in Reading Education I (2-6-4)
Prerequisite: None
A guided field experience designed to implement earlier course work. The student will be required to provide instruction in reading to small groups of children. Direct supervision and weekly discussion of the Associate's progress will be a feature of the course. It is expected that the student will actively participate in the seminar under the guidance of a faculty member.

RED 205 Seminar & Practice in Reading Education II (2-6-4)
Prerequisite: RED 204
An extension of 204. Specific attention will be devoted to assessing the extent to which the Associate can integrate concurrent coursework in Content Reading into reading instruction. Weekly seminars will center upon community and school influences for the evolution of the teaching of reading. Seminar topics will also be drawn from the Associate's laboratory work during the previous week.

RED 206 Supervised Internship in Reading Education (4-30-14)
Prerequisites: RED 103 and RED 205
A course designed to meet in the laboratory setting for four complete days each week. The Associate will be expected to demonstrate those competencies acquired during the program's earlier coursework. On-going supervision of the Associate will center upon techniques for incorporating knowledge of children, reading, the community and the school into a coherent instructional program of reading education. In addition to individual and small-group teaching, large-group instruction will be expected.

Recreation

REC 103 Swimming (0-2-1)
Prerequisite: None
Beginning swimming and/or swimming skills for advanced swimmers. Also offered as PED 103.

REC 104 Bowling (0-2-1)
Prerequisite: None
Includes fundamental skills, scoring, rules and etiquette through participation. Also offered as PED 104.

REC 105 Archery (0-2-1)
Prerequisite: None
Includes fundamental skills and knowl-

edge through participation in the activity. Also offered as PED 105.

REC 108 Skiing (0-3-1)
Prerequisite: None
Includes fundamental skills, techniques, and knowledge through participation. Beginning. Also offered as PED 108.

REC 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. Also offered as PED 112.

REC 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. Also offered as PED 114.

REC 117 Roller Skating (0-3-1)
Prerequisite: None
An analysis of the fundamental skills, techniques, and knowledge through participation in skating. Beginning.

REC 260 Outdoor Living (1-2-2)
Prerequisite: None
Outdoor living is designed to acquaint the beginner camper with various aspects of the camping experience 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. COED. Also offered as PED 260.

Religion

REL 101 World Religions (3-0-3)
Prerequisites: 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.

Radio/Television Broadcasting

RTV 1101 Introduction to Broadcasting (4-3-5)
Prerequisite: None
A survey course of radio and television broadcasting, including history and development; station organization and procedures; and a practical introduction to the fundamentals of announcing, copywriting, production, promotion, programming, sales, and administration.

RTV 1102 Broadcast Announcing & Performance I (4-3-5)
Prerequisite: RTV 1111 or Departmental Approval
A study of the announcer's function, skills, characteristics and techniques with emphasis on the analysis, interpretation and communication of a variety of types of announcing-performance projects. The course is further designed to familiarize the student with basic radio and television studio equipment and broadcast procedures.

RTV 1103 Broadcast Announcing & Performance II (4-3-5)
Prerequisite: RTV 1101-1102 or Departmental Approval
A continuation of RTV 1102. Advanced study of the announcer's techniques with practice sight reading of all types of continuity. Designed to give the student background and experience in relating his speech, personality, character and temperament to broadcast speech communication.

RTV 1104 Broadcast Practicum (1-18-7)
Prerequisite: Departmental Approval
On-the-job training at either the campus facility, a local commercial station, or both. This will enable the student to observe and take part in the actual func-

tioning of a station. Report's of the student's progress will be made bi-monthly.

RTV 1111 Broadcast Speech (3-3-4)
A detailed study of basic broadcast speech with consideration of elementary vocal anatomy and the fundamentals of the science of sound. Emphasis will be on common problems and methods of improving voice quality, diction and delivery; vocabulary improvement and oral reading skills.

RTV 1112 Broadcast Copywriting & Commercial Production (4-3-5)
Prerequisite: None
The development and practice of writing and producing the advertising message. Emphasis is on combining salesmanship and showmanship through the proper utilization of copy formulas, techniques and styles with production approaches and techniques.

RTV 1113 Broadcast Sales & Promotion (3-3-4)
Prerequisite: None
An examination of sales philosophy, rate structure, rate cards and other sales tools, planning budgets and schedules, preparing and delivering sales presentations, obtaining and retaining accounts, and a look at agencies, "reps," administration and compensation. This course will also include a study of audience and sales promotion including objectives, media, and techiques.

RTV 1114 Broadcast Administration (3-0-3)
Prerequisite: None
A study of station organization and operations, financial considerations, departmental relationships, personnel policies and requirements, files, systems and regulations. This will also include a discussion of the social, economic, and legal responsibilities of a broadcast operation, and provide the student with realistic opportunities to solve administrative prob lems.

RTV 1115 Broadcast Public Affairs (2-0-2)
Prerequisite: Departmental Approval
A detailed study of the social and legal responsibilities of a broadcast station including the ascertainment and evaluation of community needs and the programming to meet these needs. Emphasis will be on practical application and will utilize the Statement of Program Service of the broadcast license renewal form and other guidelines of the Federal Communications Commission.

RTV 1121 Broadcast Reading Skills (5-0-5)
Prerequisite: Departmental Approval
Development of oral reading abilities. Includes review and improvement of silent reading abilities, speed and comprehension. Also stresses vocabulary building, interpretive reading and the use of intonation and inflection to convey meaning. Diagnostic testing is to be used at the beginning and end of the course to identify and measure progress on such problems as reversals, additions, omissions, improper time-buying in reading and recognition of punctuation. The course is designed to expose the student to the needed skills in effective transition from written communication to spoken communication.

RTV 1122 Broadcast Programming Formats & Systems (3-0-3)
Prerequisite: None
A study of broadcast programming philosophy and station image, audience identification, determination, and measurement; sources and effects of commercial and public service programs, specialized formats and programming systems, and of NAB programming codes and FCC programming rules.

RTV 1123 Radio News Gathering, Writing, Announcing (3-3-4)
Prerequisite: RTV 1111, 1102 or Departmental Approval
An introduction to the field of broadcast journalism, with special emphasis placed on the gathering, writing, editing, processing and announcing of news and specialty programs, including documentaries.

RTV 1132 Broadcast Operations Practicum (1-6-3)
Prerequisite: None
The practical application of fundamental processes and procedures utilized in broadcast control and studio areas including audio and video equipment operation, logging, announcing and formats.

RTV 1133 Broadcast Projects (3-3-4)
Prerequisite: Departmental Approval
In this course, students will be assigned special projects in their particular area of interest and will be supervised by the faculty.

Sociology

SOC 102 Introductory Sociology (5-0-5)
Prerequisite: None
This is a study of the structure, the functioning, and changes in human groups. Consideration is given to the origins and development of culture, the nature of per-

sonality, and the basic components of social organization. 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, in-law 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 214 Introduction to Social Services (3-0-3)
Prerequisite: None
This course is designed to introduce the student to those public and private institutions which perform human and social service functions in society such as welfare services, senior citizen services, rehabilitation services, family servces, etc. Attention is also given to the history, methods, and practice of professional social work in the United States.

SOC 215 Interpersonal Relations (3-0-3)
Prerequisite: None
This is a basic course designed to improve the student's interpersonal and communicative skills. Attention is given to the practical skills the student will need in relating effectively to others. Verbal and non-verbal communication skills, listening skills, conflict management, and self-disclosure skills are emphasized in the course.

SOC 218 Group Dynamics (3-0-3)
Prerequisite: None
This is an examination of group process and structure with emphasis on the development of decision-making and problem-solving skills. Consideration is given to goals and strategies associated with social change and how the human services can serve as a "change agent" in society.

SOC 240 Social Services Internship (0-10-1)
Prerequisite: Completion of 50 quarter hours in the Social Services Associate Degree Program and approval of instructor.
The intern experience involves the student in on-the-job training and field work. The experience enables the student to gain exposure to many of the functions associated with human/social services. The on-the-job experience is coordinated with the needs of the social service organization to which the student is assigned.

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 100 Conversational Spanish (5-0-5)
Prerequisite: None
This is a one-quarter course for students desiring a basic vocabulary and the ability to engage in simple conversation. This course is designed as a study of the Spanish people, their language, and their culture with emphasis on fundamental sounds and structures of the language.

This course is planned for beginning students or those desiring to up-grade previously acquired skills in Spanish.

SPA 101 Elementary Spanish (5-0-5)
Prerequisite: None
This 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
This is a course which stresses the continuing development of the basic language skills and cultural studies.

SPA 201 Intermediate Spanish (5-0-5)
Prerequisite: SPA 101 and 102 or 2 years high school Spanish
This is a course which 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
This is a course which stresses spoken and written expression. It includes a grammar review, extensive readings, and cultural studies.

SPA 250 Independent Study (5-0-5)
Prerequisite: Departmental Approval
A student who has completed the first two years of Spanish may elect this course. The nature of the course and the amount may be determined by consultation with the instructor.

Welding

WLD 1101 Oxyacetylene Welding (3-12-7)
Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction.

WLD 1102 Arc Welding (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 1104 Advanced Welding (3-12-7)
Student is given an opportunity to specialize and review gas, arc and/or inert welding.

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 1113 Inert Gas Welding (3-12-7)
Prerequisite(s): WLD 1101
Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding.

WLD 1124 Blueprint Reading For Welders (2-3-3)
Advanced blueprint reading as related to actual complete detail drawings found in welding shops.

WLD 1131 Gas and Arc Welding (2-3-3)
Prerequisite(s): WLD 1111 and WLD 1112 or Equivalent
This is a course which reinforces the basic gas and arc welding fundamentals. It includes the advancement of welding thicker metals in the various positions. More practice in cutting and a better knowledge of the electrodes.

WLD 1132 Mechanical Testing & Inspection (3-0-3)
The standard methods for mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guided-bend, nick-tear, notched-bend, non-destructive, B-notch, Charpy inpact, etc.

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 processes according to Section IX of the ASME code.

WLD 1142 Estimating (3-0-3)
Cost estimates are prepared from actual shop prints.

WLD 1163 Gas & Arc Welding (2-3-3)
Prerequisite(s): WLD 1111 and 1112 or the equivalent
This is a course which reinforces the basic gas and arc welding fundamentals. It includes the advancement of welding thicker metals in the various positions. More practice in cutting and a better knowledge of the electrodes.

WLD 1190 Independent Study (0-3-1)
Prerequisite: None
This course provides the student with an opportunity to broaden his knowledge of skills in specific areas. May not be used for VA educational benefit.

GENERAL INFORMATION

STATEMENT OF PURPOSE

Gaston College is a comprehensive community college which seeks to be of optimum educational service to the people within its geographic area. Gaston College, concerned equally with the needs of individuals and the needs of the community, commits its resources to fulfill the following purposes:

To provide for the college oriented students the first two years of academic college courses.

To meet for industry, business, government, and service occupations the pre-service and in-service manpower training needs that require up to and including the Associate of Arts degree.

To provide educational opportunity for the population of this area, including the numerous individuals who are experiencing social and economic difficulty that is due to handicapping attitudes and work habits or who have inadequate basic general education or who lack salable skills.

To raise the level of personal fulfillment, of responsible citizenship, and the standards of living of the people of the area through advanced general and continuing educational opportunities.

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 3,000 students each quarter in curriculum programs and averages 11,000 students annually in its Continuing Education and Community Service Programs.

FACILITIES

The nine major buildings which comprise the Gaston College campus contain approximately 300,000 square feet and have an estimated current value of $16,500,000. An efficient road system and parking for more than 1,000 cars are available for the thousands of vehicles that enter and leave the campus daily. College facilities are available for public use and may be scheduled through the office of the Vice-President for Administrative Services and Human Resources.

The Lincoln Center Campus of Gaston College was opened in August, 1969 and moved to its present location in September, 1979. Its location is the former building occupied by the First Baptist Church in Lincolnton. Both college credit courses and continuing education classes are conducted at the Center.

CHILD CARE TRAINING CENTER

The Child Care Training Center on the campus of Gaston College provides child care through a creative learning environment for children, ages six weeks to five years. 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 5:30 p.m.

COLLEGE RADIO STATION

Gaston College radio station WSGE, with studios and transmitter on the campus, signed on the air in October, 1980. The station offers educational, instructional and entertainment programming to an area that includes over two million people. WSGE is operated by the Broadcasting Department of Gaston College and utilizes the talents of both a student and volunteer staff. WSGE is located at 91.7 on the FM dial.

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Visiting Artist Program

The Visiting Artist Program is a cooperative grant program of the Department of Community Colleges, the North Carolina Arts Council, and Gaston College. It is

a responsibility of the North Carolina Arts Council to recruit and screen artists of exceptional merit to become approved candidates. The artist is available without fee for lecture-demonstrations, performances and exhibitions, workshops, consultations and special projects in the Gastonia area. Gaston College's artist also participates in exchange performances and short term residencies with artists at other Community College institutions.

Programs are held for schools, civic groups, churches, businesses and industries, and other organizations. A typical performance may include a demonstration or performance, a slide-lecture presentation, a discussion, or question and answer session to provide an understanding of the art experience.

Arrangements to schedule a program may be made in advance by contacting the artist at Gaston College.

Accreditations and Memberships

Gaston College is accredited by the Southern Association of Colleges and Schools.

Five 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 following organizations are among those in which the College holds institutional memberships:

- Accreditation Board for Engineering and Technology
- American Association of Collegiate Registrars and Admissions Offices
- American Society for Engineering Education
- Gaston County Chamber of Commerce
- National Association of Broadcasters
- National Association for Foreign Student Affairs
- National Council for Resource Development (NCRD)
- North Carolina Association of Broadcasters
- North Carolina Industrial Developers Association
- Southern Association of Colleges and Schools
- Southern Association of Colleges and Junior Colleges

REGISTRATION AND RECORDS

Students may register several weeks before the start of each quarter's classes. Specific registration information is contained in instructions distributed before each quarter begins.

To insure an advantageous class schedule and to realize the full benefits of the College's orientation and counseling services, students are urged to begin the admission process at the beginning of the quarter preceding the one they wish to enter. High school students may apply in their senior year.

Course Overload

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

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 Program—Instructional Fee Per Quarter Hour of Credit

North Carolina Residents	Out-of-State Residents
$4.25	$21.25

The maximum quarterly instructional fee for residents of North Carolina is $51.00 for 12 or more credit hours. The maximum quarterly instructional fee for out-of-state residents is $255.00 for 12 or more quarter hours.

Continuing Education Program
Registration Fees Through June 1985

There is a $10.00 registration fee per person per course for occupational and academic program courses. Practical skills courses are $15.00 each. Avocational courses are $19.00 each.

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

Students (N.C. residents) 65 or older do not pay registration fees or parking fees.

OTHER GENERAL FEES

Student Activity Fee Per Quarter Hour of Credit

$1.00

The maximum quarterly student activity fee is $8.00 for 8 or more credit hours for in-state and out-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.

Parking Fee

$4.00 per vehicle per year

Parking permits are valid September 1 through August 31

Graduation Fee

$15.00

American College Test

$9.50

The current cost is $9.50 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 $5.00 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

A student shall not be allowed a tuition refund unless compelled to withdraw for unavoidable reasons. If a student partially withdraws before the first day of classes, a full tuition refund will be granted for those credit hours which were dropped. No student activity fee or parking fee will be refunded. If a student completely withdraws before the first day of classes, a complete refund of tuition, student activity fee, and parking fee will be granted. If a student withdraws within ten calendar days after the first day of classes, as published in the school calendar, the student will receive a 2/3 refund of tuition only, by mail, if the refund is more than $5.00. No student activity fee or parking fee will be refunded. No refunds will be considered following ten calendar days after the first day of classes. If a course fails to materialize, all the student's tuition will be refunded.

Continuing Education Programs

The registration fee for Continuing Education students will be refunded only in the event the class is cancelled.

Withdrawal

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

Medical - for reasons of accidents or illness.

Administrative - for unusual or unavoidable circumstances.

The instructor has the prime responsibility for dropping the student. 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 appeal process.

(NOTE: Students not attending classes for any reason, should not expect the instructor to drop them. It is the student's responsibility to withdraw officially by completing a withdrawal form in the Registrar's Office by the deadline date. Failure to do so could result in an F grade.)

Student Identification Card

Each student is required to have a Gaston College identification (ID) card. It is required for registration activities, for library checkout purposes and for admittance to athletic, cultural and social events. Currently enrolled students should carry their ID card at all times and present them on request of College authorities at any time.

Each student will receive a Gaston College ID card as part of the registration procedure. 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 Office of the Vice-President for Student Services. The cost for a replacement ID card is $1.00.

Residency Requirements

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.

In-State Tuition

To qualify for in-state tuition, a legal resident must have maintained residence 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 legal residence in North Carolina will be considered if either parent is living unless the action of the courts appointing the guardian antedates the student's first enrollment in a North Carolina institution of higher education by at least twelve (12) months.

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's.

For those who find they do not have accident insurance coverage, information on a Blue Cross student plan is available from the Office of the Vice-President of Student Services, Room 3 of the Myers Center.

Change of Address

A student should report a change of address on forms available in the Registrar's Office.

International Students

Gaston College will admit international students who meet the special admissions requirements established for obtaining F-1 visa status and college requirements as established by the Gaston College Board of Trustees.

Admission of an international student to the College does not assure admissions to a particular course and/or career program. Admission to a particular course and/or career program will be based upon criteria determined by the College. The number of international students admitted is related to the extent of special services that can be made available by the College.

As part of the admissions procedure, international students are required to show proficiency in English. A special English examination may be required, but previous work at other educational institutions also will be taken into considera-

tion. For more information, contact the Admissions Office. Once admitted, the International Student must meet certain obligations to maintain F-1 Status. These obligations may be obtained in detail from the Foreign Student Advisor and the Admissions Office.

Transfer 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 only 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 which have the accreditation of the North Carolina State Board of Education for colleges in North Carolina and the Southern Association of Colleges and Schools. Colleges and universities outside North Carolina must have accreditation from the appropriate regional accrediting agency for transfer to be accepted. Transcripts will be evaluated by deans of the curricular divisions for transfer credit. The student should contact the Registrar's 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.

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.

Division Deans will be responsible for entering Advanced Placement on student records.

Credit By Examination

At anytime during the period of enrollment in a given course at Gaston College, a student must 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 can be permitted for courses numbered 100-299 and 1100-1199. No student may request credit by examination for more than eighteen credit hours. The student must present the instructor(s) conducting the examination with the permit for the examination and a receipt from the Business Office.

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

Veterans Information

Students may be eligible for educational benefits from the Veterans' Administration (VA) 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 31, 32, 34, or 35 of Title 38 of the U. S. Code.

To receive benefits, eligible students at Gaston College must meet admission criteria, maintain satisfactory academic progress toward an educational objective, and notify the Registrar's Office and the Veterans' Affairs Office of enrollment and any changes in enrollment. The Veterans' Affairs Office is responsible for keeping the Veterans' Administration informed concerning the educational status of eligible students. All questions and problems pertaining to certifications or programs should be directed to the Veterans' Affairs Office.

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

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

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.

Course Auditing

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 Registrar's Office. Audit may be declared up through the seventh week of class. Currently enrolled Gaston College students are permitted to audit one or more courses.

Careful consideration is advisable before requesting permission to audit a course. Audit status is not convertible to credit status. When uncertain about whether to audit a course, students should see a counselor.

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. A part-time student is one registered for less than 12 quarter credits. When job requirements restrict the time available for attending classes, careful and realistic planning is necessary to successfully manage one's job and academic studies.

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 may carry a course load in proportion to the hours of employment.

Access To Student Records

Gaston College, as part of its responsibilities to students, must maintain accurate and confidential student records. The College recognizes the rights of students to have access to their educational records and to limit such access by others in accordance with existing College guidelines and The Family Educational Rights and Privacy Act, passed by the U.S. Congress in 1974. Student records, with certain exceptions, will not be released without prior consent of the student. Students have the right to review and question the content of their educational records within a reasonable time after making a request for such a review. If there are any questions as to the accuracy or appropriateness of the records that cannot be resolved informally, an opportunity for a hearing on the matter is provided. Students wishing to review their educational records may apply to the Registrar's Office for details regarding College policy and procedure designed to expedite their request.

Transfer of Credits

Counselors and other members of the College staff will advise and assist any student planning to transfer to a four-year institution. They will help students prepare for and complete the transfer process.

It is the student's responsibility to select the institution and 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 lower than 100 (the last three digits) usually do not transfer. See COURSE NUMBERING in the catalog.

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 grade mailings and transcript records.

Students may request official transcripts of grades earned at Gaston College through the Registrar's Office. Individual requests must bear the student's signature. It is the policy of Gaston College NOT to issue transcripts of other colleges and/or schools. "Official Transcripts" will be MAILED ONLY to other institutions by request.

Students receive free transcripts upon request.

Cross Registration (Charlotte Area Educational Consortium)

In addition to the classes listed in the quarterly schedule, other classes not available at Gaston College are offered at the other ten consortium colleges. Information is available through the Registrar's Office

ACADEMIC REGULATIONS

Gaston College has established a set of regulations, policies, and standards in order to provide an academic environment that will promote the educational outcome of quality education and assured 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 BULLETIN. Faculty members, staff members, counselors, and administrators are available to help students with planning, academic, and other problems, but the responsibility rests upon the individual student.

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 if 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 Vice President of Educational Programs and Instruction.

Academic dismissal is based upon the concept of "Satisfactory Progress" in a specific course or program which 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 through the auspices of the Vice-President of Educational Programs and Instruction. Note: Dismissal is to be distinguished from academic suspension. Academic suspension 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 conditions of the suspension, i.e., duration, remediation, proficiency demonstration. Appeal of a suspension is only to the Vice-President of Educational Programs and Instruction through the divisional dean of the respective division.

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 Vice-President of Educational Programs 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 subsitute 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.

Standards 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 particularly serious offenses. It is expected that cases of dishonesty will first be considered at the department-faculty level then the matter must be referred to the College Judiciary under the Code of Student Conduct.

Grading System

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

Gaston College is on a quarter system. One unit of credit is equal to one class hour of lecture or class meeting a week, or for laboratory sessions varying from two to three hours a week for one quarter.

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 Registrar's 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
W	Withdrawal	0 per quarter hour
AU	Audit	0 per quarter hour
X	No grade reported by instructor	0 per quarter hour
S	Satisfactory	0 per quarter hour
CEU	Continuing Education Unit	0 per quarter hour

An average of C is defined as a grade-point average of 2.00 on all computed grades.

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

CE Grade — At any time during the period of enrollment in a given course at Gaston College, a student must 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 can be permitted for courses numbered 100-299 and 1100-1199. No student may request credit by examination for more than eighteen credit hours. (NOTE: LPN-RN students are exempt from the College's policy on maximum CE credits. Because of the nature of the program, many students will exceed the maximum of eighteen CEs allowed by the College policy.)

The student must present the instructor(s) conducting the examination with the permit for the examination and a receipt from the Business Office.

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

Z Grade — The Z 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 Z 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 — The grade I is used to postpone course evaluation. It is to be given only when unusual circumstances, such as illness, prevent a student from completing all the requirements of a course by the end of the regular term. An I must be removed from the student's record on or before the end of the eighth week of the quarter the student will be evaluated. The grade I is not computed into the gradepoint average until the course requirements are met to the instructor's satisfaction.

W 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 gradepoint average.

The mark W indicates the 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 Registrar's 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.

S Mark — S indicates satisfactory progress toward the completion of course work involving individually guided study, internships, externships, and independent study. When the work has been concluded, the S is changed to a regular letter grade and computed accordingly.

U Mark — U indicates unsatisfactory progress toward the completion of course work involving individually guided study, internships, externships, and inde-

pendent study. When the work has been concluded, the U is changed to a regular letter grade and computed accordingly.

CEU Grade — The CEU is given for ten contact hours of participation in an organized continuing education audit and extension experience under responsible sponsorship, capable direction and qualified instruction.

Progress Policy

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.

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.

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

Probation

Students must maintain at least a 1.00 quality point average on the first 18 quarter hours attempted. Any student who maintains less than a 1.00 grade-point average on the first 18 quarter hours attempted is placed on academic probation.

After the first 18 credit hours attempted, a student must earn a quarterly grade-point average of at least 2.0 or be placed on academic probation.

Students on academic probation may not register until they have seen a counselor and/or department chairperson, discussed reasons why they are on probation and developed a plan to remove themselves from probation. Students must have their credit hours and courses approved, as signified by the counselor's signature and/or the department chairperson's signature on their course selection form.

Suspension

Students enrolled in programs of less than six quarters in length must meet the following scale:

Credit Hours	Grade-Point Average below which student enters the Suspension Status
1-18	No Requirement
19-36	1.45
37-54	1.90
55 or more	2.00

Students enrolled in programs of six or more quarters in length must meet the following scale:

Credit Hours	Grade-Point Average below which student enters the Suspension Status
1-18	No Requirements
19-36	1.50
37-54	1.75
55-72	1.90
73 or more	2.00

Students who do not meet these minimum requirements will be placed on academic suspension.

Before reentry, a student on suspension must meet with the department chairperson to discuss reasons for the suspension. A plan for removal from suspension will be developed. This plan could be a change of program. After a satisfactory plan is developed the chairperson will sign the student's Course Selection Form allowing him to register. It will be the responsibility of the student to meet with the department chairperson at the mid-point of the quarter to discuss progress being made on the plan. Before the suspended student may register for the next quarter, he must obtain the signature of the department chairperson.

Change of Program

Students may change their program by discussing their plans with a counselor who will help initiate the procedure. 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 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.

Following approval, the student's permanent record will indicate a change of degree objective. All grades for all courses taken prior to this change will not be considered in computing the Gaston College grade-point average. Students will therefore, be admitted to the new program in good standing. Credits successfully earned prior to the change will, of course, 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.

Course Substitutions

Course substitutions must be approved in writing by the Dean of the Division in which the student is pursuing a degree.

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.

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

Honors Program

Gaston College is committed to providing opportunity with excellence for academically talented students. To achieve this goal, an Honors Program has been established by Gaston College.

Credit hours earned for honors courses will transfer and may be used to satisfy requirements for an associate degree or diploma.

To be eligible for an honors course, students must have an ACT composite score of 24 or be approved by the instructor teaching the course.

Honor Lists

President's Honor List: This 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 or Z credits) in any given quarter and with no withdrawals and/or incompletes being recorded.

Dean's List: In order to honor outstanding scholarship, the deans of the various programs will publish a Dean's List after each regular term. In order to qualify for a Dean's List, a student must take a minimum course load of not fewer than twelve quarter hours (not including CE or Z credit), and maintain a least a 3.50 average with no grade lower than a B and with no withdrawals or incompletes being recorded.

Repeating A Course

If two or more final grades (not including the W mark) are recorded for the same course, only the highest grade will be computed or applied toward a degree or diploma. (Exception: certain courses can be duplicated. See Description of Courses.) NOTE: This is an academic forgiveness policy.

Class Attendance

The instructional 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 to which the students must adhere.

The College reserves the right to sever its relationship with any student who fails to maintain the respective attendance requirements. Such a student 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 Vice-President of Educational Programs and Instruction, who will make a final ruling upon the petition.

Graduation

Requirements for the degree or diploma certificate will vary according to the curriculum. Students should refer to the required courses in the catalog which apply to their particular program.

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

Graduation Procedures

Students are expected to file graduation applications with the Registrar's Office at least one quarter preceding the completion of degree requirements. Commencement exercises to award degrees, diplomas, and certificates 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 graduating student. The specific date of the commencement exercise is listed in the College Calendar in front of this catalog.

Graduation Marshals

The 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 named Graduation Marshals. The marshal who has earned the highest academic record is designated Chief Marshal.

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.

The awarding of HONORS to a student must be recommended by the program sponsoring faculty.

STUDENT SERVICES

Counseling

Gaston College provides professional guidance and counseling services. After completing admission requirements, each student will be given an appointment with a member of the counseling staff.

Upon admission to the College, students should attend an orientation session and schedule a conference with a counselor to discuss previous educational background, interest, aptitudes and goals. The counselors offer assistance in choosing an appropriate program of studies from the variety of courses offered. Thereafter, it is recommended that students meet with a counselor on a regular basis to review plans and progress.

Counselors can assist students who wish to clarify their educational or career goals through individual and group counseling, career development courses, and reference to available career resource materials in the campus libraries. In addition to academic advising, counselors can assist students with problems of a personal nature which may be affecting academic performance.

Student-Faculty Conference

The faculty members in Gaston College maintain scheduled office hours to confer with students regarding class work and related matters. Schedules of office hours will be found in the faculty office areas. Students are urged to familiarize themselves with the schedules and to contact their instructors during those hours.

Career Planning And Placement Services

The Career Planning and Placement Services at Gaston College operates as focal points for students and alumni/ae who are exploring careers or seeking employment. Career counseling and advising services assist students in exploring career options and in seeking, obtaining, and retaining employment.

Placement services assist students and former students by making them aware of the full range of career opportunities available, helping them present themselves effectively as candidates, and aiding them in finding part-time, temporary and summer employment.

CAREER PLACEMENT SERVICE: This service is available to all prospective graduates and alumni/ae of the College. Prospective graduates interested in utilizing the Career Placement Service should register at least two quarters prior to graduation to establish their credential files.

Library

The library at Gaston College is maintained for the benefit of students and faculty members. Supplemental materials are part of the collection, which is assembled through the cooperative efforts of the faculty and library staff.

The library maintains open stacks to allow direct access to books, periodicals and other materials.

Other facilities include playback equipment for audio tapes and other recording(s), microfilm readers, photographic devices for reproducing printed matter, video cassette viewing equipment and carrels for individual study.

Housing

Gaston College is a commuter institution primarily designed to serve residents of Gaston County and, therefore, does not provide housing for its students.

The Bookstore
Textbook Refund Policy

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

To obtain a full refund on textbooks:

1. You must have your CASH REGISTER Receipt AND YOUR DROP SLIP, NO EXCEPTIONS!
2. If you purchase a book and then drop a course, or the class is cancelled, a refund will be given during the first ten days of the quarter provided the book has NO Name or Marks, NO Erasures or White-Out, NO Soiled Spots.
3. Books must have been sold for the current quarter. No refund on textbooks bought for prior quarters.

KEEP YOUR CASH REGISTER RECEIPT.
We acquire a **CASH REGISTER RECEIPT** to protect you, the customer, and ourselves. These requirements are necessary to help eliminate refunding on books which had never been purchased by the student seeking the refund.

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

DEFECTIVE BOOK
ANY defective book will be replaced free of charge. Return it as soon as possible.

Student Activities

Gaston College recognizes the educational, recreational and social values of a well-integrated program of student activities. It believes that student participation in co-curricular activities contributes to the total development of the individual and to the growth of leadership ability. 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 Vice-President of Student Services and faculty members. The students essentially plan and present many co-curricular campus activities. They determine social programs and participate in the maintenance of the discipline essential to an academic community. Activities may vary from quarter to quarter depending upon student choice.

Every student is welcome to participate in a wide variety of activities ranging from involvement in the College and campus governance systems, to fine arts and entertainment programming, to membership in student clubs.

Governance participation may include membership on numerous College and campus committees including, but not limited to, College committees on Curriculum, Degree Requirements and Academic Calendar, Affirmative Action and campus Grievance programs.

Programming participation includes membership on committees that select and plan film, lecture, drama, entertainment and various recreational, leisure-time and educational programs.

Clubs and organizations covering a wide spectrum of interests exist to meet the needs of small groups of students. Further information may be obtained from the Office of Vice-President of Student Services.

Among the many activities and organizations to be found on the Gaston College campus each quarter are:

Bands
Choirs
Dances and other social functions
Drama
Interclub councils
Interest groups
Intramural-extramural sports
(including archery, badminton, basketball, bowling, flag football, golf, pool, softball, jogging, swimming, table tennis, tennis, track, and volleyball)
Fine Arts
Newspapers
Political clubs
Professional organizations
Professional boards
Religious groups
Student Government Associations

Alumni Association

Gaston College has an active Alumni Affairs Committee which consists of members of the faculty and staff. College alumni work with the Alumni Affairs Committee planning and coordinating alumni activities. Alumni are involved in social activities and sponsor special projects for the improvement of the College. An alumni office has been established on the campus.

EXECUTIVE COMMITTEE OF PRESIDENT'S ADVISORY COUNCIL

Scott, W. Wayne 1981
President
B.S., University of Chattanooga
M.A., College of William and Mary
Ph.D., Ohio State University

*Babb, Jimmie W. 1965
Vice-President for Instruction
A.B., Lenoir-Rhyne College
M.A., Appalachian State University
Ed.D., N.C. State University

*Barkley, Jacqueline C. 1986
Director, Marketing and Public Information
A.A., Gaston College
B.A., Gardner-Webb College

*Berrier, Paul R. 1974
Vice-President for Administrative Services and Human Resources
A.B., M.Div., Duke University
Ed.S., Appalachian State University
Ed.D., University of N.C. at Greensboro

*Cline, Horace L. 1965
Vice-President for Student Services
B.S., East Carolina University
M.A., Appalachian State University
Ed.D., Nova University

*Drumm, Kathy H. (C.P.A.) 1984
Vice-President for Finance
B.A., Belmont Abbey College
M.B.A., University of N.C. at Charlotte

*Onafowora, Laura L. 1982
Assistant for Strategic Planning and Grants
B.A., Rutgers University
M.P.A., New York University

*Paulin, Joyce R. 1964
Administrative Assistant to the President and Assistant Secretary for the Board of Trustees
Gaston College

PRESIDENT'S ADVISORY COUNCIL

Members of the President's Advisory Council are indicated by an asterisk.

INSTRUCTIONAL DEANS

*Ball, Roland R. 1965
Dean of Trade & Industrial Programs
B.S., Berry College
M.A., Appalachian State University

*Keck, Russell A. 1965
Dean of Engineering & Related Technologies
B.S.I.E., Virginia Polytechnic Institute

*Mahaffey, C. Jean 1983
Dean of Liberal Arts & Sciences
B.A., Erskine College
M.R.E., Southern Baptist Theological Seminary
M.A., University of Georgia

*Sellers, LeRoy 1979
Dean of Business & Computer Sciences Programs
B.S., High Point College
M.Ed., University of North Carolina at Charlotte
Ed.S., Appalachian State University

FACULTY

Armstrong, J. Leonard, Jr. 1965
Department Chairperson, Electronics/ Electrical Engineering Technology
B.S.E.E., N.C. State University

Arthurs, Janet B. (R.N.) 1983
Instructor, Nursing
B.S.N., University of North Carolina at Charlotte

Ball, George A. 1966
Department Chairperson, Science
B.S., Ohio State University
M.S., Florida State University
M.Agr., N.C. State University

Barbeau. Cynthia S. (R.N.) 1984
Instructor, Nursing
B.S.N., Nazareth College

Berry, Benedict R. 1976
Instructor, Philosophy
A.B., St. Mary's College
Ph.L., Laval University

Blanton, Robert A. 1969
Department Chairperson, Social Science
B.S., M.A., Appalachian State University

Bostian, Steven W. 1971
Instructor, Business Administration
B.S.B.A., M.A., Appalachian State University

Bradley, Lois B. (R.N.) 1981
Instructor, Nursing
B.S.N., Lenoir-Rhyne
M.Ed., Univ. of N.C. at Charlotte

Brenner, R. John 1976
Program Director, Social Services
B.S., M.A., University of Illinois

Cameron, Edgar M. 1976
Instructor, T & I Related Courses
A.A.S., Gaston College
B.S., Western Carolina University

Cameron, Fairley M. 1968
Department Chairperson, Machinist
University of Tennessee

Campbell, J. David 1982
Department Chairperson, Broadcasting/ Radio/TV
Carolina School of Broadcasting
Catawba Valley Tech College

Carpenter, Brenda L. 1973
Department Chairperson, Secretarial Science
B.S., M.A., Winthrop College

Chaffin, Troy F. 1974
Chairperson, Enrichment Programs
B.A., University of Florida

Cole, Judith P. 1970
Instructor, Biology
B.S., Morris Harvey College
M.S., Marshall University

Cooke, Ronald P. 1985
Instructor, Industrial Maintenance
International Correspondence School

*Cozart, Norma L.(R.N.) 1982
Director of Nursing
B.S.N., Duke University
M.A., Appalachian State University

*Crask, Roy I. 1983
Instructor, Electrical Engineering Technology
B.S.E.E., University of Colorado
M.S.E.E., Massachusetts Institute of Technology

Crawford, Richard N. 1965
Department Chairperson, Drafting
A.A.S., Gaston Technical Institute
B.E.T., Univ. of N.C. at Charlotte

Davis, Arthur P. 1985
Instructor, Business
B.S., Johnson C. Smith University
M.A., Antioch School of Law

Davis, William P. 1984
Department Chairperson
Computer Science
B.A., College of William and Mary

Devany, Edward H. 1985
Visiting Artist
University of the South
Randolph Macon College
Yale University Graduate School of Drama
Columbia University

Devine, Darrell F. 1983
Instructor, Electrical Installation and Maintenance
Gaston College

Domenico, Elizabeth W. 1971
Department Chairperson, Business Administration
B.S., Rider College
M.S., Temple University

Duarte, Gwendolyn N. 1965
Instructor, Business
B.S., Winthrop College
M.A., Furman University

Dunsmore, Stuart G. 1971
Director of Drama Programs
B.S., Butler University
M.A., New York University

Fahringer, Ray M. (P.E.) 1982
Department Chairperson, Mechanical Engineering Technology
B.S.M.E., Bucknell University

Farrell, William J. 1968
Instructor, Biology
B.S., Manhattan College
M.S., Texas A & M University

Fitz-William, Helen H. 1983
Instructor, Computer Science
B.S., Mary Washington College

Freeman, Gary W. 1982
Instructor, Art
B.S., M.A., East Carolina University

Galant, Lawrence L. 1970
Instructor, Psychology
B.S., Fairleigh Dickinson University
M.Ed., Pennsylvania State University
Ph.D., Univ. of N.C. at Greensboro

George, Dianne S. (R.N.) 1982
Instructor, Nursing
B.S.N., Univ. of N.C. at Charlotte

Goines, Barbara C. (R.N.) 1975
Instructor, Nursing
B.S., Winston-Salem State University

Goldman, Saul S. 1976
Instructor, Criminal Justice
B.L., M.L., Brooklyn Law School

Haas, Bobby L. 1986
Instructor, Electronics Servicing
Naval Aviation Electronics School
RCA Institutes

Hambright, Myers T. 1974
Instructor, Electronics Engr. Techology
B.A., Elon College
M.B.A., Winthrop College

Harrison, Barbara G. (R.N.) 1975
Instructor, Nursing
B.S., Winston-Salem State University
M.Ed., Univ. of N.C. at Charlotte

Hartung, A Bruce 1964
Department Chairperson, Mathematics
A.B., Catawba College
M.Ed., Ed.D., Duke University

Hegenbart, Alex F. 1979
Director of Music Programs
B.A., S.M.H. at Amsterdam
M.M., Amsterdam Conservatory of Music

Hicks, Ben B. 1983
Instructor, Broadcasting/Radio/TV
A.A., Emanuel College

Huntley, Troy C. 1973
Instructor, Physical Education & Recreation
B.S., M.A., Western Carolina University
Ed.D., East Texas State University

Johnston, Janet L. 1974
Program Director, Early Childhood Education
B.S., Athens College
M.A., Ed.D., University of Alabama

Jones, Mary Elizabeth (R.N.) 1978
Department Chairperson
Medical Assisting
B.S.N., University of South Carolina
M.A., Central Michigan University

Killian, Don R. 1965
Instructor, Social Science
Assistant for Instruction and Faculty Development
A.B., Davidson College
M.A., Appalachian State University

Kluttz, Mary G. 1982
Instructor, Computer Science
A.B., Lenoir-Rhyne College

Lackey, Keith F. (R.L.S.) 1982
Instructor, Civil Engineering Tech
B.S., North Carolina State University

Lambert, D. Keith 1974
Department Chairperson, Visual & Performing Arts
B.S., East Carolina University
M.F.A., Univ. of N.C. at Greensboro

Lawrence, Donald L. 1981
Department Chairperson, Criminal Justice
B.S., Univ. of N.C. at Charlotte
M.S., University of S.C.

Leong, Vincent W.S. 1965
Instructor, Mathematics
A.B., High Point College
M.A., Appalachian State College

Lewandowski, Joseph T. 1974
Department Chairperson, Education & Psychology
A.B., M.A., Fresno State College
Ph.D., Washington State University

Logan, F. Thomas 1973
Department Chairperson, Air Conditioning & Refrigeration
Gaston College

Lunsford, Paul C. 1965
Department Chairperson, Basic Studies
B.S., M.A., Appalachian State University

Manikas, William T. 1974
Instructor, Social Service
B.A., Boston University
M.A., Colgate University
Ed.D., Florida Atlantic University

Martin, Franklin E. 1983
Instructor, Air Conditioning & Refrigeration
Gaston College
Western Carolina University

McAteer, Porter L. 1965
Instructor, Industrial Engineering Technology
B.S.I.E., North Carolina State University

McCrory, Nellie R. 1972
Instructor, English
B.S., M.Ed., Livingston University
Ph.D., University of Alabama

McDermott, John K. 1978
Instructor, Mechanical Engineering Technology
B.S.M.E., University of Pittsburgh

McDuffie, Ernest B. 1969
Instructor, Developmental
B.S., Elizabeth City State College
M.A., North Carolina Central University

Newman, Gene L. 1974
Instructor, Physical Education & Recreation
B.S., M.A., University of Florida

Nichols, Sharon M. 1979
Instructor, Developmental
B.A., M.A., Univ. of N.C. at Charlotte

Owens, Debra H. 1983
Instructor, Computer Science
A.A.S., Gaston College
B.S., Appalachian State University

Phillips, L. Sam 1966
Department Chairperson, Languages & Literature
A.B., Erskine College
M.A., Appalachian State University

Propst, Carol F. (R.N.) 1984
Instructor, Nursing
B.S.N., Univ. of N.C. at Chapel Hill

Reavis, Lester, J. 1966
Instructor, Mathematics
B.S., North Carolina State University
M.A., Appalachian State University

Rhoney, Frances C. 1984
Instructor, Secretarial Science
A.B., Lenoir-Rhyne College
M.A., Appalachian State University

Roberson, Kathryn W. 1972
Instructor, English
B.A., M.A., Univ. of N.C. at Charlotte

Robertson, James G. 1974
Program Director, Tranportation
B.S., M.S., Pennsylvania State University

Runyon, Harry T. 1971
Department Chairperson, Automotive & Diesel Mechanics and Diesel Vehicle Maintenance
Nashville Auto Diesel College
Mayo State Vocational School

Russell, Donald K. 1965
Department Chairperson, Electronics Servicing
A.A.S., Gaston College
B.S., Western Carolina University

Shellman, W. Mark 1984
Instructor, Computer Science
B.S., North Carolina State University

Sigmon, Jimmie L. 1977
Department Chairperson, Electrical Installation & Maintenance
A.A.S., Gaston College
B.S., Western Carolina University

Simmons, Lee S. 1976
Instructor, Business
B.S.B.A., M.A., Appalachian State University

Simpson, Gary 1976
Department Chairperson, Physical Education and Recreation
B.S., Appalachian State University
M.A.T., Univ. of N.C. at Chapel Hill
Ed.D., Nova University

Smith, Paul S. 1971
Instructor, English
A.B., Lenoir-Rhyne College
M.A., Ed.S., George Peabody College

Stokes, Mamie B. 1975
Department Chairperson, Marketing
Director of Small Business Trng. Center
B.S., Florida A & M University
M.B.A., Indiana University

Stroup, Joyce E. 1978
Instructor, English
A.A., Gaston College
B.A., M.Ed., Univ. of N.C. at Charlotte

Thackston, Judith M. (R.N.) 1984
Instructor, Nursing
B.S.N., Univ. of N.C. at Charlotte

Thompson, Jasper L. 1984
Instructor, Automotive Mechanics
Gaston College

Topp, John B. (P.E.) 1966
Department Chairperson, Civil Engineering Tech
B.Sc.F., University of New Brunswick
M.Ed., Univ. of N.C. at Charlotte

Trammell, J. Bruce 1964
Instructor, Accounting
B.S., M.A., Appalachian State University
Ed.D., Nova University

Turner, Patsy W. 1982
Instructor, Business
B.S., B.S.B.A., Gardner-Webb College

Wash, Allen G. (C.P.A.) 1977
Department Chairperson, Accounting
B.B.A., Augusta College
M.B.A., M.Acc., Univ. of South Carolina

Whippo, Paul D. 1970
Instructor, Geography
B.S., Indiana State University
M.A., Indiana University

Whisenant, David H. 1980
Instructor, Business
B.S., M.A., Ed.S., Appalachian State Univ.

Whitley, Roger W. 1979
Director, Criminal Justice Academy
B.S., Mars Hill College

Williams, Robert L. 1967
Instructor, English
Writer-in-Residence
B.A., Lenoir-Rhyne College
M.A., Appalachian State University

Wood, Bobby G. 1975
Department Chairperson, Welding
Catawba Valley Technical Institute
Gaston College

Wright, James C. 1972
Instructor, Computer Science
A.B., Lenior-Rhyne College
M.S., Madison College

INSTRUCTIONAL & STUDENT DEVELOPMENT

Bagley, Winston B. 1985
Coordinator, Minority Affairs
B.S., Western Carolina University
M.S.W., University of NC at Chapel Hill

Bambach, William J. 1976
Instructor, G.E.D.
B.A., Belmont Abbey College
M.A., Univ. of N.C. at Chapel Hill

Bennett, Thomas S. 1975
Counselor/Careers
B.S., Appalachian State University
M.Ed., Univ. of N.C. at Charlotte

Brown, Pearlie M. 1966
Librarian
B.S., M.L.S., N.C. Central University
Ed.D., Nova University

*Carter, Helen L. 1970
Director, Counseling and Career Center
A.B., Atlantic Christian College
M.Ed., Ph.D., Univ. of N.C. at Chapel Hill

Cole, Richard M. 1978
Coordinator, Audiovisual Services
B.S., M.A., Appalachian State Univ.

Dale, Joyce B. 1980
Human Resources Development
Gaston College

*Dickson, Beverly H. (A.P.S.) 1984
Asst. Vice-President for Business & Economic Development
B.A., M.Ed., Clemson University

Hagen, Milton M. 1965
Coordinator, Learning Lab
B.S., University of North Dakota
M.S., Indiana University
M.Ed., Ed.D., N.C. State University

*Harmon, R. Carolyn 1984
Vice-President for Evening & Extension Education
B.S., M.A., Appalachian State University

*Hunsucker, David L. 1968
Director, Library and Media Center
A.B., Lenoir-Rhyne College
M.A., Appalachian State University
M.S.L.S., Univ. of N.C. at Chapel Hill

James, John T. 1974
Counselor/Disadvantaged/Handicapped/Testing
B.S.I.E., S.C. State College
M.Ed., University of N.C. at Charlotte

Jimison, Louise N. 1982
Supervisor, Child Care Training Center
B.A., Sacred Heart College

*Jones, Dean H. 1972
Director of Financial Aid, Veterans Affairs
A.B., University of Georgia
M.Div., Southeastern Seminary
M.A., Appalachian State University
Ed.D., Nova University

Kincaid, Brenda A. 1974
Placement
A.A., Gaston College

Massey, Nancy W. 1977
Instructor, A.B.E.
B.A., Furman University

*Merritt, John C. 1965
Director, Academic & Occupational Extension
B.S., M.A., East Carolina University
Ed.D., N.C. State University

Pasour, Cathy C. 1975
Instructor, H.R.D.
B.A., Univ. of N.C. at Charlotte

Perry, Dennis F. 1970
Director, Lincoln Center
B.S., M.A., Appalachian State Univ.
Ed.D., Nova University

Richard, Wayne E. 1976
Coordinator, Learning Lab
A.B., Univ. of N.C. at Chapel Hill

Weaver, Paulette H. 1978
Instructor, Learning Lab
A.A., Gaston College
B.A., Sacred Heart College

Yates, Judy W. 1980
Counselor
B.A., Sacred Heart College
M.Ed., Univ. of N.C. at Charlotte

SUPPORT STAFF

Agan, Damie L. 1985
Child Care Center
A.A.S., Gaston College

*Alexander, Norma F. 1964
Personnel Officer
A.A., Gaston College

Armstrong, Ruby C. 1974
Custodian

Auten, Lois G. 1977
Cashier

Beauchamp, Sherry B. 1985
Cook

Boykin, Denise B. 1984
Secretary
A.S., Univ. of S.C. at Lancaster

Brenner, Patricia L. 1985
Secretary
B.S., Western Carolina University

Brooks, Richard 1984
Custodian

Broughton, Sandra H. 1985
Veterans Affairs & Financial Aid

Brown, Carla D. 1986
Business and Economic Development Clerk

Carpenter, Betty K. 1969
Registration and Records Supervisor

Carpenter, Teresa J. 1985
Secretary
A.S., Gaston College

*Carter, Michael J. 1984
Purchasing Agent
B.S., Belmont Abbey College

Cauble, June F. 1979
Secretary
A.A., Gaston College

Clemmer, Doyle D., Jr. 1984
Maintenance Technician
Gaston College

Cooke, Linda H. 1979
Secretary/Administrative Assistant for Lincoln Campus Operations

Crowther, Joann Y. 1980
Registration and Records

Davis, Regina C. 1984
Accounting Assistant

Dee, Eugene L. 1977
Cook

Diew, Patricia C. 1985
Accounting Assistant

Dixon, Alice A. 1978
Admissions

*Eason, Jannett 1985
Food Services Supervisor

Ellis, David B. 1982
Computer Programmer
A.A.S., Gaston College

Fortenberry, Flint T. 1979
Maintenance

Freeman, Karen Q. 1984
Child Care Center
A.A.S., Gaston College

Goodson, Harry L. 1974
Maintenance

Green, Geraldine B. 1979
Secretary

Greenlee, Linda M. 1967
Secretary
A.A., Gaston College

*Gribble, Sara C. 1975
PBX/Receptionist

Hall, Robert L. 1985
Custodian

Hammontree, Denise F. 1985
Cashier

Hartness, Sue S. 1985
Secretary

Heafner, Jeanine L. 1985
Registration and Records

*High, Frances W. 1980
PBX/Receptionist

Hoyle, Sandra F. 1972
Secretary

Hurlocker, Angela B. 1983
Secretary
East Carolina University

Jarrett, James R. 1980
Custodian

Jackson, Catherine L. 1986
Admissions

*Jones, Betsy H. 1979
Director of Computer Services
A.A.S., Gaston College

Kempfer, James D. 1985
Custodian

King, Bonita G. 1976
Supervisor of Technical Processing
A.A.S., Caldwell Community College

Koone, Kandy P. 1980
Secretary/Plant Operations
Facilitator
A.A.S., Gaston College

Lienhart, Dale A. 1984
Inventory Clerk/Purchasing
Assistant
A.S., Gaston College

Littlejohn, Paul D. 1982
Custodian

Lowery, Hilda C. 1974
Secretary

Lynch, Lucinda F. 1978
Data Manager

*Martin, Ann C. 1968
Bookstore Manager

Martin, Robyn R. 1977
Admissions
A.A.S., Gaston College

*McElveen, Sharon L. 1975
Budget Analyst/Director of
Payroll

McGee, Thomas R. 1979
Campus Police

*McGill, Daisy S. 1974
Director of Accounting
Services

McManus, Thomas L., III 1985
Supervisor, Grounds Maintenance
A.A.S., Haywood Technical College

Miller, Frances E. 1972
Secretary

Miller, Jane K. 1973
Bookstore Assistant

Mintz, Annette W. 1978
Library Technician

Morrow, Brenda W. 1984
Secretary
A.A.S., Gaston College

Navey, Linda H. 1972
Secretary

Newman, A, Jodi 1985
Child Care Center
A.A.S., Gaston College

Painter, S. Anita 1985
Purchasing Assistant

Parker, D. Dolores 1967
Secretary
B.V.A., Winthrop College

Patterson, Nancy C. 1982
Secretary
A.S., Kings College

Patterson, Robert W. 1982
Painter/Maintenance

*Pearson, Geraldine T. 1973
Public Information Specialist
A.A., Gardner-Webb College

Perkins, Joanne P. 1979
Supervisor of Purchasing

*Rankin, Bobby S. 1977
Campus Police
A.A., Gaston College

*Ray, Terry L. 1984
Mail Room Clerk

*Robinson, Billy L 1977
Shipping and Receiving

Rudisell, Nellie M. 1972
Custodian

*Rudisill, Kenneth D. 1984
Supervisor, Maintenance/
Plant Operations

*Sahms, Patricia M. 1980
Printing Technician

Scott, Katherine L. 1974
Veterans Affairs &
Financial Aid

Smith, Martha Y. 1984
Secretary
B.A., Central Wesleyan College

Smith, Rhonda B. 1980
Assistant Director of
Computer Services
A.A.S., Gaston College

Sox, Angela L. 1984
Library Technician
B.A., N.C. State University

Stackston, Hattie L. 1980
Child Care Center
A.A.S., Gaston College

Stafford, Lloyd 1984
Custodian

Standley, Evelyn M. 1985
Secretary

Wade, Jeanell 1980
Child Care Center
A.A.S., Gaston College

Walker, Itelia B. 1966
Custodian

Walters, Jimmy W. 1975
Maintenance

Warren, C. James 1985
Computer Programmer
B.S., Gardner-Webb College

Whitaker, Susan D. 1985
Printing Assistant

Williams, Freddie L. 1980
Campus Police
A.A.S., Gaston College

Woody, Dorothy G. 1965
Purchasing Assistant

Wright, Cathy B. 1984
Accounting Assistant

INDEX

A
About the College 187
Academic Information 16
Academic Probation 199
Academic Regulations 196
Access to Student Records 195
Accounting 128
Accounting, Concentration in 28
Accreditation 189
Address of College Facilities 4
Admission Information 11
Adult Basic Education (ABE) 20
Advanced Placement 193
Alumni Association 204
Anthropology 131
Architectural Drafting 54
Art 132
Associate of Arts Degree 22
Associate of Fine Arts Degree 23
Associate of Science Degree 25
Associate of Applied Science Degree 26
Air Conditioning, Heating and Refrigeration 30, 128
Automotive Mechanics Concentration in 32
Automotive Mechanics 135
Auditing a Course 194

B
Banking and Finance Concentration in 34
Banking and Finance 129
Basic Law Enforcement Training 92
Biology 135
Board of Trustees 188
Bookstore 203
Business Administration/Management Concentration in 36
Business 136
Business Computer Programming, Certificate in 44
Business Computer Programming, Concentration in 42, 142
Business and Industry Programs 19

C
Calendar of Instruction 8
Campus Map 218
Career and Technical/Occupational Programs 17
Career Planning and Placement Services 203
Career Education and Community Services 18
Career Programs 18
Certificates 27
Change of Address 192
Change of Degree Objective or Program 200
Chemistry 139
Child Care Training Center 187
Civil Engineering Technology Concentration in 38
Civil Engineering Technology 139
Class Attendance 201
College Radio Station 188
Community Service Programs 19
Computer Science, Concentration in 42
Continuing Education Unit (CEU) 19
Cost 12, 190
Counseling 202
Course Auditing 194
Course Descriptions 127-185
Course Overload 190
Course Substitution 200
Credit by Examination 193
Credit Courses by TV and Radio 21
Criminal Justice, Concentration in 46
Criminal Justice 140
Criminal Justice Academy, Certificate Program 50
Cross Registration (Charlotte Area Educational Consortium) 195

D
Data Processing (Business Computer Programming) 42, 142
Dean's List 201
Developmental/Advancement Studies Program 20

Degree Programs 16
Diplomas 27
Diesel Vehicle Maintenance, Concentration in 52
Diesel Vehicle Maintenance 149
Dismissal, Grounds for Student 196
Drama 148
Drafting-Architectural, Concentration in 54
Drafting-Mechanical, Concentration in 56
Drafting 144
Drop/Add 14
Dual Enrollment 11

E
Early Childhood Associate, Concentration in 58
Earth Science 160
Economics 150
Education 151
Educational Programs 16
Electrical Engineering Technology 153
Electrical Engineering Technology, Concentration in 60
Electrical Installation and Maintenance, Concentration in 64
Electrical Installation and Maintenance 154
Electronics Engineering Technology, Concentration in 66, 155
Electronics Servicing, Concentration in 70
Electronics Servicing 156
Emergency Medical Science, Concentration in 72
Emergency Medical Science 157
Engineering Technology 152
English 158
English as a Second Language 21, 160
Executive Committee of the President's Advisory Council 206

F
Facilities 187
Faculty Listing 206
Fashion Merchandising and Marketing Technology, Concentration in 74
Financial Aid Program 14
Fire Science, Concentration in 76
Fire Science 160
French 162
Full-Time/Part-Time Status 194

G
Gaston College Foundation Board of Directors 188
General Education Development (GED) 20
General Office, Concentration in 78
Geography 162
Geology 163
Grading System 197
Grading Symbols 197
Graduation Requirements 22, 202
Graduation Marshals 202
Graduation Honors 202

H
History 163
Honors Program 201
Honor Lists 201
Honesty Standards 197
Housing 203
Human Resources Development Program (HRD) 20

I
Identification Cards 191
Industrial Engineering Technology, Concentration in 80
Industrial Management Technology, Concentration in 84
Industrial Engineering Technology 164
Industrial Maintenance, Concentration in 88
Industrial Maintenance, Certificate Program 90
Industrial Management Technology 164
Institutional Memberships 189
Instructional and Student Development Staff 209
Insurance (Student) 192
In-State Tuition 192
International Students 192

L
Law 165
Learning Laboratories 20
Liberal Arts and Sciences/
Transfer Program 17
Library 203

M
Machinist, Concentration in 94
Marketing and Retailing,
Concentration in 96, 146
Machinist 168
Math 165
Mechanical Engineering Technology,
Concentration in 98
Mechanical Engineering
Technology 167
Medical Assisting, Concentration in 102
Medical Assisting 169
Microcomputer 167
Music 171

N
Non-Credit Courses 19
Nursing (Registered Nursing),
Concentration in 106
Nursing-LPN to
RN Conversion Track 110
Nursing 172
Nutrition 174

O
Occupational Program,
Dismissal from 196
Off-Campus Credit Courses 19
Orientation 174
Other General Fees 13, 190

P
Physical Education 174
Political Science 178
Philosophy 176
Photography 176
Physics 177
President's Honor List 201
President's Advisory Council 206
Progress Policy 199
Probation 199
Psychology 178

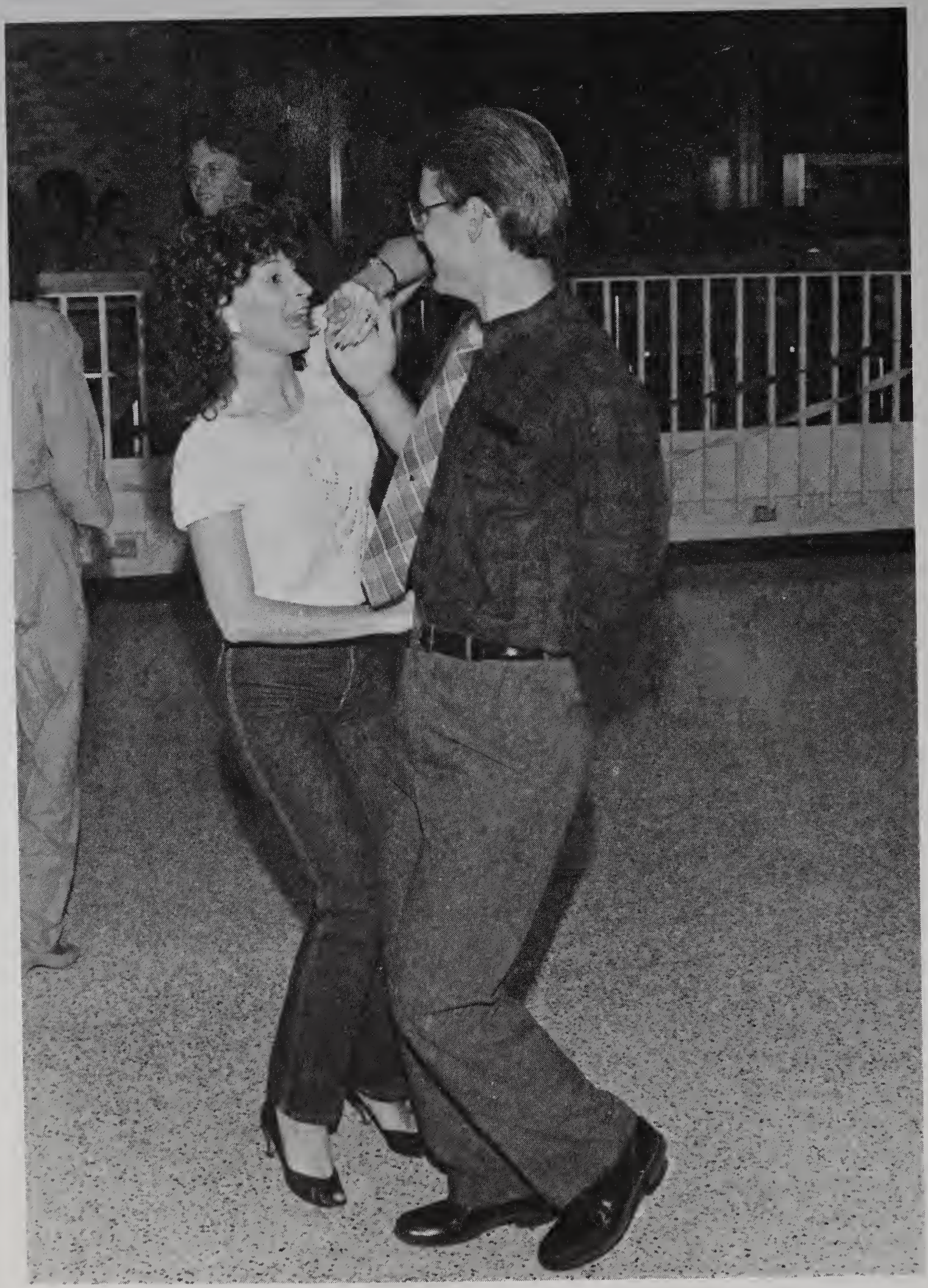
R
Radio and Television Broad-
casting, Concentration in 112, 181
Reading 179
Recreation 180
Refunds 13, 191
Religion 181
Registration and Records 189
Repeating a Course 201
Residency Requirements 192

S
Secretarial-Executive,
Concentration in 114
Secretarial-Legal,
Concentration in 116
Secretarial-Medical,
Concentration in 118
Seminars and Workshops 19
Service Areas Map,
Gaston College 4
Social Services Associate,
Concentration in 120
Sociology 182
Spanish 183
Special Admissions 11
Standards of Honesty 197
Statement of Purpose 187
Student Activities 204
Student Classification 200
Student Dismissal, Grounds for 196
Student Identification Cards 191
Student Services 202
Student-Faculty Conference 203
Support Staff 210
Suspension 199

T
Transfer from Another College 193
Transfer of Credits 195
Transfer to Senior Institutions 21
Transcript of Grades 195
Transportation, Concentration in 122
Tuition, In-State 192

V
Veterans Information 193
Visiting Artist 188
Vocational Rehabilitation 194

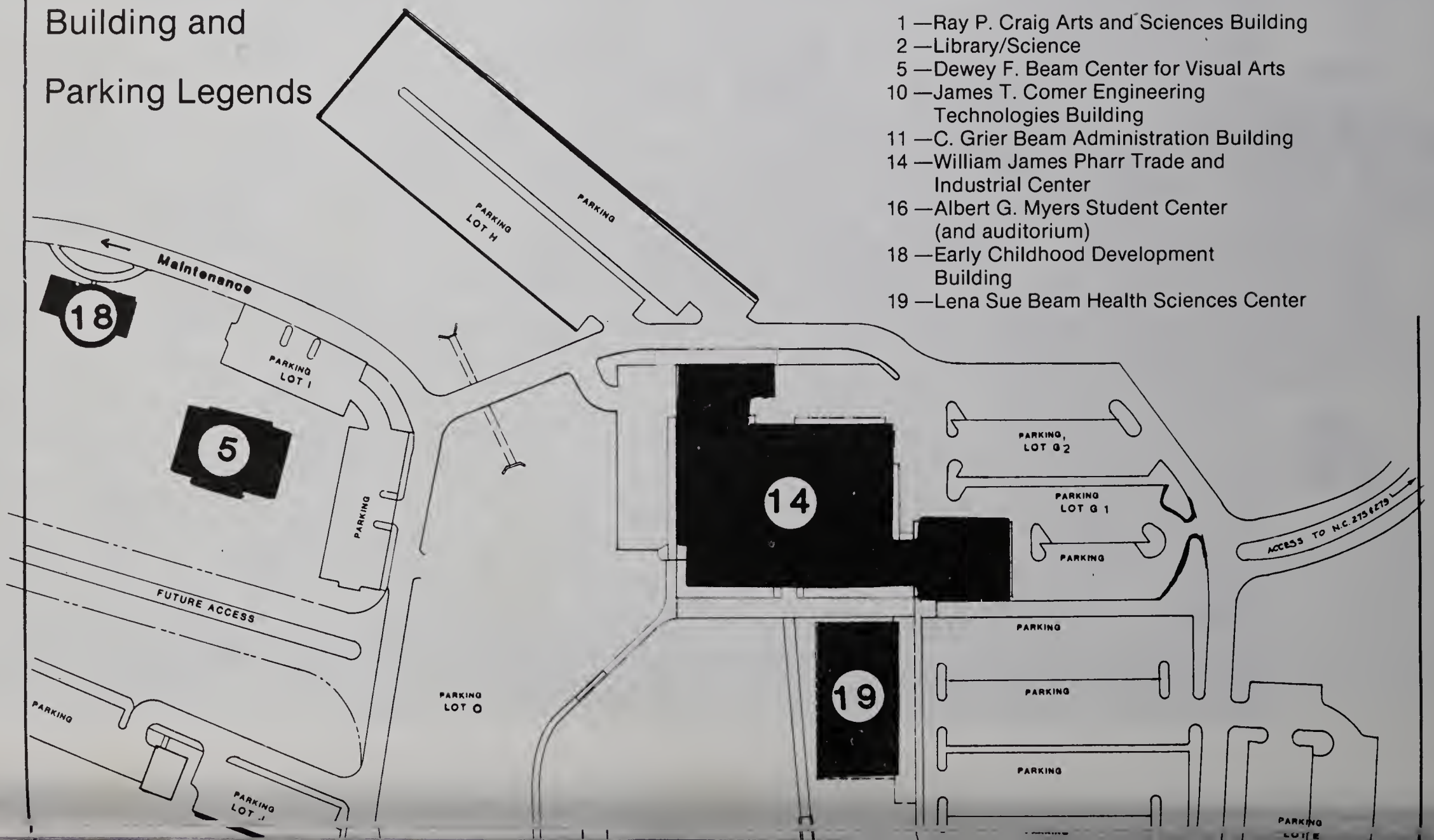
W
Welding, Concentration in 124
Welding 184
Withdrawal from a Class 191



GASTON COLLEGE CAMPUS

Building and

Parking Legends

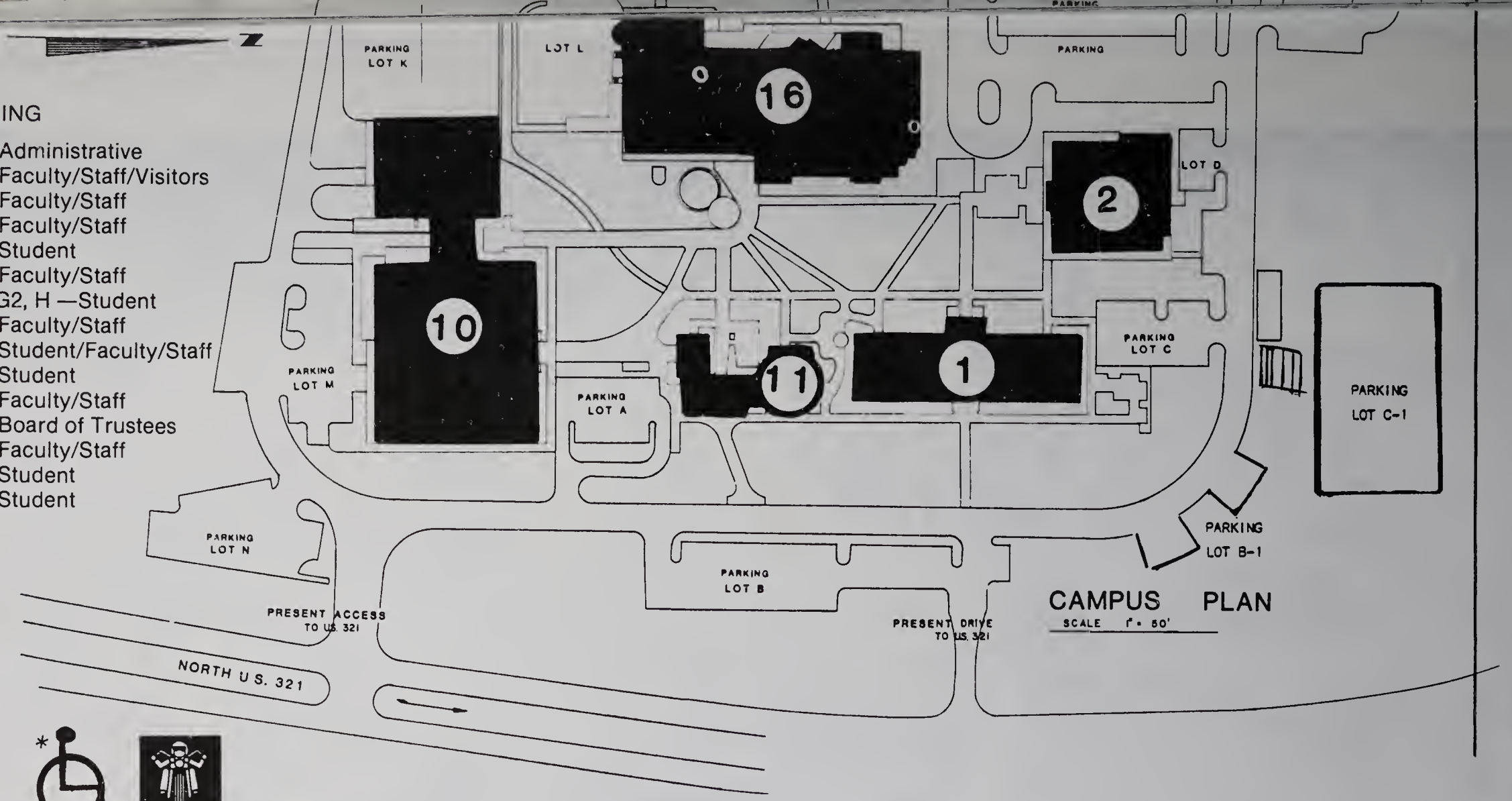


BUILDINGS

1 —Ray P. Craig Arts and Sciences Building
2 —Library/Science
5 —Dewey F. Beam Center for Visual Arts
10 —James T. Comer Engineering Technologies Building
11 —C. Grier Beam Administration Building
14 —William James Pharr Trade and Industrial Center
16 —Albert G. Myers Student Center (and auditorium)
18 —Early Childhood Development Building
19 —Lena Sue Beam Health Sciences Center

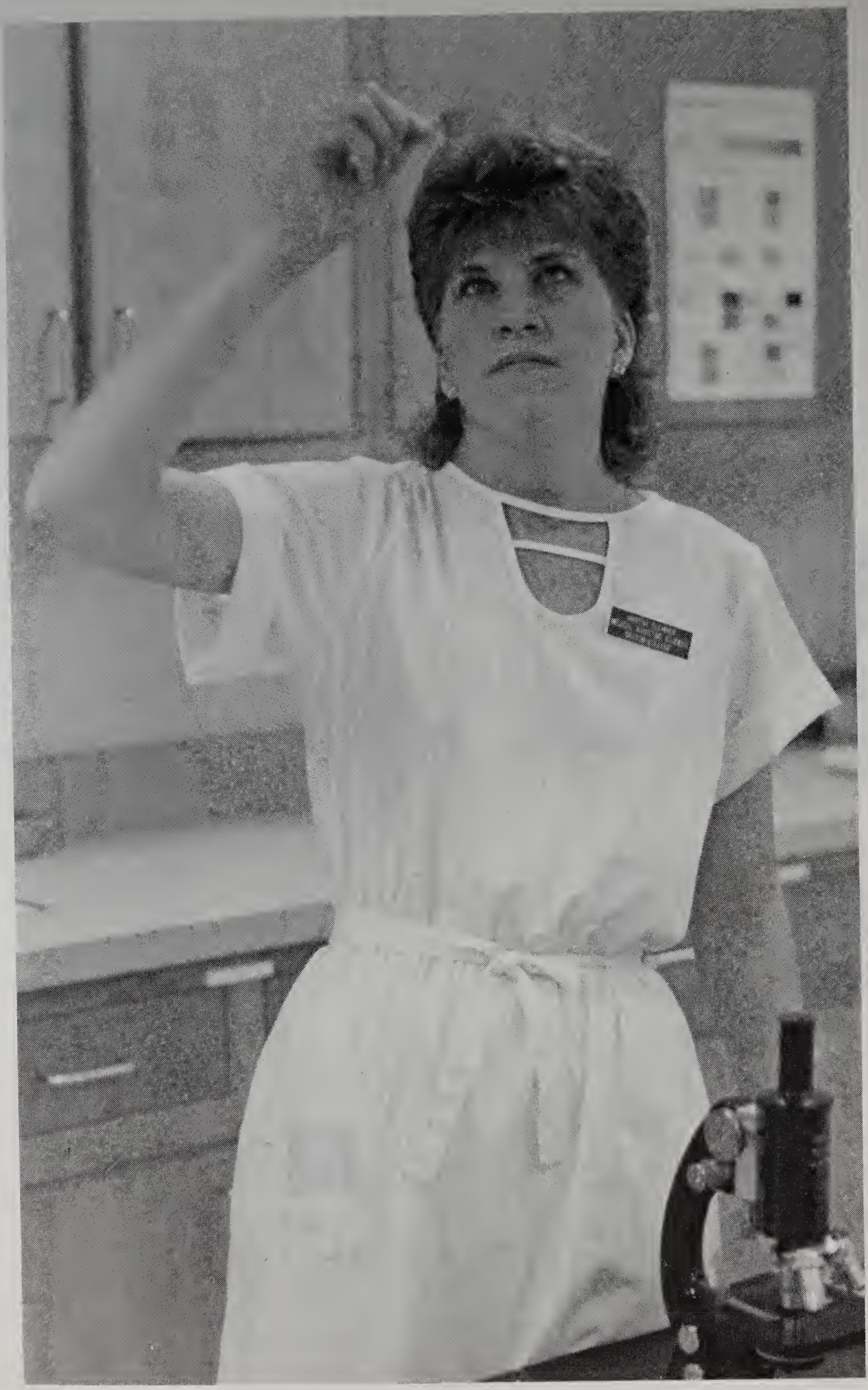
PARKING

A —Administrative
B —Faculty/Staff/Visitors
B1 —Faculty/Staff
C —Faculty/Staff
C1 —Student
D —Faculty/Staff
E,*F, G2, H —Student
G1 —Faculty/Staff
I —Student/Faculty/Staff
J —Student
K —Faculty/Staff
L —Board of Trustees
M —Faculty/Staff
N —Student
O —Student



CAMPUS PLAN
SCALE 1" = 50'

7/84



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